



Threat, challenges, and preparedness for future pandemics: A descriptive review of phylogenetic analysis based predictions

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PMID: 35065303 DOI: 10.1016/j.meegid.2022.105217

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Abstract

For centuries the world has been confronted with many infectious diseases, with a potential to turn into a pandemic posing a constant threat to human lives. Some of these pandemics occurred due to

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Role of melatonin mediated G-CSF induction in hematopoietic system of gamma-irradiated mice

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Protective effect of *Berberis aristata* against peritonitis induced by carbapenem-resistant *Escherichia coli* in a mammalian model

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PMID: 28323228 DOI: 10.1016/j.jgar.2016.12.018

Abstract

Objectives: *Berberis aristata* is known to contain a variety of phenolic compounds contributing to its holistic capability of mitigating bacterial multidrug resistance.

Methods: *B. aristata* stem bark extract was prepared and was characterised using liquid chromatography-mass spectrometry (LC-MS). The antimicrobial efficacy of the extract against carbapenem-resistant *Escherichia coli* was assessed in vivo in an animal model using Sprague Dawley rats. Microbial counts in blood and urine, physical health status, haematological and biochemical analysis of blood, and histopathology of the kidney were assessed as the study endpoints.

Results: An aquo-alcoholic extract of *B. aristata* (PTRC-2111-A) was found to effectively manage peritonitis induced by carbapenem-resistant *E. coli* in a rat model at a single post-exposure prophylactic dose of 0.5mg/kg body weight (BW). The extract was also found to show a no observed adverse effect level (NOAEL) up to a dose of 2000mg/kg BW. Physical, immunological, haematological, biochemical and histopathological aberrations were found to be restored to normal in the herbal-treated group at a dose of 0.5mg/kg BW.

Conclusions: The antimicrobial and hepatorenal protective ability of PTRC-2111-A could be attributed to the presence of isoquinoline alkaloids.

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Intranasal solid lipid nanoparticles for management of pain: A full factorial design approach, characterization & Gamma Scintigraphy

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PMID: 33582127 DOI: 10.1016/j.chemphyslip.2021.105060

Abstract

Pain is a noxious stimulus caused due to tissue damage and varies from mild to severe. Nalbuphine (NLB) is an approved, inexpensive, non-controlled, opioid agonist/antagonist analgesic used worldwide in various clinical settings for pain management. The current study aims to formulate NLB

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Role of melatonin mediated G-CSF induction in hematopoietic system of gamma-irradiated mice

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PMID: 34883100 DOI: 10.1016/j.lfs.2021.120190

Abstract

Aims: Hematopoietic acute radiation syndrome (H-ARS) can cause lethality, and therefore, the necessity of a safe radioprotector. The present study was focused on investigating the role of melatonin in granulocytes colony-stimulating factor (G-CSF) and related mechanisms underlying the reduction of DNA damage in hematopoietic system of irradiated mice.

Main methods: C57BL/6 male mice were exposed to 2, 5, and 7.5Gy of whole-body irradiation (WBI), 30 min after intra-peritoneal administration of melatonin with different doses. Mice were sacrificed at different time intervals after WBI, and bone marrow, splenocytes, and peripheral blood lymphocytes were isolated for studying various parameters including micronuclei (MN), cell cycle, comet, γ -H2AX,

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The *M. tuberculosis* Rv1523 Methyltransferase Promotes Drug Resistance Through Methylation-Mediated Cell Wall Remodeling and Modulates Macrophages Immune Responses

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PMID: 33777836 PMCID: PMC7994892 DOI: 10.3389/fcimb.2021.622487

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Abstract

The acquisition of antibiotics resistance is a major clinical challenge limiting the effective prevention and treatment of the deadliest human infectious disease tuberculosis. The molecular mechanisms by which initially *Mycobacterium tuberculosis* (*M.tb*) develop drug resistance remain poorly understood. In this study, we report the novel role of *M.tb* Rv1523 MTase in the methylation of mycobacterial cell envelope lipids and possible mechanism of its contribution in the virulence and drug resistance. Initial interactome analyses predicted association of Rv1523 with proteins related to fatty acid biosynthetic pathways. This promoted us to investigate methylation activity of Rv1523 using cell wall fatty acids or lipids as a substrate. Rv1523 catalyzed the transfer of methyl group from SAM to the cell wall components of mycobacterium. To investigate further the *in vivo* methylating role of Rv1523, we generated a recombinant *Mycobacterium smegmatis* strain that expressed the Rv1523 gene. The *M.*

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Structure–Function Analyses of New SARS–CoV–2 Variants B.1.1.7, B.1.351 and B.1.1.28.1: Clinical, Diagnostic, Therapeutic and Public Health Implications

Jasdeep Singh ¹, Jasmine Samal ², Vipul Kumar ³, Jyoti Sharma ², Usha Agrawal ², Nasreen Z Ehtesham ², Durai Sundar ³, Syed Asad Rahman ⁴, Subhash Hira ⁵, Seyed E Hasnain ^{3, 6}

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PMID: 33803400 PMCID: [PMC8000172](#) DOI: [10.3390/v13030439](#)

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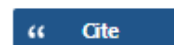
Abstract

SARS-CoV-2 (Severe Acute Respiratory Syndrome-Coronavirus 2) has accumulated multiple mutations during its global circulation. Recently, three SARS-CoV-2 lineages, B.1.1.7 (501Y.V1), B.1.351 (501Y.V2) and B.1.1.28.1 (P.1), have emerged in the United Kingdom, South Africa and Brazil, respectively. Here, we have presented global viewpoint on implications of emerging SARS-CoV-2 variants based on structural-function impact of crucial mutations occurring in its spike (S), ORF8 and nucleocapsid (N) proteins. While the N501Y mutation was observed in all three lineages, the 501Y.V1 and P.1 accumulated a different set of mutations in the S protein. The missense mutational effects were predicted through a COVID-19 dedicated resource followed by atomistic molecular dynamics

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Computational modeling and bioinformatic analyses of functional mutations in drug target genes in *Mycobacterium tuberculosis*

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PMID: 34025934 PMCID: [PMC8113780](#) DOI: [10.1016/j.csbj.2021.04.034](#)

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Abstract

Tuberculosis (TB) continues to be the leading cause of deaths due to its persistent drug resistance and the consequent ineffectiveness of anti-TB treatment. Recent years witnessed huge amount of sequencing data, revealing mutations responsible for drug resistance. However, the lack of an up-to-date repository remains a barrier towards utilization of these data and identifying major mutations-associated with resistance. Amongst all mutations, non-synonymous mutations alter the amino acid sequence of a protein and have a much greater effect on pathogenicity. Hence, this type of gene mutation is of prime interest of the present study. The purpose of this study is to develop an updated database comprising almost all reported substitutions within the *Mycobacterium tuberculosis* (*M.tb*) drug target genes *rpoB*, *inhA*, *katG*, *pncA*, *gyrA* and *gyrB*. Various bioinformatics prediction tools were

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Quantitative proteomic analysis of GnRH agonist treated GBM cell line LN229 revealed regulatory proteins inhibiting cancer cell proliferation

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PMID: 35109816 PMCID: PMC8812247 DOI: 10.1186/s12885-022-09218-8

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Abstract

Background: Gonadotropin-releasing hormone (GnRH) receptor, a rhodopsin-like G-protein coupled receptor (GPCR) family member involved in GnRH signaling, is reported to be expressed in several tumors including glioblastoma multiforme (GBM), one of the most malignant and aggressive forms of primary brain tumors. However, the molecular targets associated with GnRH receptor are not well studied in GBM or in other cancers. The present study aims at investigating the effect of GnRH agonist (Gosarelin acetate) on cell proliferation and associated signaling pathways in GBM cell line, LN229.

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Metabolomic profiling of *Commiphora wightii* (Arn.) Bhandari bark, oleogum-resin, and stem collected from different geographical regions of India

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Received 4 April 2022, Revised 23 May 2022, Accepted 30 May 2022, Available online 15 June 2022, Version of Record 15 June 2022.

Development of a Validated Bioanalytical UPLC–MS/MS Method for Quantification of Neratinib: A Recent Application to Pharmacokinetic Studies in Rat Plasma

Majed Alrobaian, Sagar Suman Panda, Obaid Afzal, Imran Kazmi, Manal A Alossaimi, Fahad A Al-Abbasi, Waleed H Almalki, Kriti Soni, Ozair Alam, Md Naushad Alam, Rehan A Rub, Mahfoozur Rahman, Sarwar Beg ✉

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Analysis of polyphenols in *Aegle marmelos* leaf and ameliorative efficacy against diabetic mice through restoration of antioxidant and anti-inflammatory status

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PMID: 34250628 DOI: 10.1111/jfbc.13852

Abstract

The biomedical survey reports edible plant *Aegle marmelos* has been utilized for centuries by tribal communities in India as a dietary supplement for the management of diabetes. Herein, we have investigated cytotoxicity, cytoprotective and antidiabetic activity of characterized alkaloid-free hydroalcoholic extract of *A. marmelos* (AFEAM; 200 and 400 mg/kg). Identification of polyphenols and quantification of major compounds were done using UPLC-MS and HPTLC, respectively. AFEAM showed good cytocompatibility and cytoprotective potential against oxidative stress induced by hyperglycemia in HepG₂ cells. The AFEAM intake had significantly ameliorated the serum blood glucose level, state of dyslipidemia, level of pro-inflammatory markers (tumor necrosis factor- α , interleukin-6, and interleukin-1 β), and antioxidant (superoxide dismutase, catalase, glutathione peroxidase, and malondialdehyde) status in diabetic mice. Histological examination of the treated groups showed amelioration of damaged pancreas, liver, and kidney tissues. Conclusively, AFEAM intake might be promising dietary supplements for prediabetics as well as an adjuvant to modern treatment in diabetics. PRACTICAL APPLICATIONS: Different reports have been published on *Aegle*

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Glioblastoma multiforme (GBM): An overview of current therapies and mechanisms of resistance

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PMID: 34302977 PMCID: PMC8384724 DOI: 10.1016/j.phrs.2021.105780

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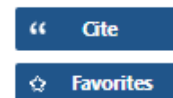
Abstract

Glioblastoma multiforme (GBM) is a WHO grade IV glioma and the most common malignant, primary brain tumor with a 5-year survival of 7.2%. Its highly infiltrative nature, genetic heterogeneity, and protection by the blood brain barrier (BBB) have posed great treatment challenges. The standard treatment for GBMs is surgical resection followed by chemoradiotherapy. The robust DNA repair and self-renewing capabilities of glioblastoma cells and glioma initiating cells (GICs), respectively, promote resistance against all current treatment modalities. Thus, durable GBM management will require the invention of innovative treatment strategies. In this review, we will describe biological and molecular targets for GBM therapy, the current status of pharmacologic therapy, prominent mechanisms of resistance, and new treatment approaches. To date, medical imaging is primarily used to determine

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NOTCH signaling: Journey of an evolutionarily conserved pathway in driving tumor progression and its modulation as a therapeutic target

Vaishali Aggarwal¹, Hardeep Singh Tuli², Mehmet Varol³, Muobarak Tuorkey⁴, Katrin Sak⁵, Nidarshana Chaturvedi Parashar⁶, Tushar Singh Barwal⁷, Uttam Sharma⁸, Ashif Iqbal⁹, Gaurav Parashar¹⁰, Aklank Jain¹¹

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Styryl quinazolinones and its ethynyl derivatives induce myeloid differentiation

Sridhar Radhakrishnan ^a, Riyaz Syed ^{b, c, j}, Hisashi Takei ^{d, e, j}, Ikei S. Kobayashi ^d, Eugene Nakamura ^d, Farheen Sultana ^{b, i}, Ahmed Kamal ^{b, f}, Daniel G. Tenen ^{g, h}, Susumu S. Kobayashi ^{d, h}

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Tamoxifen and Sulphoraphane for the breast cancer management: A synergistic nanomedicine approach

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Abstract

Breast cancer is second most leading cause of death in all over the world and not only limited to the females. Tamoxifen has been considered as the gold line therapy for estrogen receptor positive breast cancer. However, this chemopreventive approach has been focused at individuals in high risk group and limits its clinical applications to moderate and/or lower risk groups. Moreover, Tamoxifen treatment is associated with a dose related hepatotoxicity and nephrotoxicity and eventually results in poor quality of life of patients. Sulphoraphane, a naturally occurring isothiocyanate derivative has been investigated for its numerous potential biological activities including anticancer effects. The present hypothesis aims to put forward in which Tamoxifen is combined with a natural bioactive Sulphoraphane, both incorporated into a novel lipid based nanocarrier at a reduced dose, which would eventually shuttle the cargo to the target site. At the breast cancer, Sulphoraphane sensitizes the estrogen receptors and ameliorates the binding affinity of Tamoxifen to these receptors, thereby potentiating the anticancer efficacy and reducing the offsite toxicity of Tamoxifen. This dual loaded zero-dimension lipid carrier would be a value addition to the current treatment regimen for breast cancer management.

Keywords: Breast cancer; Lipid nanocarrier; Lymphatic transport; Sulphoraphane; Tamoxifen.

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Tamoxifen and Sulphoraphane for the breast cancer management: A synergistic nanomedicine approach

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PMID: 31454641 DOI: 10.1016/j.mehy.2019.109379

Abstract

Breast cancer is second most leading cause of death in all over the world and not only limited to the females. Tamoxifen has been considered as the gold line therapy for estrogen receptor positive breast cancer. However, this chemopreventive approach has been focused at individuals in high risk group and limits its clinical applications to moderate and/or lower risk groups. Moreover, Tamoxifen treatment is associated with a dose related hepatotoxicity and nephrotoxicity and eventually results in poor quality of life of patients. Sulphoraphane, a naturally occurring isothiocyanate derivative has been investigated for its numerous potential biological activities including anticancer effects. The present hypothesis aims to put forward in which Tamoxifen is combined with a natural bioactive Sulphoraphane, both incorporated into a novel lipid based nanocarrier at a reduced dose, which would eventually shuttle the cargo to the target site. At the breast cancer, Sulphoraphane sensitizes the estrogen receptors and ameliorates the binding affinity of Tamoxifen to these receptors, thereby potentiating the anticancer efficacy and reducing the offsite toxicity of Tamoxifen. This dual loaded zero-dimension lipid carrier would be a value addition to the current treatment regimen for breast cancer management.

Keywords: Breast cancer; Lipid nanocarrier; Lymphatic transport; Sulphoraphane; Tamoxifen.

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Sterile Inflammatory Role of High Mobility Group Box 1 Protein: Biological Functions and Involvement in Disease

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PMID: 30223272 DOI: 10.1159/000491390

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Abstract

High mobility group box 1 protein (HMGB1), a sterile inflammatory molecule and damage-associated molecular pattern (DAMP) released from various cells during stress has been implicated in inflammation. Several reports show that there is a direct relationship between inflammation and cardiovascular diseases (CVDs) such as thrombosis, hypertension, insulin resistance, preeclampsia, etc. Here, we intend to summarize the concept of the emerging link between HMGB1 and CVDs. Furthermore, we will discuss the possible therapeutic strategies that target HMGB1 for the treatment of different CVDs.

Keywords: Cardiovascular disease; High mobility group box 1 protein; Stress; Toll-like receptor.

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VASCULAR DISEASES AND ROLE OF NITRIC OXIDE

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Abstract

Endothelium, the inner-most layers of blood vessels is an active monolayer of cells which has been evolved to become specialized barrier between blood and other structures of the vessel wall. Endothelial cell layer is known to communicate between blood and extravascular tissues and is actively involved in cardiovascular homeostasis. Intact endothelium regulates vascular tone, permeability and maintains non-inflammatory, anti-thrombotic surface. Through its ability to express pro-coagulants, anticoagulants, vasoconstrictors, vasodilators, cell adhesion molecules and cytokines, the endothelium has emerged as one of the pivotal regulators of haemostasis. Under normal conditions, endothelial cell sustains a vasodilatory, anticoagulant and fibrinolytic state in which coagulation, platelet adhesion as well as

Keywords

Nitric Oxide, CVDs, hypertension, thrombosis, inflammation, stress..

Mutations in two component system (PhoPQ and PmrAB) in colistin resistant *Klebsiella pneumoniae* from North Indian tertiary care hospital

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PMID: 33820943 DOI: 10.1038/s41429-021-00417-2

Abstract

Colistin resistance in Gram negative bacteria is mainly attributed to chromosomal mutations in Two Component Systems(TCS) PhoPQ and PmrAB and plasmid-borne genes(mcr and its variants). The aim of this study was to understand the molecular basis of colistin resistance in *Klebsiella pneumoniae* and determine clonal transmission, in a North Indian tertiary care hospital over a 2.5 year period. Antimicrobial susceptibility was determined by Vitek and colistin resistance was confirmed by broth microdilution. Carbapenemases(*bla*_{KPC}, *bla*_{VIM}, *bla*_{IMP}, *bla*_{NDM}, *bla*_{OXA-48}) and *mcr-1* screening was done by PCR. Mutations in chromosomal genes *mgrB*, *phoP*, *phoQ*, *pmrA*, *pmrB* were analysed. Sequence typing was performed by Multilocus sequence typing(MLST). OXA-48 was detected in thirteen isolates while three isolates co-expressed OXA-48 and NDM. The *mcr-1* gene was absent in all 16 isolates. Deleterious mutations in *mgrB* included insertion sequences IS903 and ISkpn26 and a

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RNAi-mediated modulation of squalene synthase gene expression in *Artemisia annua* L. and its impact on artemisinin biosynthesis

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Keywords Artemisia Annu L. Asteraceae Artemisinin Malaria And Rnai-Technology

Toward Integrated Multi-Omics Intervention: Rice Trait Improvement and Stress Management

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PMID: 34721467 PMCID: PMC8554098 DOI: 10.3389/fpls.2021.741419

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Abstract

Rice (*Oryza sativa*) is an imperative staple crop for nearly half of the world's population. Challenging environmental conditions encompassing abiotic and biotic stresses negatively impact the quality and yield of rice. To assure food supply for the unprecedented ever-growing world population, the improvement of rice as a crop is of utmost importance. In this era, "omics" techniques have been comprehensively utilized to decipher the regulatory mechanisms and cellular intricacies in rice. Advancements in omics technologies have provided a strong platform for the reliable exploration of genetic resources involved in rice trait development. Omics disciplines like genomics, transcriptomics, proteomics, and metabolomics have significantly contributed toward the achievement of desired improvements in rice under optimal and stressful environments. The present review recapitulates the basic and applied multi-omics technologies in providing new orchestration toward the improvement of rice desirable traits. The article also provides a catalog of current scenario of omics applications in comprehending this imperative crop in relation to yield enhancement and various environmental stresses. Further, the appropriate databases in the field of data science to analyze big data, and retrieve relevant information *vis-à-vis* rice trait improvement and stress management are described.

Keywords: genomics; metabolomics; omics; proteomics; rice; stress; transcriptomics.



Air Quality Forecast using Convolutional Neural Network for Sustainable Development in Urban Environments

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Nanostructured lipid carrier to overcome stratum corneum barrier for the delivery of agomelatine in rat brain; formula optimization, characterization and brain distribution study

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PMID: 34391848 DOI: 10.1016/j.ijpharm.2021.121006

Abstract

The current work attempted to achieve bypassed hepatic metabolism, controlled release, and boosted brain distribution of agomelatine by loading in NLC and administering via transdermal route. Agomelatine-loaded NLC (AG-NLC) was fabricated employing melt-emulsification technique and optimized using central composite design. The optimized AG-NLC had 183.16 ± 6.82 nm particle size, 0.241 ± 0.0236 polydispersity index, and $83.29 \pm 2.76\%$ entrapment efficiency. TEM and FESEM visually confirmed the size and surface morphology of AG-NLC, respectively. DSC thermogram

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Immunomodulatory Activity of *Phyllanthus maderaspatensis* in LPS-Stimulated Mouse Macrophage RAW 264.7 Cells

by Uoorakkottil Ilyas¹, Deepshikha P. Katara², Punnoth Poomkuzhi Naseer^{3,*}, Mohamed Saheer Kurumyan⁴, Muhammed Elayadith-Meethal⁵ and Vidhu Aeri^{6,*}

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New constituents triterpene ester and sugar derivatives from *Panax ginseng* Meyer and their evaluation of antioxidant activities

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PMID: 28725154 PMCID: PMC5506737 DOI: 10.1016/j.jsps.2016.12.002

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Abstract

Panax ginseng C. A. Meyer (Araliaceae), is a well-known herb and used in the old established system of Oriental remedy, especially in Japan, China and Korea. Four new compounds characterized as (*cis*)-7 β ,11 α ,19,21-tetra-O-decanoyl-18, 22 β -dihydroxy-dammar-1-en-3-one (**1**), 3 β ,4 α ,12 β -trihydroxystigmast-5-en-21-yl octadecan-9',12'-dienoate (**2**), dammar-12, 24-dien-3 α , 6 β , 15 α -triol-3 α -D-arabinopyranosyl-6 β -L-arabinopyranoside (**3**) and dammar-24-en-3 α , 6 β , 16 α , 20 β -tetraol-3 α -D-arabinopyranosyl-6 β -D-arabinopyranoside (**4**) were isolated and established from the ethyl acetate and butanol extracts of the roots of *P. ginseng*. Their structures were established on the basis of

Flavonoid glycosides from leaves and straw of *Oryza sativa* and their effects of cytotoxicity on a macrophage cell line and allelopathic on weed germination

Ill-Min Chung ¹, Sung-Kyu Park ¹, Mohd Ali ², Mayakrishnan Prabakaran ¹, Young-Tek Oh ¹, Seung-Hyun Kim ¹, Nasir Ali Siddiqui ³, Ateeque Ahmad ^{4, 5}

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PMID: 29556129 PMCID: PMC5856946 DOI: 10.1016/j.jsps.2018.01.003

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Abstract

Five new flavonoids namely, 5-hydroxy-6-isoprenyl-7,4'-dimethoxyflavonol-3-O- β -D-arabinofuranoside (**1**), 5,7-dihydroxy-4'-methoxyflavone-7-O- β -D-arabinopyranosyl-2''-n-decan-1'''-oate (**2**), 3-butanoyl-5,6,8-trihydroxy-7,4'-dimethoxyflavonol-5-O- β -D-glucopyranoside (**3**), 7,4'-dimethoxy-5-hydroxyflavone-5-O- α -D-arabinopyranosyl-(2'' \rightarrow 1''')-O- α -D-arabinopyranoside (**4**), and 5,6-dihydroxy-7,4'-dimethoxyflavone-5-O- α -D-glucopyranoside (**5**), together with two known compounds, were isolated from the methanol extract of *Oryza sativa* leaves and straw. Their

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Abstract

Five new constituents, 5,4'-dihydroxy-7,3'-dimethoxyflavone-4'-O- β -D-xylopyranosyl-(2a \rightarrow 1b)-2a-O- β -D-xylopyranosyl-(2b \rightarrow 1c)-2b-O- β -D-xylopyranosyl-2c-octadecanoate (**1**), 5,4'-dihydroxy-7,3'-dimethoxyflavone-4'-O- α -D-xylopyranosyl-(2a \rightarrow 1b)-2a-O- α -D-xylopyranosyl-(2b \rightarrow 1c)-2b-O- α -D-xylopyranosyl-(2c \rightarrow 1d)-2c-O- α -D-xylopyranosyl-2d-octadecanoate (**2**),

A hybrid conceptual cost estimating model using ANN and GA for power plant projects

Sanaz Tayefeh Hashemi^{1,2} · Omid Mahdi Ebadati E.³ · Harleen Kaur⁴

Received: 1 August 2016 / Accepted: 14 August 2017
© The Natural Computing Applications Forum 2017

Abstract Providing an accurate completion cost estimate helps managers in deciding whether to undertake the project due to cash in hand. Hence, MAPNA Group Co. as an Iranian leading general contractor of power plant projects is not an exception too. Cost prediction in these projects is of great importance, whereas it can assist managers to keep their overall budget under control. Literature has been reviewed and influencing variables are explored. Thereafter, an artificial neural network model is developed and combined with genetic algorithm to select the best network architecture. According to the literature reviewed, almost all of the performed studies have selected the optimum network architecture through a process of trial and error, which makes the present method worthy of implementation. The best network architecture is capable of predicting projects' cost of accuracy equal to 94.71%. A sensitivity analysis is then performed to test the significance degree of model input variables.

Keywords MAPNA Group Co. · Artificial neural network (ANN) · Genetic algorithm (GA) · Construction cost · Early-stage cost estimation

1 Introduction

Power plants are industrial sites mainly constructed and utilized to generate and distribute electric power. MAPNA Group Co. is a leading Iranian company known as the first and largest general contractor of power plants in the Middle East and West Asia, which also operates in other fields such as oil and gas, railway, wind farms and investing projects as well as thermal power plants. Power plant projects are basically classified into different categories across the worlds today. The main power plants conducted by MAPNA Group Co. are as follows: gas turbine power plant (GTPP), combined cycle power plant (CCPP), combined cycle block (2 gas turbine + 1 steam turbine), hydroelectric, and Industrial Special (ISP) power plant projects.

The main concern of construction project managers is to undertake projects with allocating required resources, regarding predefined criteria, within which cost is the most important one, and delivering economic facilities while meeting acceptable safety standards [1]. Hence, cost management plays a vital role during project management process and though early-stage cost estimation in projects is a matter of great importance due to embedded uncertainties because of lacking available accurate data.

Cost estimation is an excessively experience-oriented process within which several matters such as relative influencing factors and their interrelationships should be considered based on adequate knowledge and expertise [2]. Traditional cost estimation methods in construction

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Cost estimation and prediction in construction projects: a systematic review on machine learning techniques

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Abstract

Construction cost predictions to reduce time risk assessment are indispensable steps for process of decision-making of managers. Machine learning techniques need adequate dataset size to model and forecast the cost of projects. Therefore, this paper presents analysis and studied manuscripts that proposed for cost estimation with machine learning techniques for the last 30 years. The impact of this manuscript is deep studied of machine learning techniques and applied an analysis methodology in cost estimation based on direct cost and indirect cost of construction projects, which consists of two parts. In the first part, for study the proposals, we focus on collecting related studied from Google Scholar and Science Direct journals. The interested application areas for project cost estimation are building, highway, public, roadway, water-related constructions, road tunnel, railway, hydropower, power plant and power projects. The second part is regarded to the analysis of the proposals. For cost analysis, there are possibilities to consider two approaches as qualitative and quantitative. However, reflect to the machine learning techniques the quantitative approach is studied. In quantitative approach, we categorized the models in three parts, as statistical, analogues and analytical model and analyse them based on their features. Correspondingly, papers have been thoroughly investigated based on the application area, method applied, techniques implemented, journals, which have been published in, and the year of publication. The most important outcome of this study is to find out the different analytics methods and machine learning algorithms to predict the cost estimation of construction and related projects and aid to find out the suitable applied methods.

Keywords Cost estimation · Prediction · Construction project · Machine learning · Systematic review

1 Introduction

Cost prediction is a vital process for every business in that it is a predecessor for budget prices and resource allocation in a project life cycle. Actually, it is hard to obtain input data for cost estimation process, while the scope of work is barely known in that it might lead to poor and rough estimates. The more, the project scope is known there are more chances to generate estimates that are more accurate in that more specifications of the project are defined. However, it should be taken into account that, on the other

hand, by the progressive elaboration, the process of cost control becomes more difficult if the project is based on inaccurate cost estimates. Furthermore, construction industry due to its characteristics and large amounts of capital needed to initiate and continue the project, are the project types which need more attention because they are high-risk [1]. Either overestimating or underestimating the cost of these projects will lead to future deviations in budget vs. realized cost. Hence, the methods used in this realm, their respective accuracy, and even their gaps have shown growing interest. Methods with more consistent

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Can PM_{2.5} pollution worsen the death rate due to COVID-19 in India and Pakistan?

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Keywords: COVID-19; PM_{2.5}.

Conflict of interest statement

Declaration of competing interest The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this

Can exposure to PM_{2.5} particles increase the incidence of coronavirus disease 2019 (COVID-19)?

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Declaration of competing interest The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Upcoming diagnostic biomarkers with promising prospects in neurological disorders

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PMID: 31746003 DOI: 10.1111/1440-1681.13216

Abstract

An exponential increase in the prevalence of neurological disorders requires substantial steps to be taken for their prevention and treatment. Neurodiagnostic biomarkers are gaining momentum presently in order to enhance the diagnostic accuracy of neurodegenerative disorders, to precisely assess their advancement and to monitor the efficiency of therapeutic interventions. Therefore, the primary focus of the present review is the recent development in this field of neurodiagnostic biomarkers, and the current state of biomarker exploration in the context of various neurodegenerative diseases. This review encompasses an updated and detailed account of specific (β -Amyloid, Tau and Phospho-tau 181, Tar-DNA binding protein-43, Progranulin, α -synuclein, Clusterin, etc) and non-specific (genetic, synaptic, inflammatory and coagulation) neurodiagnostic biomarkers and the recent advances in this growing field. This comprehensive review also suggests the utilization of neurodiagnostic markers in network approaches and personalized medication that will eventually improvise the existing diagnostic and therapeutic complexities of neurodiagnostic biomarkers.

Keywords: network approach; neurodiagnostic marker specific neurodiagnostic biomarker; neurological disorders; non-specific neurodiagnostic biomarker; personalized medication.

Box-Behnken supported development and validation of robust HPTLC method: an application in estimation of punarnavine in leaf, stem, and their callus of *Boerhavia diffusa* Linn

Wasim Ahmad,¹ Ibraheem Husain,² Niyaz Ahmad,³ Mohd Amir,⁴ Md. Sarafroz,⁵ Mohammad Azam Ansari,⁶ Ameeruz Zafar,⁷ Abuzer Ali,⁸ Rasheeduz Zafar,⁹ and Kamran Ashraf¹⁰

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Wasim Ahmad, Email: wasimahmadansari@yahoo.com.

[✉]Corresponding author.



Application of anthocyanins extracted from Sohiong (*Prunus nepalensis* L.) in food processing

Tanya L. Swer^a, Komal Chauhan^b & ✉, C. Mukhim^c, Khalid Bashir^d, Anit Kumar^b

^a Industrial Training Institute, Jowai, Meghalaya, India

^b National Institute of Food Technology Entrepreneurship and Management (NIFTEM), Kundli, Haryana, India

^c Tirhut College of Agriculture, DRPCA, Dholi, Muzaffarpur, India

^d Jamia Hamdard, New Delhi, India

Received 21 April 2019, Revised 26 June 2019, Accepted 3 July 2019, Available online 3 July 2019, Version of Record 10 July 2019.



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Vitamin D microencapsulation and fortification: Trends and technologies

Vaibhav Kumar Maurya¹, Khalid Bashir², Manjeet Aggarwal³

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PMID: 31586474 DOI: 10.1016/j.jsbmb.2019.105489

Abstract

Today, as per the latest medical reports available, majority of the population throughout globe is facing vitamin D (Vit D) deficiency. Even in sub-tropical countries like India and many others Vit D deficiency is highly prevalent despite the exuberant available sunshine (a major source of Vit D) throughout the year. The reason could be attributed to an array of factors including socioeconomical, cultural and religious. Further, other than the sunlight, there are very limited sources of Vit D to fulfil the recommended dietary allowance of Vit D (RDA: 400-800 IU per day). A large proportion of Vit D is lost during food processing and storage due to environmental stress conditions such as temperature, pH, salt, oxygen and light. Vita D, an important micronutrient, is essentially required for the prevention of disorders such as neurodegenerative diseases, cardiovascular diseases, cancer etc. in addition to its traditional role in bone metabolism. Therefore, in order to meet the daily requirements of Vit D for human body, WHO has recognized fortification as the most efficient and safest method to address malnutrition. But there are innumerable challenges involved during food fortification using Vit D as fortificants such as homogeneity into the food matrix, physico-chemical/photochemical degradation, loss during processing and storage, interactions with other components of food matrix resulting into change in taste, texture and appearance thus affecting acceptability, palatability and



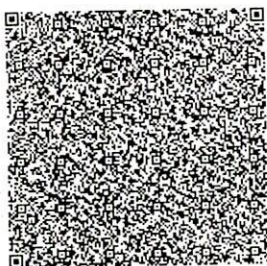
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MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding (MoU) entered into and executed on this 4th day of October 2017, at New Delhi.

BETWEEN

Jamia Hamdard (Deemed University), Hamdard Nagar, New Delhi-110062, INDIA, through its Registrar presently Prof. Ehsan A. Khan, (hereinafter called as 'JHUU'), PARTY OF THE FIRST PART.



E.A. Khan
Registrar
Jamia Hamdard
(Deemed University)
Hamdard Nagar
New Delhi-110062

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AND

YASHRAJ BIOTECHNOLOGY LTD., PLOT NO. C-232, TTC INDUSTRIAL AREA, MIDC, NAVI MUMBAI-400705, MAHARASHTRA, through its Director – Technical presently Dr. Paresh Bhanushali, (Hereinafter referred to as 'YBL') PARTY OF THE SECOND PART.

The expressions of Jamia Hamdard and Yashraj Biotechnology Ltd. shall, however, mean and include the Institutions / Organizations, their successors, appointees, assignees, etc.

WHEREAS, Jamia Hamdard was conferred the status of a Deemed University in 1989 vide a notification of the Ministry of Human Resource Development, under Section 3 of UGC Act, 1956. JHU became the first University of Delhi to be adjudged in a category 'A' by the National Assessment and Accreditation Council (NAAC) of India. JHU has emerged as an outstanding institution of higher learning with distinct and focused academic programmes. Jamia Hamdard has faculty of Science, Pharmacy, Medicine, Nursing, Management Studies, and Allied Health Sciences etc. The University has its own hospital and a MCI approved Medical College with the name Hamdard Institute of Medical Science & Research (HIMSR). JHU offers higher education in different disciplines of science, pharmacy and medicine leading to UG, PG and Ph.D. Degrees. JHU also envisages launching programmes in Interdisciplinary Science including Translational Research.

AND WHEREAS, Yashraj Biotechnology Ltd., is one of the forerunners in the medical diagnostic sector of the healthcare industry, engaged in research, development and bulk production of protein antigens (disease specific biomarkers for cancer, cardiovascular disease, inflammatory bowel disease, sepsis, neurological syndromes etc.) in native form from human biological fluids, cell derived antigens, recombinant proteins and monoclonal and polyclonal antibodies that subsequently are used as components in diagnostic kits by manufacturers world-wide. YBL is now aiming to extend its product and service portfolio by venturing into the stem cell diagnostic area, for which, extended collaborations with research organizations will be key.

AND WHEREAS, both parties viz., JHU and YBL realize that in the current context, working together is desirable to promote scientific research using facilities and expertise available at JHU and YBL Therefore, both parties are agreeable to enter into a MoU for working and cooperating with one another and using their respective expertise, knowledge and resources.

ARTICLE – I: OBJECTIVES OF COOPERATION

JHU and YBL, agree to develop their academic links under the principles of mutual understanding, common interest and mutually complementary activities as outlined hereunder.

1. To promote individual contacts among scholars, students and personnel of both the institutions.

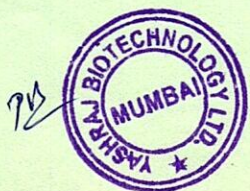


E.Achan Registrar
Jamia Hamdard
(Deemed University)
Hamdard Nagar
New Delhi-110032

2. To provide opportunities for both staff and students to use to maximum the expertise and facilities available in both the organizations through training of students/staff and through exchange of thoughts by brain storming sessions/seminars/workshops and meetings.
3. To work jointly for the common research interest at national and international levels. This includes preparation of joint proposals for funding from national and international agencies and their implementation.
4. To support the exchange of academic, research and training material.
5. To share experiences and expertise concerning administration and management of both the organizations.
6. To encourage any other activities that both the parties agreed to be on mutual benefit.

ARTICLE – II: AREAS OF COOPERATION

1. This MoU would cover all the constituent Units of YBL desirous of having collaboration with JHU research and joint. For this purpose, YBL may individually submit proposal for collaborative research to Steering Committee as envisaged in Article III of this MoU.
2. Ph.D. and PG students working at JHU will be allowed to carry out a part of their research work in YBL and vice-versa depending upon specific requirements. No fee will be charged by either of the parties for such association.
3. JHU and YBL will independently cover the cost of research chemicals and other expenditure incurred in connection with research collaboration, if it is absolutely required for success of the joint research work.
4. JHU and YBL shall apply for collaborative projects jointly to national and international funding agencies.
5. JHU and YBL shall organize joint Conferences / Seminars / Symposia / Workshops / Training Programmes and shall seek financial support from national and international agencies for such an event.
6. JHU and YBL may launch joint academic programme after due approval of statutory bodies of JHU and YBL and government, if applicable.
7. The Mobility of Professors/Faculties of JHU and Scientists / Researchers of YBL between JHU and YBL and vice-versa will be encouraged.



E. A. Chavan
Registrar
Samia Hamdard
(Deemed University)
Hamdard Nagar
New Delhi-110032

8. JHU will not claim any part of the IPR resulting from this collaboration if the invention originates from the work done at YBL. However, out of collaborative research if the invention originates from a JHU laboratory, the University will have full right on IPR.
9. The Scientists of YBL will deliver lectures in areas of their specialization to students of JHU as Visiting Faculty on days and timings prearranged on mutual consent by concerned Department.
10. Upon recommendations of the YBL, JHU may consider appointing Scientists working at YBL as 'Adjunct Faculty' (Adjunct Professor) for a specific duration in any identified Department of the University following the due procedure as per the University norms.
11. Each Institution will be free to have additional MoUs / Agreements with any other organization or agency. However, it would be incumbent upon JHU and YBL to safeguard the interest of their respective institutes and to avert any conflict of interest.

ARTICLE – III: IMPLEMENTATION AND MONITORING:

1. JHU and YBL shall constitute a joint 'Steering Committee' which will periodically monitor the progress of the MoU. Different proposals for collaboration will also be considered by the joint Committee. Meeting of the Committee may be held at the premise of JHU or YBL.

The Joint Steering Committee will be as follows:

From JHU:

- i) Prof. S. Raisuddin, Advisor (Research)
- ii) Prof. Farhan J. Ahmad, Department of Pharmaceutics.
- iii) Prof. J.K. Batra, Department of Biochemistry.

From YBL:

- i) Dr. Chander Puri
- ii) Dr. Paresh Bhanushali
- iii) Dr. Shweta Bhatt

Advisor (Research), JHU, will be the coordinator of all activities of this collaboration at JHU.

Regular meetings of Steering Committee will be organized at JHU and YBL and activities will be steering through the above Committee.



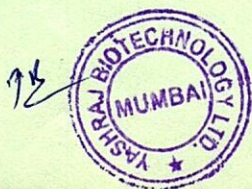
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Registrar
Jamia Hamdard
(Deemed University)
Hamdard Nagar
New Delhi-110062

ARTICLE – IV: DURATION AND TERMINATION OF THE MOU

1. This MoU is effective as of the date of signatures by the Authorities of JHU and YBL and shall remain in effect for five (5) years.
2. The tenure of MoU may be extended with mutual agreement of the parties.
3. This MoU may be amended at any time by written mutual consent of both the parties.
4. This MoU may be terminated by either party by the provision of written notice of termination not less than six months prior to the desired termination date. However, both parties agree that all continuing obligations to students, staff funding bodies or other entities are met in full subsequent to the notice of termination.
5. The termination of this MoU shall not affect the rights or obligations of either party regarding any binding offer or firm obligation approved and agreed to either party prior to the termination date.

ARTICLE – V: MISCELLANEOUS

1. If any provision of this Memorandum is held by any court or other competent authority to be illegal, void or enforceable in whole or in part, this MoU shall continue to be valid as to the other provisions therefore and the remainder of the effected provision.
2. Nothing in this MoU constitutes or to be construed a party as the partner, agent employee, or representative of the other party. A party must not act independently of the other Party and does not have the right or power to commit the other Party on any matter or incur any obligation on behalf of or pledge the credit of the other Party without the prior written approval of the other Party.
3. The parties agree to comply with all laws applicable within the jurisdiction of the signatories below.
4. Parties shall conduct their activities following all the statutory regulations and law of the land in letter and spirit.
5. Any dispute arising out of this Memorandum of Understanding or in its enforcement the concerned parties to this MoU will resolve the same amicably. However, in case if the dispute remains unresolved it shall be referred to an Arbitrator to be appointed by mutual consent of both the parties subject to Delhi jurisdiction. The decision of the Arbitrator shall be final and binding upon the party concerned.



E.A. Hasan
Registrar
Jamia Hamdard
(University)
Hamdard Nagar
New Delhi-110062

IN WITNESS whereof, the parties hereto have executed this MoU or caused it to be executed in their names and on their behalf by their duly authorized representatives on the date set forth.



Paresh


Dr. Paresh Bhanushali
(Director - Technical)
YASHRAJ BIOTECHNOLOGY LTD
Plot No. C-232,
TTC Industrial Area,
MIDC, Navi Mumbai - 400705,
Maharashtra.

E. Khan

Prof. Ehsan A. Khan
Registrar
Jamia Hamdard
Hamdard Nagar
New Delhi - 110062

Witnesses:

- Gadgil*

1. Mr. Subodh Gadgil
(Director-Operations), YBL
- Shweta*

2. Dr. Shweta Bhatt
(Chief Scientific Officer), YBL

Witnesses:

- R. Kh.*
1. Prof S. Raisuddin
(Advisor - Research).
- Nidhi*
2. *(Dr. Nidhi)*
Asst. Professor
CTCR, JH



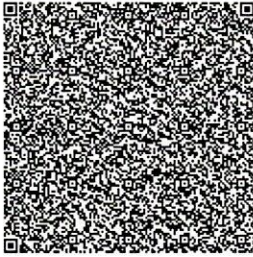
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MEMORANDUM OF UNDERSTATING

The Memorandum of Understanding executed this 09th day of December 2013 at New Delhi.

BETWEEN

Jamia Hamdard (Deemed University), Hamdard Nagar, New Delhi-110 062, through its Registrar presently Dr. Firdous A. Wani, (hereinafter referred to as 'JHU'), PARTY OF THE FIRST PART.

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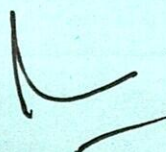
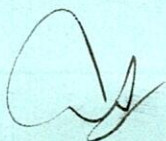
AND

Institute of Nuclear Medicine and Allied Sciences (INMAS), through its Additional Director & Scientist 'G' presently Dr. Rakesh Kumar Sharma, (hereinafter referred to as 'INMAS'), PARTY OF THE SECOND PART.

The expressions of JHU and INMAS shall, however, mean and include the Institutions/Organizations, their successors, appointees, assignees etc.

Now this Memorandum of Understanding Witnesseth:

1. INMAS, Delhi will be a 'Research Affiliate' of Jamia Hamdard.
2. There will be collaboration between the medical/pharmacy and basic science faculties of Jamia Hamdard and the scientists of INMAS in the areas of joint interests.
3. This collaboration will extend the facilities of the two Institutions/labs for complementing joint research projects and to train each other students/faculties to facilitate the overall research and training.
4. The two Institutions will conduct joint programs including courses and training as per mutual interest.
5. Wherever there is potential for research funding from national / international agencies, the applications for such funding in areas of mutual interest may be sent jointly after obtaining permission of the Competent Authority (DRDO HQrs) and the office of the Vice Chancellor, Jamia Hamdard.
6. Research Students working at INMAS be allowed to register for Ph.D. degree to be awarded by Jamia Hamdard. The guide will be a Scientist of the INMAS who will be at the level of Scientist with Ph. D. having the requisite experiences. A list of competent Scientists and their CVs will be provided by the Director INMAS to obtain a formal approval from the appropriate academic body of Jamia Hamdard at the time of processing of specific applications from INMAS. A faculty member of Jamia Hamdard will be a co-guide for these students. Bye-laws of Jamia Hamdard governing the admission and award of Ph. D. degree will apply to such joint Ph. D. program.
7. Ph.D. students working at JH will be able to carry out a part of their work at INMAS and if needed a INMAS scientist may be a co-guide.
8. JH and INMAS will independently cover the cost of research chemicals and other expenditure incurred in connection with the research collaboration.
9. INMAS will be happy to provide short-term training to students and faculty members of the JH in their areas of specialization on the request

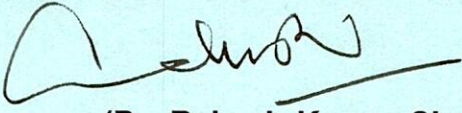


from the University. Upto a maximum of 4 to 6 such requests per year will be accepted.

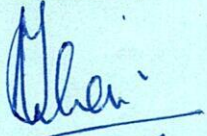
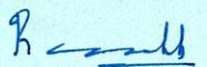
10. Jamia Hamdard and INMAS may apply for collaborative projects jointly to national and international funding agencies.
11. Scientists of INMAS labs may be invited to deliver lectures in specific courses or seminars of Jamia Hamdard.
12. Mobility of Professors/Faculties of Jamia Hamdard and Scientists of INMAS between Jamia Hamdard and INMAS will be encouraged.
13. IPR related issues shall be jointly shared by INMAS (through DRDO corporate HQ) and Jamia Hamdard.
14. This MOU will come into force on 21st August 2012 and will be for a period of five years (if not terminated). This MOU may be amended by mutual consent in writing of both the parties.
15. This MOU may be terminated by either institution at any time provided that the terminating institution gives to other party written notices of intention to terminate at least six months prior to termination.
16. Any dispute arising out of this Memorandum of Understanding or in its enforcement the concerned parties to this MoU will resolve the same amicably. However, in case if the dispute remains unresolved it shall be referred to an arbitrator to be appointed by mutual consent of both the parties subject to Delhi jurisdiction. The decision of the arbitrator shall be final and binding upon the party concerned.

In witness whereof, the Registrar, Jamia Hamdard, and the Director, INMAS, have hereinto signed this MOU on the day and year first above written.

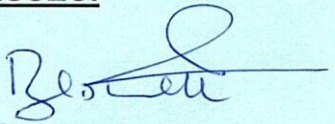
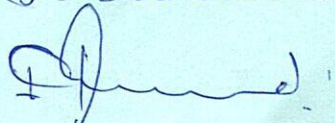

(Dr. Firdous A. Wani)
Registrar
Jamia Hamdard
Hamdard Nagar
New Delhi-110062


(Dr. Rakesh Kumar Sharma)
Additional Director & Scientist 'G'
Institute of Nuclear Medicine
and Allied Sciences
Brig. S.K. Mazumdar Marg
Delhi-110054

WITNESSES:

1. 
L.O. Jamia Hamdard
2. 
Achisar (Rosca), J.H.

WITNESSES:

1. 
(B.S. Dwarakanath)
2. 
(Dr. Kailash Mandla)



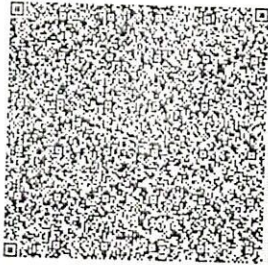
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MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding (MoU) is executed on this 13th day of October 2017, at New Delhi.

BETWEEN

JAMIA HAMDARD (Deemed University), Hamdard Nagar, New Delhi – 110062, through its Registrar presently Prof. Ehsan A. Khan, (Hereinafter referred to as 'JH' as the context permits), PARTY OF THE FIRST PART.

डा० पूनम सलोत्रा / Dr. POONAM SALOTRA
कार्यकारी निदेशक / Director in-Charge

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नई दिल्ली-110 029 / New Delhi-110 029

Registrar
Jamia Hamdard

Poonam

Ehsan

AND

ICMR-National Institute of Pathology (NIP), Safdarjung Hospital Campus, New Delhi-110029, established in 1965 under Indian Council of Medical Research (ICMR), Department of Health Research, Ministry of Health and Family Welfare, through its Director-in-Charge Dr. Poonam Salotra, (Hereinafter referred to as 'NIP' as the context permits), PARTY OF THE SECOND PART.

The expression of Jamia Hamdard and ICMR-The National Institute of Pathology shall however mean and include their successor, appointees, assignees etc.

WHEREAS, Jamia Hamdard was conferred the status of a Deemed University in 1989 vide a notification of the Ministry of Human Resource Development, under Section 3 of UGC Act, 1956. JH became the first University of Delhi to be adjudged in a category 'A' by the National Assessment and Accreditation Council (NAAC) of India. JH has emerged as an outstanding institution of higher learning with distinct and focused academic programmes. Jamia Hamdard has faculty of Science, Pharmacy, Medicine, Nursing, Management Studies, Interdisciplinary Sciences and Allied Health Sciences etc. The University has its own hospital and a MCI approved Medical College with the name Hamdard Institute of Medical Science & Research (HIMSR). JH offers higher education in different disciplines of science, pharmacy and medicine leading to UG, PG and Ph.D. Degrees. JH also envisages to launch programmes in interdisciplinary science including translational research.

AND WHEREAS, NIP, is a permanent institute of Indian Council of Medical Research (ICMR), New Delhi, conducts research on various cancers of national importance (Breast cancer, Prostate cancer, Urinary Bladder cancer, Hematopoietic-Lymphoid malignancies and neurological cancers), Infectious diseases, Diabetes, Environmental Toxicology and Adult Stem Cell Biology. The major thrust is on basic as well as translational research leading to development of vaccines for prevention and biomarkers for screening, diagnosis, prognosis and prediction of drug response, resistance for various diseases.

AND WHEREAS, both parties, viz., 'JH' and 'NIP' realize that in the current context, working together is desirable to promote scientific research in the areas of biomedical sciences, pharmaceutical sciences and environmental toxicology using facilities and expertise available at JH and NIP. Therefore, both parties are agreeable to enter into an MoU for working and cooperating with one another and using their respective expertise, knowledge and resources.

Article-I: Objectives of Cooperation:

JH and NIP, New Delhi, agree to develop their academic links under the principles of mutual understanding, common interest and mutually complementary activities as outlined hereunder.

1. To promote individual contacts among scholars, students and personnel of both the institutions/organizations.

Poonam

पूनाम सलोत्रा / Dr. POONAM SALOTRA
निदेशक / Director in-Charge
संस्थान (आई.सी.एम.आर.)
Pathology (ICMR)

E. Acharya
Registrar
Jamia Hamdard
(Deemed University)
Hamdard Nagar
New Delhi-110062

2. To provide opportunities for both staff and students to use to maximum the expertise and facilities available in both the organizations through training of students/ staff and through exchange of thoughts by brain storming sessions/seminars/workshops and meetings.
3. To work jointly for the common research interest at national and international levels. This includes preparation of joint proposals for funding from national and international agencies and their implementation.
4. To support the exchange of academic, research and training material.
5. To share experiences and expertise concerning administration and management of both the organizations.
6. To encourage any other activities that both the parties agreed to be on mutual benefit.

Article-II: Areas of Cooperation:

1. This MoU would cover all the constituent research groups of NIP. Desirous of having collaboration with JH for advanced research. For this purpose, NIP may individually submit proposal for collaborative research to Steering Committee as envisaged in Article IV of this MoU.
2. The Scientists/Researchers with M.D./Ph.D. working at NIP will be recognized as Co-supervisors for Ph.D. and Post-graduate (PG) theses. However, their recognition as Co-supervisors will be as per the University norms in this regard and approval by the concerned authority of the University. Bye-laws governing Ph.D. programme of Jamia Hamdard will apply to all the supervisors and candidates.
3. Ph.D. and PG students working at JH will be allowed to carry out a part of their research work in NIP and vice-versa depending upon specific requirements and enroll for Ph.D. program of JH in any discipline (Department) as per University guidelines. No fee will be charged by either of the parties for such association.
4. JH and NIP will independently cover the cost of research chemicals and other expenditure incurred in connection with research collaboration, if it is absolutely required for success of the joint research work.
5. JH and NIP shall apply for collaborative projects jointly to national and international funding agencies.
6. JH and NIP shall organize joint Conferences / Seminars / Symposia / Workshops / Training Programmes and shall seek financial support from national and international agencies for such an event.

Poonam
 डा० पूनम सलोत्रा / Dr. POONAM SALOTRA
 कार्यकारी निदेशक / Director in-Charge
 राष्ट्रीय विकृति विज्ञान संस्थान (आई.सी.एम.आर.)
 National Institute of Pathology (ICMR)
 अस्पताल परिसर
 Campus

EAFhan
 Registrar
 Jamia Hamdard
 (Deemed University)
 Hamdard Nagar
 New Delhi-110062

7. JH and NIP may launch joint academic programme after due approval of statutory bodies of JH and NIP and government, if applicable.
8. Mobility of Professors/Faculties of JH and Scientists/Researchers of NIP between JH and NIP and vice-versa will be encouraged.
9. JH will not claim any part of the IPR resulting from this collaboration if the invention originates from the work done at NIP. However, out of collaborative research if the invention originates from a JH laboratory, the University will have full right on IPR.
10. Scientists of NIP will deliver lectures in areas of their specialization to students of JH as Visiting Faculty on days and timings prearranged on mutual consent by concerned Department.
11. Upon recommendations of the NIP, JH may consider appointing Scientists working at NIP as 'Adjunct Faculty' (Adjunct Professor) for a specific duration in any identified Department of the University following the due procedure as per the University norms.
12. Each Institution will be free to have additional MoUs/Agreements with any other organization or agency. However, it would be incumbent upon JH and NIP to safeguard the interest of their respective institutes and to avert any conflict of interest.

Article-III: Duration and Termination of MoU:

1. This MoU is effectives as of the date of signatures by the Authorities of JH and NIP and shall remain in effect for FIVE (5) years.
2. The tenure of MoU may be extended with mutual agreement of the parties.
3. This MoU may be amended at any time by written mutual consent of both the parties.
4. This MoU may be terminated by either party by the provision of written notice of termination not less than six months prior to the desired termination date. However, both parties agree that all continuing obligations to students, staff funding bodies or other entities are met in full subsequent to the notice of termination.
5. The termination of this MoU shall not affect the rights or obligations of either party regarding any binding offer or firm obligation approved and agreed to either party prior to the termination date.

Poonam

डा० पूनम सलोत्रा / Dr. POONAM SALOTRA
कार्यकारी निदेशक // Director in-Charge
राष्ट्रीय विकृति विज्ञान संस्थान (आई.सी.एम.आर.)
National Institute of Pathology (ICMR)
सफदरजंग अस्पताल परिसर
Safdarjung Hospital Campus
New Delhi-110 029

E. Achan

Registrar
Jamia Hamdard
(Deemed University)
Hamdard Nagar
New Delhi-110062

Article-IV: Miscellaneous:

JH and NIP shall constitute a joint 'Steering Committee' which will periodically monitor the progress of the MoU. Different proposals for collaboration will also be considered by the joint Committee. Meeting of the Committee may be held at the premise of JH or NIP.

The joint Monitoring committee will be as follows:

From JH:

- i. Dean, School of Interdisciplinary Science & Technology
- ii. Advisor (Research) – Convener at JH.

From NIP:

- i. A senior Scientist of NIP to be nominated by the Director, NIP
- ii. A scientist or any other senior administrative staff as Convener on behalf of NIP to be nominated by Director, NIP.

2. If any provision of this Memorandum is held by any court or other competent authority to be illegal, void or enforceable in whole or in part, this MoU shall continue to be valid as to the other provisions therefore and the remainder of the effected provision.

3. Nothing in this MoU constitutes or to be construed a party as the partner, agent employee, or representative of the other party. A party must not act independently of the other Party and does not have the right or power to commit the other Party on any matter or incur any obligation on behalf of or pledge the credit of the other Party without the prior written approval of the other Party.

4. The parties agree to comply with all laws applicable within the jurisdiction of the signatories below.

5. Any dispute arising out of this Memorandum of Understanding or in its enforcement the concerned parties to this MoU will resolve the same amicably. However, in case if the dispute remains unresolved it shall be referred to an arbitrator to be appointed by mutual consent of both the parties subject to Delhi jurisdiction. The decision of the arbitrator shall be final and binding upon the party concerned.

Poonam

डा० पूनम सलोत्रा / Dr. POONAM SALOTRA
कार्यकारी निदेशक / Director in-Charge
राष्ट्रीय विकृति विज्ञान संस्थान (आई.सी.एम.आर.)
National Institute of Pathology (ICMR)
सफदरजंग अस्पताल परिसर
Safdarjung Hospital Campus
New Delhi-110 029

E. A. Khan

Registrar
Jamia Hamdard
(Deemed University)
Hamdard Nagar
New Delhi-110062

IN WITNESS WHEREOF, the parties hereto have executed this MOU or caused it to be executed in their names and on their behalf by their duty authorized representatives the date set forth.

Poonam

Dr. Poonam Salotra
Director-in-charge
National Institute of Pathology (ICMR)
Safdarjung Hospital Campus
New Delhi-110029

डॉ. पूनम सलोत्रा / Dr. POONAM SALOTRA
कार्यकारी निदेशक / Director in-charge
राष्ट्रीय विकृति विज्ञान संस्थान (आई.सी.एम.आर.)
National Institute of Pathology (ICMR)
सफदरजंग अस्पताल परिसर
Safdarjung Hospital Campus
नई दिल्ली-110 029 / New Delhi-110 029

WITNESSES:

1. *Nasreen*
NASREEN Z. EHTESHAM
Scientist 'G'
National Institute of Pathology
N. Delhi
2. *Sumita Ahuja*
Administrative officer
National Institute of Pathology,
New Delhi.

E. Khan

Prof. Ehsan A. Khan
Registrar
Jamia Hamdard
Hamdard Nagar
New Delhi-110062

WITNESSES:

1. *P. S. R. Suddhin*
(P. S. R. Suddhin)
Advisor (Research), JH.
2. *M. G. Vinod Kumar*
Asstt. Registrar (Res)



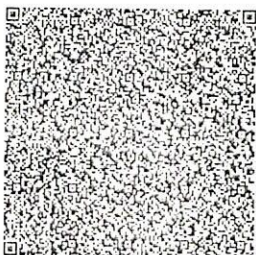
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Government of National Capital Territory of Delhi

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Certificate No. : IN-DL41364282028728P
Certificate Issued Date : 12-Oct-2017 09:56 AM
Account Reference : IMPACC (IV)/ dl740303/ DELHI/ DL-DLH
Unique Doc. Reference : SUBIN-DL74030384681352467845P
Purchased by : REGISTRAR JAMIA HAMDARD
Description of Document : Article 5 General Agreement
Property Description : Not Applicable
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(Zero)
First Party : REGISTRAR JAMIA HAMDARD
Second Party : Not Applicable
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Stamp Duty Amount(Rs.) : 100
(One Hundred only)



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MEMORANDUM OF UNDERSTANDING

The Memorandum of understanding executed this 13th day of October, 2017 at New Delhi.

BETWEEN

Jamia Hamdard (Deemed University), Hamdard Nagar, New Delhi-110062, through its Registrar presently Prof. Ehsan Ahmad Khan, duly authorized to enter into and sign MOU on behalf of Jamia Hamdard (hereinafter referred to as 'JHU'), PARTY OF THE FIRST PART.

Statutory Alert:

1. The authenticity of this Stamp Certificate should be verified at "www.shcilestamp.com". Any discrepancy in the details on this Certificate and as available on the website renders it invalid.
2. The onus of checking the legitimacy is on the users of the certificate.
3. In case of any discrepancy please inform the Competent Authority.

Registrar
Jamia Hamdard
(Deemed University)
Hamdard Nagar
New Delhi-110062

AND

Dabur India Limited, with its office at Sahibabad, Ghaziabad (U.P)-201010 through its Executive Director HR presently Mr. V. Krishnan duly authorized in this regards, (hereinafter referred to as 'DABUR'), PARTY OF THE SECOND PART.

The expressions of the Jamia Hamdard & DABUR shall, however, mean and include the institutions/Organization, their successors, appointee, assignees etc.

WHEREAS, Jamia Hamdard was conferred the status of a Deemed University in 1989 vide a notification of the Ministry of Human Resource Development, under Section 3 of UGC Act, 1956. JH became the first University of Delhi to be adjudged in a category 'A' by the National Assessment and Accreditation Council (NAAC) of India. JH has emerged as an outstanding institution of higher learning with distinct and focused academic programmes. Jamia Hamdard has faculty of Science, Pharmacy, Medicine, Nursing, Management Studies, and Allied Health Sciences etc. The University has its own hospital and a MCI approved Medical College with the name Hamdard Institute of Medical Science & Research (HIMSR). JH offers higher education in different disciplines of science, pharmacy and medicine leading to UG, PG and Ph.D. Degrees. JH also envisages to launch programmes in interdisciplinary science including translational research.

AND WHEREAS, Dabur is **DABUR INDIA LIMITED**, a company incorporated under the Companies Act, 1956 and having its place of business at 22, Site-IV, Sahibabad, Ghaziabad – 201 010, U.P., India.

AND WHEREAS, both parties viz., JH and Dabur realize that in the current context, working together is desirable to promote scientific research using facilities and expertise available at JH and Dabur. Therefore, both parties are agreeable to enter into a MoU for working and cooperating with one another and using their respective expertise, knowledge and resources.

ARTICLE I: OBJECTIVES OF COOPERATION

JH and Dabur, agree to develop their academic links under the principles of mutual understanding, common interest and mutually complementary activities as outlined hereunder.

1. To promote individual contacts among scholars, students and personnel of both the institutions.
2. To provide opportunities for both staff and students to use to maximum the expertise and facilities available in both the organizations through training of students/staff and through exchange of thoughts by brain storming sessions/seminars/workshops and meetings.



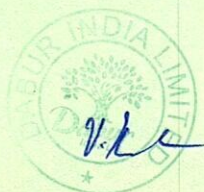
E. Khan

Registrar
Jamia Hamdard
(Deemed University)
Hamdard Nagar
New Delhi-110062

3. To work jointly for the common research interest at national and international levels. This includes preparation of joint supervision of Post-graduate (PG) and Doctoral (Ph.D.) students of JH and Dabur and submission of joint proposals for funding from national and international agencies and their implementation.
4. To support the exchange of academic, research and training material.
5. To share experiences and expertise concerning administration and management of both the organizations.
6. To encourage any other activities that both the parties agreed to be on mutual benefit.

ARTICLE II: AREAS OF COOPERATION

1. The Scientists/Researchers working at Dabur will be recognized as Co-supervisors for Ph.D. and Post-graduate (PG) thesis. However, their recognition as Co-supervisors will be as per the University norms in this regard and approval by the University. Bye-laws governing Ph.D. programme of Jamia Hamdard will apply to all the supervisors and candidates. The staff and scientists at Dabur will be eligible to get admission in Ph.D. programme of JH following due procedure.
2. This MoU would cover all the constituent Units of Dabur desirous of having collaboration with JH for advanced research and joint Ph.D. programme. For this purpose, Dabur may individually submit proposal for collaborative research to Steering Committee as envisaged in Article III of this MoU.
3. Rules of JH in force from time to time will applicable to all applications of Dabur for the Ph.D. admission formalities.
4. Ph.D. and PG students working at JH will be allowed to carry out a part of their research work in Dabur and vice-versa depending upon specific requirements. No fee will be charged by either of the parties for such association.
5. JH and Dabur will independently cover the cost of research chemicals and other expenditure incurred in connection with research collaboration, if it is absolutely required for success of the joint research work.
6. JH and Dabur shall apply for collaborative projects jointly to national and international funding agencies.
7. JH and Dabur shall organize joint Conferences / Seminars / Symposia / Workshops / Training Programmes and shall seek financial support from national and international agencies for such an event.



E. A. Khan Registrar
Jamia Hamdard
(Deemed University)
Hamdard Nagar
New Delhi-110062

8. JH and Dabur may launch joint academic programme after due approval of statutory bodies of JH and Dabur and government as applicable.
9. Mobility of Professors/Faculties of JH and Scientists/Researchers of Dabur between JH and Dabur and vice-versa will be encouraged.
10. JH will not claim any part of the IPR resulting from this collaboration if the invention originates from the work done at Dabur. However, out of collaborative research if the invention originates from a JH laboratory, the University will have full right on IPR.
11. Scientists of Dabur will deliver lectures in areas of their specialization to students of JH as Visiting Faculty on days and timings prearranged on mutual consent by concerned Department.
12. Upon recommendations of the Dabur, JH may consider appointing Scientists working at Dabur as 'Adjunct Faculty' (Adjunct Professor) for a specific duration in any identified Department of the University following the due procedure as per the University norms.
13. Each Institution will be free to have additional MoUs/Agreements with any other organization or agency. However, it would be incumbent upon JH and Dabur to safeguard the interest of their respective institutes and to avert any conflict of interest.

ARTICLE III: IMPLEMENTATION AND MONITORING

1. JH and Dabur shall constitute a joint 'Steering Committee' which will periodically monitor the progress of the MoU. Different proposals for collaboration will also be considered by the joint Committee. Meeting of the Committee may be held at the premise of JH or Dabur.

The joint Steering Committee will be as follows:

From JH:

- i) Dr Sayeed Ahmad
- ii) Advisor (Research)

From Dabur:

- i) Dr JLN Sastry
- ii) Dr Arun Gupta

Advisor (Research), JH will be the coordinator of all activities of this collaboration at JH.

Regular meetings of Steering Committee will be organized at JH and Dabur and activities will be steering through the above Committee.



E.A. Khan
Registrar
Jamia Hamdard
(Deemed University)
Hamdard Nagar
New Delhi-110062

ARTICLE IV: DURATION AND TERMINATION OF THE MOU

1. This MoU is effective as of the date of signatures by the Authorities of JH and Dabur and shall remain in effect for 5(five) years.
2. The tenure of MoU may be extended with mutual agreement of the parties.
3. This MoU may be amended at any time by written mutual consent of both the parties.
4. This MoU may be terminated by either party by the provision of written notice of termination not less than six months prior to the desired termination date. However, both parties agree that all continuing obligations to students, staff funding bodies or other entities are met in full subsequent to the notice of termination.
5. The termination of this MoU shall not affect the rights or obligations of either party regarding any binding offer or firm obligation approved and agreed to either party prior to the termination date.

ARTICLE V: MISCELLANEOUS

1. If any provision of this Memorandum is held by any court or other competent authority to be illegal, void or enforceable in whole or in part, this MoU shall continue to be valid as to the other provisions therefore and the remainder of the effected provision.
2. Nothing in this MoU constitutes or to be construed a party as the partner, agent employee, or representative of the other party. A party must not act independently of the other Party and does not have the right or power to commit the other Party on any matter or incur any obligation on behalf of or pledge the credit of the other Party without the prior written approval of the other Party.
3. The parties agree to comply with all laws applicable within the jurisdiction of the signatories below.
4. Parties shall conduct their activities following all the statutory regulations and law of the land in letter and spirit.
5. Any dispute arising out of this Memorandum of Understanding or in its enforcement the concerned parties to this MoU will resolve the same amicably. However, in case if the dispute remains unresolved it shall be referred to an Arbitrator to be appointed by mutual consent of both the parties subject to Delhi jurisdiction. The decision of the Arbitrator shall be final and binding upon the party concerned.



E. Khan

Registrar
Jamia Hamdard
(Deemed University)
Hamdard Nagar
New Delhi-110062

IN WITNESS whereof the parties hereto have executed this MoU or caused it to be executed in their names and on their behalf by their duly authorized representatives on the date set forth.



Mr. V. Krishnan
Executive Director-HR
Dabur India Limited
22, Site IV, Sahibabad
Ghaziabad-201010

E.A. Khan

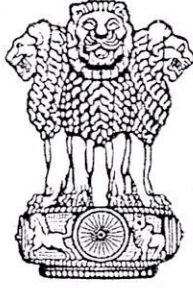
Prof. Ehsan A. Khan
Registrar
Jamia Hamdard
Hamdard Nagar
New delhi-110062

WITNESSES:

1. *Himanshu Bhatia*
(HIMANSHU BHATIA)
2. *J.L.N. [ASTRA]*
[J.L.N. [ASTRA]]

WITNESSES:

1. *Dr. Sayeed Ahmed*
[Signature]
2. *R. [Signature]*
Prof S.R. [Signature]
Advisor (Research).



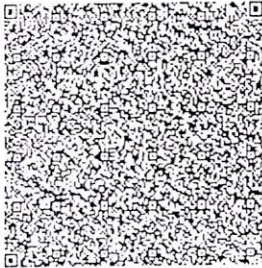
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Government of National Capital Territory of Delhi

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Certificate No. : IN-DL10677840994616P
Certificate Issued Date : 26-Jul-2017 03:55 PM
Account Reference : IMPACC (IV)/ dl740303/ DELHI/ DL-DLH
Unique Doc. Reference : SUBIN-DL74030322536201511020P
Purchased by : REGISTRAR JAMIA HAMDARD
Description of Document : Article 5 General Agreement
Property Description : Not Applicable
Consideration Price (Rs.) : 0
(Zero)
First Party : REGISTRAR JAMIA HAMDARD
Second Party : Not Applicable
Stamp Duty Paid By : REGISTRAR JAMIA HAMDARD
Stamp Duty Amount(Rs.) : 100
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Please write or type below this line.

MEMORANDUM OF UNDERSTANDING

The Memorandum of Understanding (MOU) is executed on this 27th day of September 2017, at New Delhi.

BETWEEN

JAMIA HAMDARD (Deemed University), Hamdard Nagar, New Delhi-110062, through its Registrar (Hereinafter referred as 'JHU'), PARTY OF THE FIRST PART.

Statutory Alert:

1. The authenticity of this Stamp Certificate should be verified at "www.shcilestamp.com". Any discrepancy in the details on this Certificate and as available on the website renders it invalid.
2. The onus of checking the legitimacy is on the users of the certificate.

AND

Fermish Clinical Technologies Private Limited, A-21, Sector 65, Noida, 201301, through its Managing Director Dr. Khalid Khan authorized in this regards, (Hereinafter referred to as '**Fermish**'), PARTY OF THE SECOND PART.

The expressions of the Jamia Hamdard & Fermish shall, however, mean and include the institutions/Organization, their successors, appointee, assignees etc.

NOW THIS MEMORANDUM OF UNDERSTANDING WITNESSETH:

1. Fermish, will be a 'Research Collaborator' of Jamia Hamdard.
2. There will be research collaboration between the medical/pharmacy and basic science Faculties of Jamia Hamdard and the scientists of Fermish in the areas of joint interests.
3. This research collaboration will extend the facilities of the two institutions/labs for the complementing joint research projects and to train each others' students /faculties to facilitate the overall research and training.
4. The two institutions will conduct joint programs including courses and training as per mutual interest.
5. Whenever there is potential for the research funding from national/international agencies, the applications for such funding in areas of mutual interest may be sent jointly after obtaining permission of the competent authorities of the two institutions.
6. Research students/ employees working at Fermish Clinical Technologies private Limited (Fermish) be allowed to register for Ph.D degree to be awarded by Jamia Hamdard. The co guide should be a regular scientist, of Fermish who will be at the level of Scientist 'E-1' of CSIR cadre or equivalent with a Ph.D. Degree and having the requisite experience as per the bye-law of Jamia Hamdard. A list of eligible scientist, along with CVs and list of publications will be provided by the Managing Director of Fermish to obtain a formal approval from the appropriate academic body of Jamia Hamdard at the time of processing of specific applications from Fermish. A faculty member of Jamia Hamdard will be a supervisor for these students. Bye-laws of Jamia Hamdard governing the admission and award of Ph.D. Degree will apply to such joint Ph.D. program.

7. Ph.D. students working at Jamia Hamdard will be able to carry out a part of their work at Fermish and if needed a Fermish scientist may be a co-guide.
8. Ph.D. students working under this MoU will be required to complete course work as per specification of Ph.D. bye-laws of Jamia Hamdard. Course work of specified credits will have to be completed at Jamia Hamdard. The university may allow to complete such course work at Fermish, if course work is the same as adopted and approved by Jamia Hamdard. Evaluation will be exclusively done by Jamia Hamdard.
9. Jamia Hamdard and Fermish will independently cover the cost of research chemicals & other expenditure incurred in connection with the research collaboration.
10. Fermish will provide short-term training to students and faculty members of the Jamia Hamdard in their areas of specialization on the request from the University.
11. Scientists of Fermish may be invited to deliver lectures in specific courses or seminars of Jamia Hamdard
12. Mobility of Professors/Faculties of Jamia Hamdard and Scientist of Fermish between Jamia Hamdard and Fermish will be encouraged.
13. IPR related issues shall be jointly shared by Fermish and Jamia Hamdard.
14. The tenure of the MOU is for a period for three years i.e. w.e.f. 27.09.2017 to 26.09.2020. This MOU may be amended / extended for specified duration by mutual consent in writing of both the parties.
15. This MOU may be terminated by either institution at any time provided that the terminating institution gives to other party written notice of intention to terminate at least six months prior to termination.
16. A joint committee shall be constituted to periodically review the progress of this MOU.
17. Any dispute arising out of this Memorandum of Understanding or in its enforcement the concerned parties to this MOU will resolve the same amicably. However, in case if the dispute remains unresolved it shall be referred to an arbitrator to be appointed by mutual consent of both the parties subject to Delhi jurisdiction. The decision of the arbitrator shall be final and binding upon the party concerned.

In witness whereof, the Registrar, Jamia Hamdard, and the Managing Director, Fermish Clinical Technologies Private Limited, have hereinto signed this MOU on the day and year first above written.



Dr. Khalid Khan
Managing Director
Fermish Clinical Technologies Private Limited
A-21, Sector 65,
NOIDA-201301 (UP)

EAKhas

27.9.17

Prof. Ehsan A. Khan
Registrar
Jamia Hamdard
Hamdard Nagar
New delhi-110062

WITNESSES:

Reenu

1. (Reenu Chaudhary)

Saad Khan
2. (Ms Saad Khan)

WITNESSES:

1. Fahad
(Fahad T. Ahmed)

2. Yahis
(Dr Yasmin Sultana)



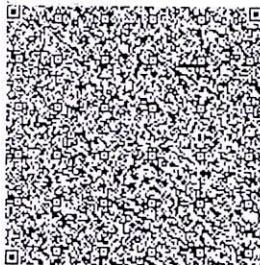
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Certificate No. : IN-DL10677005322650P
 Certificate Issued Date : 26-Jul-2017 03:55 PM
 Account Reference : IMPACC (IV)/ dl740303/ DELHI/ DL-DLH
 Unique Doc. Reference : SUBIN-DL74030322535439164190P
 Purchased by : REGISTRAR JAMIA HAMDARD
 Description of Document : Article 5 General Agreement
 Property Description : Not Applicable
 Consideration Price (Rs.) : 0
 (Zero)
 First Party : REGISTRAR JAMIA HAMDARD
 Second Party : Not Applicable
 Stamp Duty Paid By : REGISTRAR JAMIA HAMDARD
 Stamp Duty Amount(Rs.) : 100
 (One Hundred only)



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MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding is executed on this 25th day of August, 2017 at New Delhi.

BETWEEN

Jamia Hamdard (Deemed University), Hamdard Nagar, New Delhi-110062, represented through the Registrar presently Prof. Ehsan A. Khan, (Hereinafter referred as 'JHU'), PARTY OF THE FIRST PART.

Sarvagyan
 Secretary
 CPS International
 Center for Peace and Spirituality
 Wazirpur West
 Delhi-110013

E.A. Khan

Statutory AIBA:

1. The authenticity of this Stamp Certificate should be verified at "www.sholestamp.com". Any discrepancy in the details on this Certificate and as available on the website renders it invalid.
2. The onus of checking the legitimacy is on the users of the certificate.
3. In case of any discrepancy please inform the Registrar to the effect.

AND

CPS International, 1, Nizamuddin West Market, New Delhi-110013, through its Secretary, Mr. Saniyasnain Khan, (Herein referred to as 'CPSI'), PARTY OF THE SECOND PART.

The expressions of 'JHU' and 'CPSI' shall, however, mean and include the institutions / organizations, their successors, appointees, assignees, associate companies, firm, proprietorship, etc.

WHEREAS, Jamia Hamdard (Deemed University) is a minority educational institution under Article 30(1) of the Constitution of India and has become the first university in Delhi to be adjudged in category 'A' by the National Accreditation and Assessment Council of India. Jamia Hamdard is conducting a number of Undergraduate, Post Graduate courses and Ph.D. Programs.

AND WHEREAS, it is the statutory objective of JHU to disseminate and advance knowledge by providing instructional research and extension facilities in the fields of Islamic Studies and Social Sciences or as may be deemed fit.

AND WHEREAS, CPS International is a Trust registered under the Indian Trusts Act, 1882 that provides opportunities and resources to research scholars to conduct researches in the fields of Islam and the modern age, peace, interfaith harmony, conflict resolution and related topics.

AND WHEREAS, JHU has a Department of Islamic Studies under the School of Humanities and Social Sciences that offers a Ph. D program after completing of the due formalities and procedures.

AND WHEREAS, CPSI facilitates and supports researches through exceptional scholars in the field of Islam and the modern age, peace, interfaith harmony, conflict resolution and related topics.

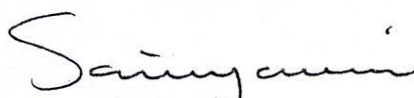
AND WHEREAS, CPSI approached JHU to collaborate with each other to conduct doctoral researches in Islam and the modern age, peace and related topics through the Department of Islamic Studies, School of Humanities and Social Sciences.

Now, therefore, this MoU, witnesses and parties agree as under:

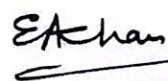
TERMS AND CONDITIONS:

Both the Parties shall arrange reciprocal arrangements to accomplish to give an impetus to collaborative researches in the fields of Islam and the modern age, peace, interfaith harmony, conflict resolution and related topics based on mutually acceptable terms as under:

1. That JHU shall provide the admissions in the Ph.D. Program of the Department of Islamic Studies, School of Social Sciences and School of



Secretary
CPS International
Center for Peace and Spirituality
1, Nizamuddin West,
New Delhi-110013

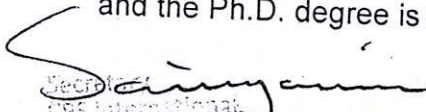
 Registrar
Jamia Hamdard
(Deemed University)
Hamdard Nagar

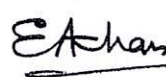
Humanities and Social Sciences or any other relevant Department of the First Party.

2. That CPSI will arrange to identify exceptional research scholars to conduct researches in the field of Islam and the modern age, peace, interfaith harmony, conflict resolution and related topics through the Ph.D. Program of JHU and support and facilitate such researches.
3. That for the purpose of pre-admission, if needed, CPSI shall arrange an internal entrance written test to identify eligible candidates for the said admission in the Ph.D. Program of JHU. For those candidates that qualify in the internal entrance test an interview shall be conducted by CPSI Research Panel. Alternately as per the applicable Bye-Laws Governing the Doctor of Philosophy (PH.D) Program in JHU, if required by JHU, the candidates will appear in the entrance test and the interview conducted by JHU for admission to Ph.D. Program.
4. That CPSI will get involved in the selection of Ph.D. Scholars who will be working on research topics jointly identified by JHU and CPSI. At one given time there will not be more than 05 such scholars to be selected by this mechanism.
5. That CPSI will partially support such scholars to the extent of ₹.5,000/- (Rupees five thousand only) per month per scholar directly. Such support shall be provided for the maximum duration of 36 months which is the minimum duration for submission of Ph.D. thesis as per JHU Ph.D. by-laws. However, a scholar shall cease to receive financial support from CPSI from the proceeding month of the month of submission of the Ph.D. thesis in case the scholar submits the thesis in less than 36 months. CPSI shall also provide 10% of the fellowship amount (of ₹. 500/- per scholar per month) to JHU directly as institutional overhead expenditure. This amount shall be transferred to JHU on an annual basis.
6. That as per the applicable Bye-Laws Governing the Doctor of Philosophy (PH.D.) Program in JHU for the purpose of conducting the researches, JHU will provide a supervisor for the qualifying doctoral research scholars and CPSI will provide a co-supervisor for the qualifying doctoral research scholars from its Research Panel.
7. That the Ph.D. course work will be as per JHU Ph.D. bye-laws. However, CPSI will be free to offer additional learning resources.
8. That CPSI will ensure that the candidates complete their research as JHU's terms outlined as per the Bye-Laws Governing the Doctor of Philosophy (PH.D.) Program in JHU all aspects.

TERMS OF TERMINATION:

1. This Memorandum shall come into effect on 11th day of July, 2017 and shall remain effective unless terminated by either party mutually. However, the MoU will continue till the process of the ongoing researches are completed and the Ph.D. degree is awarded to the said candidates.


Secretary
CPSI International
(Center for Peace and Spirituality)
1, Nizamuddin West
New Delhi-110013

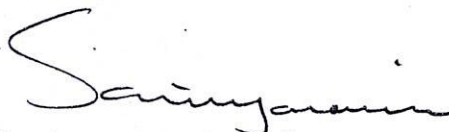

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Jamia Hamdard
(Deemed University)
Hamdard Nagar
New Delhi-110062

MISCELLANEOUS:

1. The Parties to this MoU may by mutual consent, add, modify, amend, delete, review any term(s) and condition(s) of this MoU in writing.
2. Any disputes between the parties shall be resolved by mutual discussions. Minor dispute during execution of the project shall be subjected to resolution out of this MOU. The MoU shall be considered, interpreted and governed by the laws of India and Courts at **Delhi** shall have exclusive jurisdiction in all such matters.
3. The Parties to this MoU undertake to treat as "confidential and privileged" information of the other Party which is so classified in advance and agree and undertake not to disclose the same to any third party without prior written permission to the other Party.
4. Without prejudice to the generality of the cooperation as incorporated in this MoU, the Parties herein may sign collaborative agreements in other fields of common interest.
5. That a Joint Monitoring Committee comprising representative of both parties will be constituted, which will oversee implementation of MOU.


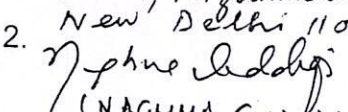
In consideration of the mutual covenants contained herein above and the terms and conditions of this MoU whereof the parties have hereinto set their hand and seal on the day and year first above written.

For and on behalf of CPSI:

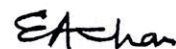


(Sanjiv Kumar) Secretary
Secretary CPS International
CPS International (Center for Peace and Spirituality)
1, Nizamuddin West, New Delhi-110013
1, Nizamuddin West Market,
New Delhi-110013.

WITNESSES:


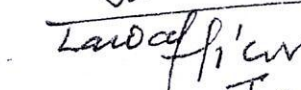

1. 
(FARIDA KHANAM)
C-29, Nizamuddin West
New Delhi 110013
2. 
(NAGHMA SIDDIQUI)
F 9/11 Model Town
Delhi-110009

For and on behalf of JHU:



(Prof. Ehsan A. Khan)
Registrar
Jamia Hamdard
Hamdard Nagar
New Delhi-110062.
Registrar
Jamia Hamdard
(Deemed University)
Hamdard Nagar
New Delhi-110062

WITNESSES:

1. 

Jamia Hamdard
2. 
Advisor (Research)
Jamia Hamdard.

COOPERATION PROTOCOL

BETWEEN



ISTANBUL AYDIN UNIVERSITY

AND



**Jamia Hamdard
(Deemed to be University)
Hamdard Nagar, New Delhi-110062.**

IQAC/Advisor (Research)
Received
Date 01-06-2018
Time 12:15 Pm.

Pavla



Istanbul Aydin University (hereafter referred to as **IAU**, address: BesyolMah. Inonu Cad. No:38K.cekmece/ Istanbul/ Turkey) and **Jamia Hamdard** (Deemed to be University) (hereafter referred to as **JH** address: Hamdard Nagar, New Delhi – 110 062, India) aim to establish and develop a strategic collaborative relationship in order to promote academic and cultural exchange between the two institutions based on the following provisions:

I. Areas of Cooperation:

The Cooperation Protocol will serve as a general framework for institutional cooperation through a broad range of activities such as:

- a. Exchange of students for study and research;
- b. Short-term programs;
- c. Exchange of academic staff for teaching and research;
- d. Collaboration on research projects and publications;
- e. Organizing joint seminars, conferences and other scientific events;
- f. Development of joint and dual degree programs or articulation and progression agreements;
- g. Organizing joint cultural activities designed to promote international understanding

II. Principles of Cooperation:

1. The Cooperation Protocol as outlined in this document is meant to describe the cooperative intentions of the institutions involved and suggest guidelines for cooperation. Any specific program will be subject to availability of funds and the mutual agreement of the two institutions.
2. The terms of cooperation for each specific activity implemented under this Cooperation Protocol will be mutually discussed and agreed upon in writing by both parties in a separate agreement, prior to the initiation of that activity. Any such implementation agreements will form appendices to this Cooperation Protocol.
3. Financial and/or funding consideration shall become the subject of specific discussion and agreement within the framework of separate implementation agreement. No financial commitment, on the part of either signatory, is intended in or to be implied from this general document.



III. Management of Cooperation

1. Each institution will designate an administrative office who will be the principal contact point for regular communications and the planning of activities for the implementation of this Cooperation Protocol.
2. Each institution will do its best to identify areas of mutual interest and key academic staff in relevant departments in order to formulate concrete proposals for research and teaching activities.

IV. Duration and Termination

The Cooperation Protocol will remain in force for a period of 5 (five) years from the date of the last signature, with the understanding that it may be terminated by the appropriate authorities of either party in writing, unless an earlier termination date is mutually agreed upon. The Cooperation Protocol may be amended or extended by mutually written consent of the authorities of the two parties.

V. Dispute Resolution :

All disputes arising under or in connection with this Cooperation Protocol shall be amicably resolved at least senior level appropriate by consultation and negotiation. Any dispute which cannot be resolved by amicable discussions between the Parties shall be referred to the Head of the Institutions or their nominees for resolution. Any unresolved dispute may be submitted to such alternative dispute resolution mechanism as may be agreed in writing between the Parties.

VI. Governing Law:

This Cooperation Protocol shall be governed by and construed in accordance with the laws of Turkey and India as the case may be.



IN WITNESS WHEREOF the Parties hereto have caused this MOU to be duly executed on the day and year first abovementioned.

(Prof. Yadigar Izmirli) 15.02.2018
Rector
Istanbul Aydin University
BesyolMah. Inonu Cad.
No:38K.cekmece/ Istanbul/ Turkey.

(Prof. Ahmed Kamal)
Pro-Vice Chancellor
Jamia Hamdard
Hamdard Nagar
New Delhi-110062.

Witnesses:

1.

2.

Witnesses:

1.

2.

MEMORANDUM OF UNDERSTANDING

Relating to Collaboration in Research

BETWEEN

NATIONAL UNIVERSITY OF SINGAPORE

AND

JAMIA HAMDARD (DEEMED TO BE UNIVERISTY)

IQAC/Advisor (Research)
Received
Date... 01-06-2018
Time... 02:15 pm

Signature

E. A. Khan
Registrar
Jamia Hamdard
(Deemed University)
Hamdard Nagar
New Delhi-110062



This Memorandum of Understanding (MOU) is made on this 30th day of January 2018.

BY AND BETWEEN

- (1) **NATIONAL UNIVERSITY OF SINGAPORE**, (Company registration number: 200604346E), a public company limited by guarantee incorporated in Singapore with its registered address at 21 Lower Kent Ridge Road, Singapore 119077, acting through its **Cancer Science Institute of Singapore (NUS)**; and
- (2) **Jamia Hamdard (Deemed to be University)**, Hamdard Nagar, New Delhi-110062, established under the UGC Act, 1956. It is a Society registered under the Societies Registration Act, 1860, bearing Registration No. S/19910 of 1989. JH became the first Deemed to be University of Delhi to be adjudged in a category 'A' by the National Assessment and Accreditation Council (NAAC) of India. JH offers higher education in different disciplines of science, pharmacy and medicine leading to UG, PG and Ph.D. Degrees. JH has its own hospital and a MCI approved Medical College with the name Hamdard Institute of Medical Science & Research (HIMSR).

NUS and JH shall hereinafter be referred to individually as a "Party" and collectively as the "Parties".

The expressions of the NUS and JH shall, however, mean and include the institutions / organization.

WHEREAS:

- (A) The Parties wish to promote joint research and development activities of mutual interest and benefit in the area(s) of particularly in the research of **Anti-cancer agents** in accordance with their respective needs and objectives.
- (B) The purpose of this MOU is to record formally the Parties' intention to explore and determine the areas and subject of collaboration and to set out the general principles under which the Parties intend to co-operate.

1 AREAS OF COOPERATION

- 1.1 The Parties intend to collaboratively pursue the following research activities:
 - (a) Joint research projects of mutual interests in the area of development of new anti-cancer agents research;
 - (b) Visits by staff and students for discussion and participation in joint research and development activities, seminars and conferences in disciplines of mutual interest;

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- (c) Exchange of scientific, academic and technical information and appropriate academic materials and other information of mutual interest; and
- (d) Research aiming pharmaceutical development for other diseases with unmet medical needs.

(Collectively the **Collaborative Activities**).

2. ARRANGEMENTS AND FUNDING:

- 2.1 Each Party may appoint representatives to help drive, oversee and facilitate the Collaborative Activities contemplated under this MOU.
- 2.2 To implement the Collaborative Activities envisaged under this MOU, representatives of the Parties may meet periodically to negotiate and conclude specific programmes of cooperation (the **Projects**), including the terms for their financing, with each other and, as the case may be, with other parties provided that neither Party can bind the other Party without having sought written consent.
- 2.3 As and when details of any Project are developed and mutually agreed by the Parties, the Parties agree to enter into a specific and legally binding definitive agreement (the **Project Agreement**) to implement the Project. Such Project Agreement shall include the terms and conditions that shall apply to the Project, a description of the Project, responsibilities of the Parties, terms of financing the Project and any other provisions which the Parties consider pertinent. The format of the Project Agreement shall be separately agreed by the Parties.
- 2.4 The Parties understand that all financial arrangements for the Projects will have to be negotiated and agreed separately and that the Parties' ability to carry out any Collaborative Activity will depend on the availability of funds and resources. In the absence of any specific agreement to the contrary, the Parties agree that all expenses, including but not limited to, salary, travel, living and associated costs relating to each Project shall be borne by the Party who incurs such expenses.

3. INTELLECTUAL PROPERTY, INVENTIONS, INNOVATIONS AND SPECIMENS

- 3.1 The terms with respect to title to, use and exploitation of intellectual property, inventions and innovations (including but not limited to trademarks and service marks, copyright, patents, know-how, designs and confidential information on the subject of such

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Jamia Hamdard
(Deemed University)
Hamdard Nagar
New Delhi-110062



intellectual property, inventions and innovations) will be negotiated on a project-by-project basis, and the terms and conditions as agreed by the Parties shall be included in the relevant Project Agreement for each Project. Save as aforesaid, nothing in this MOU shall be construed as a license or transfer or an obligation to enter into any further agreement with respect to any intellectual property currently licensed to or belonging to either Party.

3.2 All intellectual property held by a Party which the Party may disclose or introduce to the other Party in connection with this MOU and all materials in which such intellectual property is held shall remain the property of the Party introducing or disclosing it.

3.3 The Parties shall not transfer any specimens or materials between the Parties which are not jointly owned unless otherwise expressly agreed to in writing by the Parties.

4. PUBLICATION OF ARTICLES:

4.1 Each Party shall be able to publish the findings of the Projects in journals or electronic repositories, or present them at a conference or seminar, subject to the safeguards to be set out in the relevant Project Agreement.

5. CONFIDENTIALITY:

5.1 "Confidential Information" means all information, whether written, oral, pictorial or in other tangible form including personal data, prototypes and samples that is disclosed by a Party (the **Disclosing Party**) to the other Party (the **Receiving Party**) in connection with this MOU which currently is or which in the future may be identified by the Disclosing Party as proprietary or confidential and includes, without limitation, all information which by its nature the Receiving Party knew or should have reasonably known was or would be proprietary or confidential. Information disclosed orally, visually or in intangible form and identified as confidential at the time of such disclosure shall be considered Confidential Information.

5.2 The Receiving Party shall:

(a) use the same degree of precaution (but in no event less than a reasonable degree of care) as it would use to protect its own confidential or proprietary information of like importance to maintain the confidentiality, and prevent unauthorized use or disclosure of Confidential Information of the Disclosing Party;

(b) not use, adapt or reproduce the Confidential Information, in whole or in part, for any purpose other than for the

Registrar
Jamia Hamdard
(Deemed University)
Hamdard Nagar
New Delhi-110062



purposes of this MOU only, unless otherwise expressly agreed to in writing by the Disclosing Party; and

- (c) hold and keep in confidence any and all Confidential Information and not disclose such Confidential Information or any part thereof to any third party without the Disclosing Party's prior written approval except to its directors, officers, employees, agents, subcontractors, students and professional advisors strictly on a "need to know" basis, and who are bound by obligations of confidentiality.

- 5.5 The provisions of **Clause 5.2** shall not apply to information in the public domain; information in the possession of the Receiving Party prior to the disclosure of the information; information which is independently developed by the Receiving Party; information required to be released by law; and information which is rightfully received by the Receiving Party from third parties without any breach of confidentiality obligations.
- 5.6 The Receiving Party's obligations of confidentiality set out in this **Clause 5** shall survive the expiry or termination of this MOU for three (3) year from the date of expiry or termination of this MOU.
- 5.7 The Receiving Party shall comply with the Personal Data Protection Act 2012 of Singapore (the **PDPA**) and all subsidiary legislation related thereto (collectively the **Data Protection Legislation**) with regard to any and all personal data that it receives from the Disclosing Party.
- 5.8 All information or materials are provided by the Disclosing Party "as is" without any representation or warranty, express or implied, as to the accuracy, completeness, merchantability or fitness for a particular purpose or non-infringement of third party rights.

6. PUBLICITY AND USE OF NAMES:

- 6.1 Each Party shall, without the prior written consent of the other Party, not:
 - (a) use the name or logo of the other Party(ies) for any purpose; and
 - (b) publish any news releases, publicity, advertisements or marketing materials, or make any references, statements, announcements or denial or confirmation in any medium concerning all or any part of the discussions under this MOU;
- 6.2 Notwithstanding the generality of the above, the Parties may notify third parties of the fact that this MOU is in effect.

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Jamia Hamdard
(Deemed University)
Hamdard Nagar
New Delhi-110062



7. **NOTICES:**

7.1 All notices given pursuant to or in connection with this MOU shall be sent or delivered to the addresses set forth below. Notices are effective upon receipt.

If to NUS:

National University of Singapore
Cancer Science Institute of
Singapore
E-mail:
daniel.tenen@nus.edu.sg
Attention: Prof. Daniel G. Tenen
Director

If to JH:

Jamia Hamdard
(Deemed to be University)
E-mail:
eakhan@jamiyahamdard.ac.in
Attention: Prof. Ehsan A. Khan
Registrar

8. **TERM OF MOU:**

8.1 This MOU shall commence on the date first written above (the **Effective Date**) and shall remain in force for a period of **two (02)** years. Either Party may terminate this MOU by giving no less than six (6) months' prior written notice to the other Party of its desire to terminate. This MOU may be extended by the mutual agreement of both Parties in writing.

8.2 The termination of this MOU shall not affect the implementation of the Projects established under any Project Agreement made pursuant to this MOU prior to such termination except in accordance with such Project Agreement.

9. **AMENDMENTS:**

9.1 This MOU sets forth the entire understanding between the Parties regarding the subject matter hereof and supersedes any prior or contemporaneous written or oral understanding of the Parties. This MOU may be amended and supplemented in writing at any time by the mutual consent of the Parties in writing.

10. **DISPUTE RESOLUTION:**

10.1 All disputes arising under or in connection with this MOU shall be amicably resolved at the least senior level appropriate by consultation and negotiation. Any dispute which cannot be resolved by amicable discussions between the Parties shall be referred to the Deputy President (Research & Technology) of NUS and the Vice-Chancellor of JH or their nominees for resolution. Any unresolved dispute may be submitted to such alternative dispute resolution mechanism as may be agreed in writing between the Parties.

Registrar
EAS Jamia Hamdard
(Deemed University)
Hamdard Nagar
New Delhi 110062



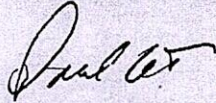
11. NON-BINDING NATURE OF THIS MOU:

11.1 Despite the statements and obligations expressed herein and save for **Clauses 3, 5, and 6**, this MOU is a non-binding expression of the current intentions of the Parties, and neither Party will incur nor be bound to any legal obligations or expense hereunder to the other Party until and unless definitive agreements have been negotiated, approved by the necessary management levels of each Party and executed and delivered by authorized representatives of all Parties. **Clauses 3, 5, and 6**, shall survive the expiry or termination of this MOU and shall be legally enforceable in accordance with their terms in any court of competent jurisdiction.

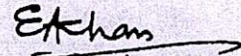
12. GOVERNING LAW:

12.1 This MOU shall be governed by and construed in accordance with the laws of Singapore.

IN WITNESS WHEREOF the Parties hereto have caused this MOU to be duly executed on the day and year first abovementioned.



(Prof. Daniel G. Tenen)
Director
Cancer Science Institute of Singapore
National University of Singapore
21 Lower Kent Ridge Road,
Singapore 119077



Registrar
(Prof. Ehsan A. Khan)
Jamia Hamdard
Deemed University)
Jamia Hamdard
Hamdard Nagar 110062
New Delhi-110062.



05th October 2018

Please find enclosed herewith the copy of “MoU regarding Entrepreneurship Development – institutional association MoU”, in collaboration with Wadhvani Foundation, Bengaluru. Jamia Hamdard has started a certificate course on entrepreneurship development under the umbrella of entrepreneurship cell, governed by Department of Computer Science, Jamia Hamdard.

This is for information and record.



Prof. S.H. Ansari

Registrar

c.c. to :

- ✓ • Advisor, Research – with the request to incorporate this information in NAAC document at an appropriate place.
- Hon'ble Pro Vice Chancellor – for information please

IQAC/Advisor (Research)	
Received	
Date..	05-10-18
Time..	05:40 Pm

Shawidk



Entrepreneurship Development – Institutional Association MOU

This non-binding Memorandum of Understanding ("MOU") is made on this 9th day of April 2018.

BETWEEN

JAMIA HAMDARD (Deemed to be University), Hamdard Nagar, New Delhi-110062, Hereinafter referred to as "Partner Institute" (which expression shall, unless it be repugnant to the subject or context thereof, include its successors and permitted assigns).

AND


Wadhvani Operating Foundation, a California nonprofit public benefit corporation, with offices at Four Main Street, Suite 120, Los Altos, CA 94022, hereinafter referred to as "WOF" or "WF", (which expression shall, unless it be repugnant to the subject or context thereof, include its successors and permitted assigns).

This MOU is non-binding in nature and does not create any legal obligations between the Parties, except for the intellectual property provisions in Section 2 and dispute resolution and indemnity provisions in Section 7 of the Terms and Conditions. The Partner Institute and WOF agree to work together to systematically develop the entrepreneurship programs described below.

Partner Institute and WOF are hereinafter individually referred to as a "Party" and collectively as the "Parties" as the context may require.

Objectives / Benefits:

1. Empower students with entrepreneurial traits and build leadership capabilities leading to success in entrepreneurship or superior job opportunities through:
2. Mainstreaming (make courses credit-bearing) entrepreneurship education on campus through curricular and Practicum activities and programs.
3. Support aspiring graduates who start meaningful ventures by connecting them to mentors, experts, service providers and learning mechanisms.


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Jamia Hamdard
(Deemed University)
Hamdard Nagar
New Delhi-110062

WOF Roles & Responsibilities:

A. Curriculum:


For Institutes that offer WF courses as credit-bearing:

1. Access to WF entrepreneurship curriculum, content and assessments via LearnWISE.
2. Access to annual face-to-face training program for selected faculty for up to three years - build faculty knowledge and skill; and access to online training.
3. Program management handholding guidance by a WF Regional Manager.
4. Faculty certification based on faculty assessment and demonstrated effective facilitation of WF courses.
5. Faculty merit certification based on achieving key success measures like:
 - full batch of students 25-30 actively engaging and qualifying in the assessments; and
 - 'outlier' students from each batch qualifying to the WF Accelerator program.
6. Faculty exposure opportunities with Angel / VC / Startup Accelerator program for the best faculty across the country.

B. E Cell Activities (Practicum):

7. Access for student leaders to annual E-Leader training (F2F); ongoing on-line training;

Organization building support; running outcome driven WF Practicum.
8. Handholding support from WF Regional Manager on Outlier program rollout including outreach, program deployment, and expert connects etc.
9. Access to the WF E-Cell playbook, WF Practicums, assessments and other activity management tools through LearnWise.
10. Joint E-Leader certificates of excellence with Institute based on WF defined success indicators.


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(Deemed University)
Hamdard

C. Incubation:

11. Qualified Incubatees get access to:

- WF Mentor, Investor, Customer and Service provider connects through a global platform;
- WF Learning Resources including videos from practitioners; and
- WF Venture Fastrack program (subject to its regular evaluation process).

12. Incubator access to:

- WF Venture Fastrack program franchise (as per regular evaluation process)

Partner Institutes Roles & Responsibilities:


A. Curriculum:

1. Adopt WF's Entrepreneurship Curriculum

- One or both courses offered as credit course/s starting Fall 2018 academic year
- At least 70% of the course content is WF content delivered via LearnWISE; and
- Course/s approved by the Senate / Boards of the institute and approval letter shared with WF.

2. A strong evangelist faculty appointed and trained and WF certified to run course/s:

- If such a faculty not available, an Institute funded visiting or adjunct faculty appointed for this purpose;
- Faculty appropriately trained and WF certified (expenses to attend training borne by institute) so can run course confidently; and
- Engage practitioners in classroom activity as necessary to learn effectively.
- Keep WF apprised of the students that are showing a strong inclination and aptitude to start up on a regular basis.


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Hamdard Nagar
New Delhi-110062


3. Adopt WF's built-in assessments as a mandatory part of overall course assessments including the quizzes, assignments and Capstone project with a minimum weightage of 40% for final credits of the program.

B. Practicum:

4. Launch or strengthen E-Cells run by students.
5. Enable E-Cells to run 'outcome' driven WF activities to engage students deeply.
6. Drive support for the 'outlier' students via the WF Advanced Practicum.
7. Enable and measure success indicators of E-Cell programs
 - Build member base of at least 50 students with 70% participating in 7 or more WF Practicum; and
 - 'Outlier' students on campus active in the E-Cell.
8. Incentivize through E-Leader certificates of excellence based on success indicators.
9. Incentivize members with certificate of merit based on learning quizzes and submitted assignments post activities.

C. Incubation:

10. Launch or strengthen incubator (at an appropriate time) for graduating students, alumni and community aspirants starting up, to maximize outcomes and efficiency.
11. Measure success indicators from the program:
 - Success rates of starting up from cohort higher than 80%;
 - Graduating cohorts achieving 70+% of business goals;
 - Optimized timelines of incubation 12-18 months.
12. Incubator lead by professional full-time leader.
13. Faculty, alumni and graduating student participation in incubation incentivized.
14. Publish outcomes and share with WF.


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New Delhi-110062

Other:

15. IT infrastructure (sufficient bandwidth to provide live and uninterrupted faculty and student device level access in classroom and at eCells of WOF content both curriculum and practicum) to enable students to learn using modern blended learning methodologies.

Governance and Review Process:


1. An Operational team consisting of WF Regional Manager with Faculty member(s) in charge as well as student E-Leaders will enable the rollout of the programs. They will interact monthly (via calls or in person) to track rollout and address issues.
2. A Steering Committee consisting of Institute's Director and WF Senior Management will review progress/outcomes and enable course correction at least twice a year.
3. Progress and feedback will be monitored via bi-annual surveys while outcomes will be measured annually jointly with WF.
4. If by Year 2, at least 25 students have not registered for these courses, either party holds the right to discontinue the program.

General Note:

1. The Partner Institute shall not be permitted to charge any fees, to the students, for granting to them access to, and use of, the WOF licensed Intellectual Property. Notwithstanding the foregoing, the Partner Institute may recover, by way of fees or other charges, from the students, the costs and expenses incurred by it in making the licensed Intellectual Property available to such students, such as the costs incurred in relation to faculty, the IT Infrastructure, etc.
2. WOF reserves the right to modify the MoU, if during the course of this program, it becomes evident that it is imperative to do so for the success of the program. Such communication will be sent via email to the registered email address which will be provided at the time of the registration on the Online Learning Platform.

Terms and Conditions:

1. **Financial Terms:** Each Party will bear the costs of meeting its responsibilities described in Section-2 above and will not owe the other Party any amounts pursuant to this MOU.
2. **Intellectual Property Rights:**
 - "Intellectual Property" includes creations, domain names, inventions, know-how, trade or business secrets, patents,


Registrar
Jamia Hamdard
(Deemed University)
Hamdard Nagar

copyrights, trademarks, logos, designs, works of authorship, software programmes, papers, models, teaching techniques, research projects, databases and instruction manuals.


- Each Party shall retain all rights to its IP and nothing contained in this MOU, nor the use of the IP in the publicity, advertising, or promotional or other material relating to the fulfillment of the obligations of the Parties contained herein shall be construed as giving to any Party any right, title or interest of any nature whatsoever to any of the other Party's IP.
- Partner institute will not copy or reproduce in any form, WOF's IP.
- The WOF licensed Intellectual Property is a product of WOF's knowledge and substantial skills, intellectual efforts and funding, and is, as such, a valuable asset, but is provided herein free of cost to the Partner Institute under the terms of this MOU.

3. Representations and Warranties:

- Each Party hereby represents and warrants that the use of IP made available or contributed by it does not violate the IP rights of any third party.
- Each Party has all requisite power and authority to enter into this MOU and the execution, delivery and performance by such Party of this MOU has been authorised by all necessary and appropriate corporate or governmental action and will not, to the best of its knowledge, violate any applicable law or approval presently in effect and applicable to it.

4. Confidentiality:

- The Parties acknowledge that during the term of this MOU each Party may obtain confidential and/or proprietary information of the other Party including, but not limited to, financial or business information, contracts and employee details (collectively, "Proprietary Information"). Such Proprietary Information shall belong solely to the disclosing Party. Proprietary Information shall not include information that is or becomes publicly known through no wrongful act of the receiving Party.
- The receiving Party shall not disclose Proprietary Information to third parties without the prior written consent of the disclosing Party and agrees to undertake reasonable measures to ensure that such is kept confidential and to disclose to its employees, officers, directors or representatives on a need to know basis only.


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New Delhi-110062

- The receiving Party also agrees to report immediately to the disclosing Party any unauthorized disclosure of Proprietary Information of which it has knowledge.

5. Third Party:

- Nothing in this MOU shall mean or shall be construed to mean that either Party is at any time precluded from having similar arrangements with any other person or third party.
- The Parties shall wherever necessary enter into definite written agreements with/without third parties to facilitate the implementation of specific initiatives with the prior written consent of the other Party. Such agreements will be independent and exclusive of this MOU.
- Each Party will promptly notify the other Party of any potential conflict of interest arising from the conduct of activity pursuant to this MOU as soon as it is known by the Party that becomes aware of the potential conflict.
- WOF shall not be liable for any acts done by any unauthorized person/(s) or individual/(s) claiming to act on its behalf.


6. Termination:

- This MOU is for the duration of three (3) years from the date of this MOU. However, either Party may terminate or extend this MOU by providing 60 days' notice in writing to the other Party. In the event that the Partner Institute would like to continue operating under the terms of the MOU because of student enrollment in courses conducted pursuant to this MOU, despite having received notice of termination from WOF, WOF will support the students until the end of the course, on submission of proof that the enrollments took place before the date of the termination notice.
- If the Partner Institute does not fulfill its responsibilities, WOF will discontinue the program and the Partner Institute shall cease to be a member.

- 7. Dispute Resolution:** If a dispute arises concerning the interpretation or implementation of this MOU the Parties agree to settle amicably by mutual consultation or negotiation and shall observe and comply with all laws, rules, and regulations of each other's country where this MOU is performed.


8. Miscellaneous:

- a) **Entire MOU:** This MOU constitutes the entire understanding of the Parties with respect to the Project and supersedes any prior or


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New Delhi 110062

contemporaneous oral or written understanding or communication between the Parties.

- b) **Amendment:** This MOU shall not be amended, changed, modified in whole or in part except by an instrument in writing signed by both the Parties hereto.
- c) **Relationship of Parties:** Nothing in this MOU shall be construed as creating a relationship of partnership, joint venture, agency or employment between the Parties. Neither Party shall be responsible for the acts or omissions of the other Party, nor shall either Party have the power or authority to speak for or assume any obligation on behalf of the other Party.
- d) **Assignment:** Each Party may assign its rights and obligations under this MOU with the prior written consent of the other Party. Notwithstanding the foregoing, WOF shall be entitled to assign any of its rights and obligations to any of its affiliates without the prior written consent of the Partner Institute. It is clarified that:
 - i. The assignment or alienation of any part or whole of the Partner Institute IP or WOF IP shall not be construed to be an assignment of rights or obligations under this MOU; and
 - ii. The delegation of any obligations under this MOU by WOF to any person or entity shall not be construed to be an assignment of rights or obligations under this MOU, so long as WOF remains at all times responsible for its obligations under this MOU.
- e) **Indemnity:** This M O U does not contemplate or provide for the exchange of any funds between the Parties. Therefore, save and except for fraud, no Party shall be liable to indemnify or pay damages to the other Party, its officers, directors, employees or agents from and against any liabilities, costs and expense incurred or suffered, or to be incurred or suffered by the other Party that arise out of or relate to, or result from any breach or termination by either Party of any of the provisions of this MOU. With regard to third party claims, each Party shall bear the liability of dealing with such claims that arise of breach by such Party of the terms of this MOU or the law for the time being in force.
- f) **Counterparts:** This MOU may be executed in two counterparts each of which when so executed and delivered in the English Language shall be an original, but all of which shall together constitute one and same instrument.
- g) **Notice:** Either Party may, from time to time, change its respective address or representative for receipt of notices or other communications by giving to the other Party not less than 10 days


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prior written notice in English. Please note you are required to notify WOF in writing upon making a change at nen-membership@wfglobal.org.

9. **Matters Not Covered by the MOU:** The WOF brand is upheld not only because of its thought leadership in entrepreneurship and best practices but also for the quality of its content, program management, delivery standards, material, tools, etc. Hence any co-branding, co-certification, and marketing association for a program would be subject to quality assessment on a case-by-case basis with individual partners and respective programs. This MOU does not automatically include co-branding, co-certification or marketing of programs operated by the Partner Institute, and discussions regarding such matters would be on a case-by-case basis between the Partner Institute and WOF.

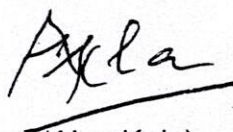
The Formal Approval Letter signed on will be considered to be Annexure-1 of this MoU.

We have read the above information and agree that the Partner Institute will engage in the WOF Entrepreneurship Development Affiliation. We understand that this guidance and support will enhance the value of our experience and speed of development in entrepreneurship education.

On behalf of Jamia Hamdard


Registrar
(S. S. Akhtar) Jamia Hamdard
Registrar (Deemed University)
Jamia Hamdard Hamdard Nagar
Hamdard Nagar New Delhi-110062
New Delhi-110062 (INDIA)

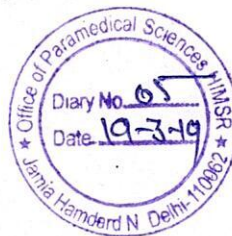
On behalf of WOF


(Ajay Kela)
Executive Director
Four Main Street, Suite 120,
Los Altos, CA 94022,

Prof. Raisuddin Sb.



FIJI NATIONAL
UNIVERSITY



MEMORANDUM OF UNDERSTANDING

BETWEEN

THE FIJI NATIONAL UNIVERSITY created by virtue of an Act with effect on 27 October 2009, with its head office located at Lot DSS 1722, 5 ½ Miles, Kings Road, Nasinu, Fiji, represented herein by the **Vice-Chancellor, Professor Nigel Healey**, (herein referred as "FNU"), of the FIRST PART.

AND

JAMIA HAMDARD (Deemed to be University), Hamdard Nagar, New Delhi-110062 (INDIA), represented herein by the **Registrar, Mr. Syed Saud Akhtar**, (herein referred as "JH"), of the SECOND PART.

FNU and JH, hereinafter separately referred to as a "Party" or mutually referred to as the "Parties".

PREAMBLE:

The Parties will cooperate and work together for the purpose of promoting mutual understanding, leading to the strengthening of both institutions through identified development activities. The Parties agree to promote, strengthen and enhance cooperation in the area of research, education and faculty development.

IT IS HEREBY AGREED AS FOLLOWS:

ARTICLE 1 – OBJECTIVE

The objective of this MOU is to bind together both of the signatories by working together on matters of common concerns, hence spreading their mutual interest through collaborative research and publications together with capability building.

ARTICLE 2 – SCOPE OF CO-OPERATION

The Parties agree to encourage and promote the following activities:

- a. Exchange of ideas, expertise and knowledge in the areas mutually agreed;

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(Deemed University)
Hamdard Nagar
New Delhi-110062

- b. Exchange of publications, collaborative research, publication, relevant technical information and academic materials between the respective organizations;
- c. Joint research, lectures, symposia and other academic activities
- d. Exchange of staff and students
- e. Other activities as may be mutually agreed upon by the Parties.

ARTICLE 3 – DURATION

This MOU is valid for a period of **5 (Five) years** and will enter into effect on the date of signing by the Parties. The operation of this MOU may be extended by mutual consent for such period(s) may be considered desirable by the parties, which period shall be set out in writing in letters of exchange signed by both Parties.

ARTICLE 4 – FINANCIAL ARRANGEMENTS

The parties agree that any specific project that arises from this MOU will need to be incorporated into a specific Memorandum of Agreement (MOA) and financial arrangements will have to be negotiated and agreed upon. Specific details for the implementation of activities will be developed mutually for each activity or project.

ARTICLE 5 – LEGAL EFFECT

The parties acknowledge that this MOU is not legally enforceable, but that it does not diminish the intention of the parties to comply with the terms, conditions, responsibilities and undertakings stipulated in this MOU.

ARTICLE 6 – TERMINATION

Either Party may terminate this MOU upon giving to the other party 6 (Six) months' notice in writing of its intention to do so. In the event of termination, both Parties agree to protect the interests of staff and students currently participating in collaborative programmes or initiatives and to provide all the support necessary to enable them to conclude those initiatives successfully.

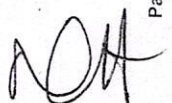
ARTICLE 7 - SETTLEMENT OF DISPUTES

Any dispute arising out of the interpretation and/or implementation of this MOU shall be settled amicably in good faith through consultation or negotiation between the parties without reference to any third party or any international tribunal.

ARTICLE 8 - CONFIDENTIALITY & INTELLECTUAL PROPERTY

The parties shall not disclose or distribute any confidential information, documents, data received or supplied to the other in the course of the implementation of this MOU to any third party except as authorized in writing to do so by the requesting party. The parties further agree to recognize each other's intellectual property rights in relation to the performance of the responsibilities of each party under this MOU.

Registrar
Jamia Hamdard
(Deemed University)
Hamdard Nagar
New Delhi-110062



ARTICLE 9 - FORCE MAJEURE

Neither Party shall be held responsible for non-fulfilment of their respective obligations under this MOU due to exigency of one or more of the force majeure events such as, but not limited to, act of God, war, flood, earthquake, strikes, lockouts, epidemics, riots, civil commotion, etc., provided on the occurrence and cessation of any such events, the Party affected thereby shall give a notice in writing to the other Party within 1 (One) month of such occurrence or cessation.

ARTICLE 10 - MODIFICATIONS AND AMENDMENTS

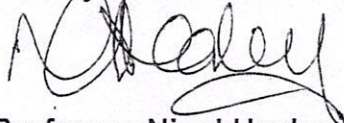
This MOU may be varied and/or amended by the mutual agreement of the Parties and any such variation shall be set out in writing and signed by the Parties.

ARTICLE 11 - DESIGNATION OF OFFICE

Each party shall designate an office and/or an officer which/who shall serve as liaison for implementing this MOU. Unless the other party is advised in writing, for the FNU: this person is Dr. Gausal Azam Khan, A/Professor College of Medicine, Nursing and Health Science, Department of Physiology & Physiotherapy (gausal.khan@fnu.ac.fj). For JH: this person is Dr. MI Alam, Department of Physiology, HIMSAR, Jamia Hamdard, New Delhi-110062 (iqbalasc@yahoo.com).

IN WITNESS WHEREOF, the parties hereto have affixed their signatures:


SIGNED on behalf of
The Fiji National University by



Professor Nigel Healey
Vice-Chancellor
Fiji National University
Lot DSS 1722, 5 ½ Miles,
Kings Road, Nasinu, Fiji,

Date:

Witnesseth by:

Signed: 

Name: Ms. Santa Devi

Title: University Registrar

Date: 23/07/18


SIGNED on behalf of
Jamia Hamdard by



Syed Saud Akhtar
Registrar
Jamia Hamdard
Hamdard Nagar
New Delhi-110062
(Deemed University)

Date: Hamdard Nagar
New Delhi-110062

Witnesseth by:

Signed: 

Name: Prof. Md. Iqbal Alam

Title: Professor of Physiology

Date: 29/06/2018



**FIJI NATIONAL
UNIVERSITY**



MEMORANDUM OF AGREEMENT (MoA)

BETWEEN

THE FIJI NATIONAL UNIVERSITY created by virtue of an Act with effect on 27th October 2009, with its head office located at Lot DSS 1722, 5 ½ Miles, Kings Road, Nasinu, Fiji, represented herein by the **Vice-Chancellor, Professor Nigel Healey**, (Hereinafter referred as '**FNU**'), PARTY OF THE FIRST PART.

AND

JAMIA HAMDARD (DEEMED TO BE UNIVERSITY), Hamdard Nagar, New Delhi-110062, represented through its Registrar presently Mr. S.S. Akhtar, (Hereinafter referred as '**JH**'), PARTY OF THE SECOND PART.

The expressions of '**FNU**' and '**JH**' shall, however, mean and include the institutions / organizations, their successors, appointees, assignees, associate companies, firm, proprietorship, etc.

PREAMBLE:

This MoA outlines the shared responsibilities between the two parties in undertaking the project funded by the Grand Challenges Canada Grant Number: R-ST-POC-1807-13914: Stars in Global Health: Early detection of bio-markers for pre-eclampsia.

Grand Challenges Canada has awarded the Fiji National University, College of Medicine, Nursing & Health Sciences also known as CMNHS (the "Grantee") of a grant of up to the amount of \$94,889 CAD for the period beginning on June 1, 2018 (the "Start Date") and ending on December 1, 2019 (The "Project Period").

ARTICLE 1 – OBJECTIVE

This MoA contains the terms and conditions of the extent of the MoA between the two parties undertaking the action funded by the Grand Challenges Canada Grant Number: R-ST-POC-1807-13914.

The Grantee agrees that the advance of any funds by Grand Challenges Canada to the Grantee under the Grant Agreement is subject to its compliance with the conditions set out herein, including those in the Attachments hereto, which form an integral part of this Grant Agreement. For interpretive purposes, this Grant Agreement supersedes any attached documents.

1. Both parties must have read the "Grant Agreement" and understood what their role in the action will be before undersigning this agreement.
2. Both parties must have read the standard "Grant Agreement" and understood what their respective obligations under the MoA will be if the grant is awarded. They authorise the lead applicant to sign the MoA with the Agency and represent them in all dealings with the Agency in the context of the action's implementation.
3. The applicant must consult with other party regularly and keep them fully informed of the progress of the action.
4. Both parties must receive copies of the reports - narrative and financial - made to the donor.
5. Proposals for substantial changes to the action should be agreed by both parties before being submitted to the Donor. Where no such MoA can be reached, the applicant must indicate this when submitting changes for approval to the Donor.

ARTICLE 2 – SCOPE OF CO-OPERATION

Roles and Responsibilities of Fiji National University:

FNU agrees to provide the following as a signatory to this Memorandum of Agreement as follows:

1. Release the grant money allotted as per the budget approved by Grant Challenges Canada (19,944 CAD).
2. Allow the PI/ postdoctoral fellow to visit/work/liaise with JH in a timely manner as per the project proposal to complete the work within the given time frame.

3. Salary and other approved expenditures should be paid from the grant as per approved budget.
4. Allow the Principal Investigator to use the funds as per the budget approved by Grant Challenges Canada.
5. Necessary measures need to be taken to ensure that the deliverables of the project are within the time frame.

Roles and Responsibilities of Jamia Hamdard (Deemed to be University):

JH agrees to provide the following as a signatory to this Memorandum of Agreement as follows:

1. Complete the assigned work as per the project with consultation with Principal Investigator.
2. Allow Principal Investigator to constantly monitor the project on daily basis for successful delivery of the objectives.
3. Allow the Principal Investigator to work in JH to complete the project for successful completion.
4. Use the grant as per the budget approved by Grant Challenges Canada.
5. Data and financial report should be submitted in time of the project period.
6. Any unused funds should be return to FNU with proper financial records.
7. After receiving the allocated funds, it is the responsibility of JH to complete the project deliverable and submit the report within the time frame.

ARTICLE 3 – DURATION

This MoA is valid for a period of **18 (Eighteen) Months** and will enter into effect on the date of signing by the Parties. The operation of this MoA may be extended by mutual consent for such period(s) may be considered desirable by the parties, which period shall be set out in writing in letters of extension signed by both Parties.

ARTICLE 4 – FEES AND COST

- 4.1 FNU is responsible for payment of all costs and fees as agreed in this MOA (refer schedule 1) and for any associated activities (Principal Investigator/Postdoctoral fellow visit and salary), which are agreed by both parties.
- 4.2 The details of the fees and costs are detailed in “SCHEDULE 1 - Project Budget and financial breakdown of the project”
- 4.3 All payments of the project related expenditures are to be made to the Parties institutional account to the following banking details by FNU:

Bank Account Details:

Name and address of the account holder:	Jamia Hamdard
Name of Bank	Jammu and Kashmir Bank Ltd
Address of Bank	Lal Chowk Okhla Industrial Area Phase – II New Delhi - 110020
Bank Code	0715
SWIFT Code	JAKAINBBOKL
BSB Code	N.A
IBAN Account number	N.A
The national VAT number	-----
Bank Account Number	0387010100001539
Internal project number of the account holder (if known at this stage) (Vote Code)	-----

ARTICLE 6 – TERMINATION

Either Party may terminate this MoA upon giving to the other party 6 (six) months' notice in writing of its intention to do so. In the event of termination, both Parties agree to protect the interests of staff and students currently participating in collaborative programmes or

initiatives and to provide all the support necessary to enable them to conclude those initiatives successfully.

ARTICLE 7 - SETTLEMENT OF DISPUTES

Any dispute arising out of the interpretation and/or implementation of this MoA shall be settled amicably in good faith through consultation or negotiation between the parties without reference to any third party or any international tribunal.

ARTICLE 8 - CONFIDENTIALITY & INTELLECTUAL PROPERTY

The parties shall not disclose or distribute any confidential information, documents, data received or supplied to the other in the course of the implementation of this MoA to any third party except as authorized in writing to do so by the requesting party. The parties further agree to recognize each other's intellectual property rights in relation to the performance of the responsibilities of each party under this MoA.

ARTICLE 9 - FORCE MAJEURE

Neither Party shall be held responsible for non-fulfilment of their respective obligations under this MoA due to exigency of one or more of the force majeure events such as, but not limited to, act of God, war, flood, earthquake, strikes, lockouts, epidemics, riots, civil commotion, etc., provided on the occurrence and cessation of any such events, the Party affected thereby shall give a notice in writing to the other Party within 1 (one) month of such occurrence or cessation.

ARTICLE 10 - MODIFICATIONS AND AMENDMENTS

This MoA may be varied and/or amended by the mutual Agreement of the Parties and any such variation shall be set out in writing and signed by the Parties.

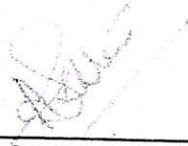
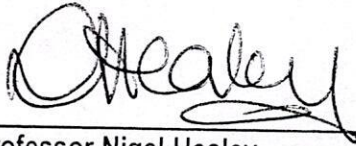
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IN WITNESS WHEREOF, the parties hereto have affixed their signatures:

SIGNED on behalf of
The Fiji National University by

SIGNED on behalf of
University of Jamia Hamdard by



Professor Nigel Healey
Vice-Chancellor
Fiji National University

Mr. Syed Saud Akhtar
Registrar
Jamia Hamdard

Date: 16.10.18

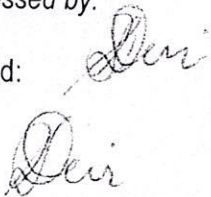
Date: 13/12/18

Witnessed by:

Witnessed by:

Signed:

Signed:



Name: SARITA DEVI

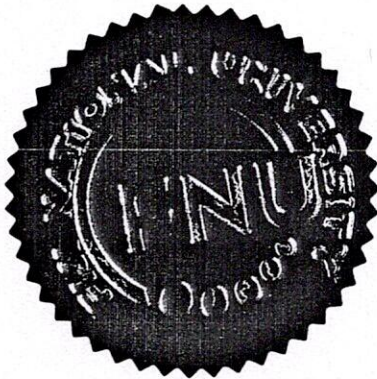
Name: DR. M.I. ALAM

Title: REGISTRAR

Title: Professor of Physiology

Date: 18/10/18

Date: 13/12/18



SCHEDULE 1 – Project Budget and financial breakdown of the project

Sub-grants

Item of expenditure	Year 1 - Local Currency	Year 2 - Local Currency	Total Local Currency	Total CAD	Description required
Sub-grant /contract 1: Oscar Medicare Pvt. Ltd					The Sub-grantee is Oscar Medicare Pvt. Ltd, New Delhi: They will develop the kit after getting the final results from the experiments. The remuneration charges:
Remuneration - organization's employees		9,000	9,000	5,499	Two employee [1500 x 3 months=4500 X2=9000.00]
Fees - Subcontractors					
Reimbursable Travel Costs					
Reimbursable Goods and Supplies		3,000	3,000	1,833	For reagents, chemicals etc.... for development of Kit.
Reimbursable Equipment Costs					
Reimbursable Project Administration Costs					
Sub-grant /contract 2:					University of Jamia Hamdard, New Delhi, as per proposal (sub grant) part of the sample will be collected in India and will be analyzed there. Therefore manpower; chemicals etc... will be required as below and it is through one of the collaborator in India:
Remuneration - organization's employees	19,944	-	19,944	12,186	One research Associate/ Postdoc @ 500 CAD/ month x 18 Months=9000 CAD; 5. one technician @ 200 CAD/ month x 18 months=3600 CAD
Fees - Subcontractors					
Reimbursable Travel Costs					
Reimbursable Goods and Supplies	9,100	-	9,100	5,560	1. eDNA Isolation kit 1000X2=2000 CAD; eRNA isolation kit 1000x2=2000 CAD. Chemicals: 1750 CAD. Total=5750 CAD

Reimbursable Equipment Costs	3,957	-	3,957	2,418	Liquid nitrogen tank (one) and small Centrifuge (one): 2500 CAD
Reimbursable Project Administration Costs	-	-	-	-	-
Sub-grant contract 3:					
Remuneration - organization's employees	-	-	-	-	-
Fees - Subcontractors	-	-	-	-	-
Reimbursable Travel Costs	-	-	-	-	-
Reimbursable Goods and Supplies	-	-	-	-	-
Reimbursable Equipment Costs	-	-	-	-	-
Reimbursable Project Administration Costs	-	-	-	-	-
Sub-grant /contract 4:					
Remuneration - organization's employees	-	-	-	-	-
Fees - Subcontractors	-	-	-	-	-
Reimbursable Travel Costs	-	-	-	-	-
Reimbursable Goods and Supplies	-	-	-	-	-
Reimbursable Equipment Costs	-	-	-	-	-
Reimbursable Project Administration Costs	-	-	-	-	-
Total 1.7 Sub-grants	33,001	12,000	45,001	27,496	Total of 1.7 sub-grant

①
AGREEMENT

BETWEEN

THE UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND
CULTURAL ORGANIZATION

AND

THE NETWORK ON RESEARCH AND POSTGRADUATE
EDUCATION IN BIOPHYSICS, BIOTECHNOLOGY AND
ENVIRONMENTAL HEALTH

CONCERNING THE ESTABLISHMENT OF A UNITWIN
COOPERATION PROGRAMME

AGREEMENT

Between the United Nations Educational, Scientific and Cultural
Organization
and the Network on Research and Postgraduate Education in Biophysics,
Biotechnology and Environmental Health
concerning the establishment of a UNITWIN Cooperation Programme

The United Nations Educational, Scientific and Cultural Organization, 7. Place de Fontenoy, 75352 Paris, France, represented by its Director-General, Ms Audrey Azoulay, (hereinafter referred to as "UNESCO").

AND

The International Network on Research and Postgraduate Education in Biophysics, Biotechnology and Environmental Health (hereinafter referred to as "the Network"), composed of:

- Life Sciences International Postgraduate Educational Center, 31 Acharian St., Yerevan, 0040, Armenia, represented by its Director, Professor G. Ayrapetyan;
- Bogomoletz Institute of Physiology, Bogomoletz Str.4, Kyiv, 01024, Ukraine, represented by its Director, Professor Oleg Krishtal;
- Cairo University, El-Gammaa, 12613, Cairo, Giza, Egypt, represented by its President; Professor Mohamed Othman Elkhosht;
- Istanbul Medeniyet University, Dumlupınar Mahallesi, D-100 Karayolu No:98, 34000 Kadıköy, Istanbul, Turkey, represented by its Rector, Professor Dr. M. Ihsan Karaman;
- Jamia Hamdard (Deemed to be University), Hamdard Nagar, New Delhi-110062 (INDIA), represented by its Registrar, presently Mr. S.S. Akhtar;
- Stony Brook University, 100 Nicolls Rd, Stony Brook, NY 11794, USA, represented by its President, Mr. Samuel L. Stanley Jr.;

Considering that one of the essential factors favouring development in UNESCO's fields of competence is the exchange of experience and knowledge between universities and other higher education institutions;

Convinced that joint work by university teachers, researchers and administrators from different regions all over the world will provide important benefits for the entire academic community;

Bearing in mind UNESCO's mission and objectives as set forth in its Constitution, and its role in promoting international inter-university cooperation;

Taking into account the experience of the UNESCO Chairs Programme as a stimulus for academic mobility and the rapid transfer of knowledge through twinning, networking and other linking arrangements;

Have agreed as follows:

Article – I: Purpose:

UNESCO and the Network will create a Cooperation Programme on Research and Postgraduate Education in Biophysics, Biotechnology and Environmental Health (hereinafter referred to as "the Cooperation Programme") in the framework of UNESCO's UNITWIN Programme.

Article – II: Main objectives:

The main objectives of this Cooperation Programme are to:

- promote an integrated system of research, training, information and documentation activities on biophysics, biotechnology and environmental health ;
- support capacity enhancement in biophysics, biotechnology and environmental health in developing countries notably through the development of a specialized postgraduate programme that meets international standards, addresses social and economic needs, and gives education access to different social groups;
- foster research and innovation capacity in the fields of focus through the establishment of an exchange programme for PhD students and young researchers between the participant institutions, the organization of short-term training courses, summer schools and biannual research meetings;
- improve awareness on the network's activities and outreach to stakeholders to ensure sustainable use of the research results;
- facilitate collaborative work, knowledge and information sharing among students and researchers notably through the creation of a dedicated website, the organization of online libraries specialized in science literature at Network member institutions, as well as the publication and dissemination of brochures and other publications including a newsletter;
- collaborate closely with UNESCO and existing UNESCO Chairs on relevant programmes and activities; and,

facilitate collaboration between high-level, internationally-recognized researchers and teaching staff of the institutions that are members of the Network, as well as institutions outside the Network in other regions of the world.

Article – III: Implementation of the Cooperation Programme:

- 1 The implementation of the Cooperation Programme will comprise two phases:
 - Phase – I: establishment of direct contact between the Network and the relevant UNESCO unit(s)/programme(s) to determine the work plan for cooperation over the next four years;
 - Phase – II: identification, in close collaboration with the members of the Network and with UNESCO, of ways to extend the Programme to include other participants and/or institutions. All admission of new participants and/or institutions into the Cooperation Programme must be approved in writing by each of the Parties concerned.

Article – IV: Contribution of each Party:

- 1 The Network, in consultation with UNESCO, shall appoint the Coordinator, who will be selected in accordance with the procedures described in UNESCO's "Guidelines and procedures for the UNITWIN/UNESCO Chairs Programme".
- 2 Each Party within the Network shall appoint its own Coordinator for the Cooperation Programme and duly notify the others.
- 3 Subject to the terms of this Agreement, the Network shall assume all expenses linked to the implementation of the Cooperation Programme's activities.
- 4 Each Network member shall contribute the facilities, as well as the human and financial resources necessary to conduct the academic research and training activities in its fields and to make their results accessible online.
- 5 The Network shall submit to UNESCO a mid-term progress report and a final report on the activities carried out by the Network, as well as on the financial resources of the Network. The reports should comply with the UNESCO template. They will be reviewed by UNESCO and will be published on the UNITWIN portal.
- 6 The Network shall arrange for its members to participate in UNESCO programmes and activities with a view to strengthening international academic cooperation in the fields of biophysics, biotechnology and

environmental health and related disciplines. Whenever possible, the Network shall arrange for its members to engage, with other universities and within the framework of the UNITWIN Programme in an exchange of professors, researchers and students.

Article – V: Use of UNESCO's Name and Logo:

In order to demonstrate its link with UNESCO, the Network is invited to use the composed UNESCO/UNITWIN logo that includes the UNESCO official logo and the UNITWIN logo to the right of the former, under the following conditions:

- the conditions for the use of the logo will be determined by UNESCO and cannot be modified without the prior agreement of the latter; UNESCO shall provide the Network with a high definition electronic format of the composed logo, in compliance with the agreed specifications;
- the logo must be used cautiously, with a view to avoiding misinterpretation by the general public, notably concerning the respective status of the Network, the member universities and UNESCO, as specified under the provisions of Article VI.2 of the Agreement; the composed UNESCO/UNITWIN logo shall not, under any circumstances, be used for any commercial purposes, either by the Network or by the member universities;
- all promotional and information materials published by the Network or the member universities, bearing the composed UNESCO/UNITWIN logo (example: pamphlets and other electronic documents), should bear the disclaimer: *The authors are responsible for the choice and presentation of views contained in this ...and for opinions expressed therein, which are not necessarily those of UNESCO and do not commit the Organization;* and,
- the Network and/or the member universities will assume full responsibility for any legal consequences stemming from this use.

Article – VI: Other Provisions:

- 1 Neither the Network nor any member of its staff employed for the implementation of the Cooperation Programme's activities shall be considered an agent, representative or member of UNESCO's staff, nor shall they enjoy any benefit, immunity, remuneration or reimbursement if not clearly foreseen in this Agreement; moreover, they shall not be authorized to present themselves as being part of UNESCO, nor make statements on UNESCO's behalf, nor commit UNESCO to any expense of any nature or to any other obligation.
- 2 The Network shall be entirely responsible for taking any measures it deems necessary to insure itself against loss, injury or damage incurred during the implementation of these activities.

- 3 The present Agreement shall enter into force for a period of four (4) years on the date of all signatures having been appended. It may be cancelled by either Party subject to sixty (60) days' written notice to the other Party.
- 4 The Network shall request the renewal of the present Agreement before its expiry date. Any renewal of the present Agreement shall be effected by an exchange of letters between the Parties, on condition that the Network meets its specific objectives as laid out in Article II, and provides detailed information on activities and budget secured for the period of renewal.
- 5 UNESCO may decide not to renew the present Agreement, or to terminate the Cooperation Programme if the Network fails to submit timely progress reports on its activities; the reports are negatively evaluated; or, the Network's activities do not correspond to UNESCO's strategic priorities.
- 6 In the event of a dispute, the Parties shall make a good faith effort to settle it amicably. If an amicable settlement cannot be reached, any dispute arising out of, or relating to, this Agreement shall be settled by a sole arbitrator appointed by mutual agreement or, failing this, by the President of the International Court of Justice at the request of either Party.

In witness whereof the undersigned, duly authorized to that effect, have signed 07 copies of the present Agreement in the English language.

For the United Nations Educational,
Scientific and Cultural Organization

Audrey Azoulay
Director-General

Date:

For Life Sciences International
Postgraduate Educational Center

For Bogomoletz Institute of
Physiology, Bogomoletz

G. Ayrapetyan
Director

Oleg Krishtal
Director

Date:

Date:

For Cairo University

Mohamed Othman Elkhosht
President

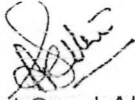
Date:

For Istanbul Medeniyet University

M. Ihsan Karaman
Rector

Date:

For Jamia Hamdard



Syed Saud Akhtar
Registrar
Jamia Hamdard
(Deemed University)
Date: Hamdard Nagar
New Delhi-110062

17/04/2018

For Stony Brook University

Samuel L. Stanley Jr.
President

Date:

AGREEMENT

BETWEEN

THE UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL
ORGANIZATION

AND

THE NETWORK ON RESEARCH AND POSTGRADUATE
EDUCATION IN BIOPHYSICS, BIOTECHNOLOGY AND
ENVIRONMENTAL HEALTH

CONCERNING THE ESTABLISHMENT OF A UNITWIN
COOPERATION PROGRAMME

AGREEMENT

between the United Nations Educational, Scientific and Cultural Organization and the Network on Research and Postgraduate Education in Biophysics, Biotechnology and Environmental Health concerning the establishment of a UNITWIN Cooperation Programme

The United Nations Educational, Scientific and Cultural Organization (hereinafter referred to as "UNESCO"), 7 Place de Fontenoy, 75352 Paris, France, represented by its Director-General, Ms Audrey Azoulay;

and,

The International Network on Research and Postgraduate Education in Biophysics, Biotechnology and Environmental Health (hereinafter referred to as "the Network"), composed of:

- Life Sciences International Postgraduate Educational Center, 31 Acharian St., Yerevan, 0040, Armenia, represented by its Director, Professor G. Ayrapetyan;
- Bogomoletz Institute of Physiology, Bogomoletz Str.4, Kyiv, 01024, Ukraine, represented by its Director, Professor Oleg Krishtal;
- Istanbul Medeniyet University, Dumlupınar Mahallesi, D-100 Karayolu No:98, 34000 Kadıköy, İstanbul, Turkey, represented by its Rector, Professor Dr. M. Ihsan Karaman;
- Jamia Hamdard University, Mehrauli Badarpur Road, 110062 New Delhi, India, represented by its Chancellor, Dr Habil Khorakiwala.

Considering that one of the essential factors favouring development in UNESCO's fields of competence is the exchange of experience and knowledge between universities and other higher education institutions;

Convinced that joint work by university teachers, researchers and administrators from different regions all over the world will provide important benefits for the entire academic community;

Bearing in mind UNESCO's mission and objectives as set forth in its Constitution, and its role in promoting international inter-university cooperation;

Taking into account the experience of the UNESCO Chairs Programme as a stimulus for academic mobility and the rapid transfer of knowledge through twinning, networking and other linking arrangements;

Have agreed as follows:

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UNESCO and the Network will create a Cooperation Programme on Research and Postgraduate Education in Biophysics, Biotechnology and Environmental Health (hereinafter referred to as "the Cooperation Programme") in the framework of UNESCO's UNITWIN Programme.

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The main objectives of this Cooperation Programme are to:

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- collaborate closely with UNESCO and existing UNESCO Chairs on relevant programmes and activities; and,
- facilitate collaboration between high-level, internationally-recognized researchers and teaching staff of the institutions that are members of the Network, as well as institutions outside the Network in other regions of the world.

Article III Implementation of the Cooperation Programme

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- phase one: establishment of direct contact between the Network and the relevant UNESCO unit(s)/programme(s) to determine the work plan for cooperation over the next four years;
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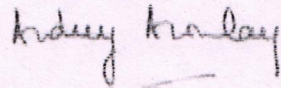
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In witness whereof the undersigned, duly authorized to that effect, have signed 5 copies of the present Agreement in the English language.

For the United Nations Educational,
Scientific and Cultural Organization



Audrey Azoulay
Director-General

Date: - 5 - 2017

For Life Sciences International
Postgraduate Educational Center

For Bogomoletz Institute of Physiology,
Bogomoletz

G. Ayrapetyan
Director

Oleg Krishtal
Director

Date:

Date:

For Jamia Hamdard University

For Istanbul Medeniyet University

Habil Khorakiwala
Chancellor

Ihsan Karaman
Rector

Date:

Date:



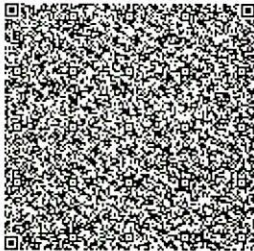
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MEMORANDUM OF UNDERSTANDING

The Memorandum of Understanding (MOU) is executed on this 12th day of January 2018, at New Delhi.

BETWEEN

JAMIA HAMDARD (Deemed University), Hamdard Nagar, New Delhi-110062, through its Registrar (Hereinafter referred as 'JH'), PARTY OF THE FIRST PART.

E.A. Khan
Registrar
Jamia Hamdard
(Deemed University)

Dr. Revlina
MD, DNB, FICD, DHA
Managing Director
Artemis Global Life Sciences Limited
Artemis Hospital
Regn HMC No. : 3309

For Artemis Education & Research Foundation

Statutory Alert:

1. The authenticity of this Stamp Certificate should be verified at www.e-stamp.com. Any discrepancy in the details on this Certificate and as available on the website renders it invalid.
2. The onus of checking the legitimacy is on the users of the certificate.
3. In case of any discrepancy please inform the Competent Authority.

AND

ARTEMIS EDUCATION AND RESEARCH FOUNDATION, Sector-51, Gurgaon-122001, Haryana, (Hereinafter referred to as 'AERF' as the context permits), PARTY OF THE SECOND PART.

WHEREAS, Jamia Hamdard was conferred the status of a Deemed University in 1989 vide a notification of the Ministry of Human Resource Development, under Section 3 of UGC Act, 1956. JH became the first University of Delhi to be adjudged in a category 'A' by the National Assessment and Accreditation Council (NAAC) of India. JH has emerged as an outstanding institution of higher learning with distinct and focused academic programmes. Jamia Hamdard has School of Science, Pharmacy, Medicine, Nursing, Management Studies, and Allied Health Sciences etc. The University has its own Hospital and a MCI approved Medical College with the name Hamdard Institute of Medical Science & Research (HIMSR). JH offers higher education in different disciplines of science, pharmacy and medicine leading to UG, PG and Ph.D. Degrees. JH also envisages to launch programmes in interdisciplinary science including translational research.

AND WHEREAS, Artemis Education and Research Foundation (AERF) was established by Artemis Health Institute on 4th September 2013. AERF is a nonprofit trust through which the money will be used for research purposes. The trust is guided by the board of trustees and governance system set up. The main activities of Trust/ Foundation/ Society are education, training and research. Artemis research laboratory is a central facility with state-of-the-art equipments to support clinical research as well as promote translation research. This has been certified by Department of Scientific and Industrial Research (DSIR) in 2015. Research lab has been constructed to cater to the investigations related to research protocols. Its main purpose is to assist clinicians in pursuing their interest in research and work on national and international collaborative projects.

AND WHEREAS, both parties viz., JH and AERF realize that in the current context, working together is desirable to promote scientific research using facilities and expertise available at JH and AERF. Therefore, both parties are agreeable to enter into a MoU for working and cooperating with one another and using their respective expertise, knowledge and resources.

Article I: Objectives of Cooperation:

JH and AERF, agree to develop their academic links under the principles of mutual understanding, common interest and mutually complementary activities as outlined hereunder:

1. To promote individual contacts among scholars, students and personnel of both the institutions.
2. To provide opportunities for both staff and students to use to maximum the expertise and facilities available in both the organizations through

Registrar
Jamia Hamdard
(Deemed University)
Hamdard Nagar
New Delhi-110062

For Artemis Education & Research Foundation

Trustee

Dr. Devendra Kumar
MD, DNB, DM (D), DHA
Managing Director
Artemis Global Life Sciences Limited
Artemis Hospital
Sector-51, Gurgaon-122001, Haryana
Regn HMC No. 13309

training of students/ staff and through exchange of thoughts by brain storming sessions/seminars/workshops and meetings.

3. To work jointly for the common research interest at national and international levels. This includes preparation of joint proposals for funding from national and international agencies and their implementation.
4. To support the exchange of academic, research and training material.
5. To share experiences and expertise concerning administration and management of both the organizations.
6. To encourage any other activities that both the parties agreed to be on mutual benefit.

Article II: Areas of Cooperation:

1. This MoU would cover all the constituent Units of Artemis Hospitals, Gurgaon desirous of having collaboration with JH for advanced research. For this purpose, Ph.D. students may individually submit proposal for collaborative research to Steering Committee as envisaged in Article I of this MoU.
2. The Scientists/Researchers working at AERF will be recognized as Co-supervisors for Ph.D. and Post-graduate (PG) theses. However, their recognition as Co-supervisors will be as per the University norms in this regard and approval by the concerned authority of the University. Bye-laws governing Ph.D. programme of Jamia Hamdard will apply to all the supervisors and candidates.
3. Ph.D. and PG students working at JH will be allowed to carry out a part of their research work in AERF and vice-versa depending upon specific requirements. No fee will be charged by either of the parties for such association.
4. JH and AERF will independently cover the cost of research chemicals and other expenditure incurred in connection with research collaboration, if it is absolutely required for success of the joint research work.
5. JH and AERF shall apply for collaborative projects jointly to national and international funding agencies.
6. JH and AERF shall organize joint Conferences / Seminars / Symposia / Workshops / Training Programmes and shall seek financial support from national and international agencies for such an event.
7. JH and AERF may launch joint academic programme after due approval of statutory bodies of JH and AERF and government, if applicable.

Registrar
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(Deemed University)
Hamdard Nagar
Hamdard Nagar
110062

For Artemis Education & Research Foundation

Trustee

Dr. Devlina Chakravarty
MD, DNB, DMRD, DHA
Managing Director
Artemis Global Life Sciences Limited
Artemis Hospitals
Sector-51, Gurugram-122 001, Haryana
Regn HMC No. 3003

8. Mobility of Professors/Faculties of JH and Scientists/Researchers of AERF between JH and AERF and vice-versa will be encouraged.
9. JH will not claim any part of the IPR resulting from this collaboration if the invention originates from the work done at AERF. However, out of collaborative researches, if the invention originates from a JH laboratory, JH will have full right on IPR. In case of joint efforts resulting in patents, JH and AERF researchers involved will share the IPR proportionately. Similarly, in joint publications resulting from the collaboration researchers of JH and AERF will be given credit of authorship proportional to their contribution in the joint research effort.
10. Scientists of AERF will deliver lectures in areas of their specialization to students of JH as Visiting Faculty on days and timings prearranged on mutual consent by concerned Department.
11. Upon recommendations of the Steering Committee, JH may consider appointing Scientists working at AERF as 'Adjunct Faculty' (Adjunct Professor) for a specific duration in any identified Department of the University following the due procedure as per the University norms.
12. Each Institution will be free to have additional MoUs/Agreements with any other organization or agency. However, it would be incumbent upon JH and AERF to safeguard the interest of their respective institutes and to avert any conflict of interest.

Article III: Duration and Termination of the MoU:

1. This MoU is effective as of the date of signatures by the Authorities of JH and AERF and shall remain in effect for FIVE (5) years.
2. The tenure of MoU may be extended with mutual agreement of the parties.
3. This MoU may be amended at any time by written mutual consent of both the parties.
4. This MoU may be terminated by either party by the provision of written notice of termination not less than six months prior to the desired termination date. However, both parties agree that all continuing obligations to students, staff funding bodies or other entities are met in full subsequent to the notice of termination.
5. The termination of this MoU shall not affect the rights or obligations of either party regarding any binding offer or firm obligation approved and agreed to either party prior to the termination date.

For Artemis Education & Research Foundation

Registrar
Jamia Hamdard
(Deemed University)
Hamdard Nagar
New Delhi-110062

Trustee

Dr. Devlina Chakravarty
MD, DNB, DMRD, DHA
Managing Director
Artemis Global Life Sciences Limited
Artemis Hospital
Sector-51, Gurugram-122 001, Haryana
Regn HMC No. : 3309

Article IV – Miscellaneous:

1. JH and AERF shall constitute a joint 'Steering Committee' which will periodically monitor the progress of the MoU. Different proposals for collaboration will also be considered by the joint Committee. Meeting of the Committee may be held at the premise of JH or AERF.

The joint Monitoring Committee will be as follows:

From JH:

- i) Dean, HIMSR, JH,
- ii) Advisor (Research), JH,

From AERF:

- i) Medical Director, Artemis Health Institute
- ii) Chief, Education and Research, AERF

Advisor (Research), JH will be the Convener from JH.

Chief (Education & Research), AERF will be the Convener from AERF.

2. If any provision of this Memorandum is held by any court or other competent authority to be illegal, void or enforceable in whole or in part, this MoU shall continue to be valid as to the other provisions therefore and the remainder of the effected provision.
3. Nothing in this MoU constitutes or to be construed a party as the partner, agent employee, or representative of the other party. A party must not act independently of the other Party and does not have the right or power to commit the other Party on any matter or incur any obligation on behalf of or pledge the credit of the other Party without the prior written approval of the other Party.
4. The parties agree to comply with all laws applicable within the jurisdiction of the signatories below.
5. Any dispute arising out of this Memorandum of Understanding or in its enforcement the concerned parties to this MoU will resolve the same amicably. However, in case if the dispute remains unresolved it shall be referred to an arbitrator to be appointed by mutual consent of both the parties subject to Delhi jurisdiction. The decision of the arbitrator shall be final and binding upon the party concerned.

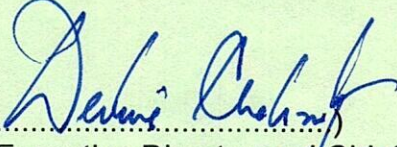
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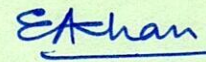
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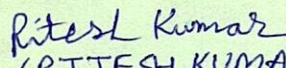
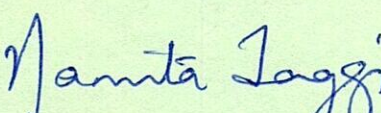
Dr. Devlina Chakravarty
MD, DNB, DMRD, DHA
Managing Director
Artemis Health Services Limited
Artemis Hospital
Sector-51, Gurugram-122 001, Haryana
Regn. AMC No. : 3309

IN WITNESS whereof the parties hereto have executed this MoU or caused it to be executed in their names and on their behalf by their duly authorized representatives the date set forth.

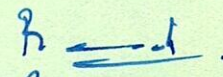
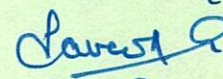

(.....)
(Executive Director and Chief Executive Officer)
Artemis Education and Research Foundation
Artemis hospitals, Sector-51, Life Sciences Limited
Gurgaon, Haryana-122001
Managing Director
Artemis Hospital
Sector-51, Gurugram-122 001, Haryana
Regn HMC No. : 3309


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Hamdard Nagar
New Delhi-110062

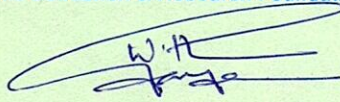
Witnesses:

1. 
(RITESH KUMAR)
Artemis Hospital, Sect-51, Gurugram
2. 
DR. NAMITA JAGGI
Director, Labs + Infection Control
Chief, Education + Research
Artemis Hospital, Gurgaon

Witnesses:

1. 
(Prof. S. K. Misra)
Advisor (Research), JH.
2. 
Dr. Javed Ali
Associate Professor
School of Pharm. Edu &
Research
Jamia Hamdard
New Delhi-110062

For Artemis Education & Research Foundation


Trustee

INDIA NON JUDICIAL

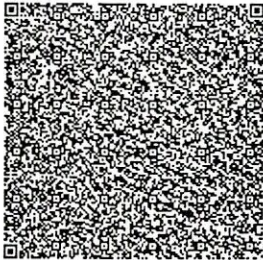
Government of National Capital Territory of Delhi



सत्यमेव जयते

e-Stamp

Certificate No. : IN-DL68693367827018P
Certificate Issued Date : 27-Dec-2017 11:37 AM
Account Reference : IMPACC (IV)/ dl740303/ DELHI/ DL-DLH
Unique Doc. Reference : SUBIN-DL74030340352924825112P
Purchased by : REGISTRAR JAMIA HAMDARD
Description of Document : Article 5 General Agreement
Property Description : Not Applicable
Consideration Price (Rs.) : 0
(Zero)
First Party : REGISTRAR JAMIA HAMDARD
Second Party : Not Applicable
Stamp Duty Paid By : REGISTRAR JAMIA HAMDARD
Stamp Duty Amount(Rs.) : 100
(One Hundred only)



.....Please write or type below this line.....

MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding (MoU) entered into and executed on this 12th day of January 2018, at New Delhi.

BETWEEN

Jamia Hamdard (Deemed to be University), Hamdard Nagar, New Delhi-110062, INDIA, through its Registrar presently Prof. Ehsan A. Khan, (hereinafter called as 'JH'), PARTY OF THE FIRST PART.

Statutory Alert:

1. The authenticity of this Stamp Certificate should be verified at "www.shcilestamp.com". Any discrepancy in the details on this Certificate and as available on the website renders it invalid.
2. The onus of checking the legitimacy is on the users of the certificate.
3. In case of any discrepancy please inform the Competent Authority.

E. A. Khan
Jamia Hamdard
(Deemed University)
Hamdard Nagar
New Delhi-110062

AND

TALWAR RESEARCH FOUNDATION, having its office at E-8, NEB VALLEY, NEW DELHI – 110068 is a Scientific & Industrial Research Organization, recognized by Department of Scientific & Industrial Research, Govt. of India, through its Principal Trustee, (Hereinafter referred to as 'TRF'), PARTY OF THE SECOND PART.

The expressions of Jamia Hamdard and Talwar Research Foundation shall, however, mean and include the Institutions / Organizations, their successors, appointees, assignees, etc.

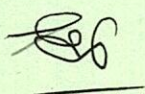
WHEREAS, Jamia Hamdard was conferred the status of a Deemed University in 1989 vide a notification of the Ministry of Human Resource Development, Government of India under Section 3 of UGC Act, 1956. JH became the first University of Delhi to be adjudged in a category 'A' by the National Assessment and Accreditation Council (NAAC) of India and has been accredited in 'A' Grade for three consecutive cycles. JH has emerged as an outstanding institution of higher learning with distinct and focused academic programmes. Jamia Hamdard has faculty of Science, Pharmacy, Medicine, Nursing, Management Studies, and Allied Health Sciences etc. JH offers higher education in different disciplines of science, pharmacy and medicine leading to UG, PG and Ph.D. Degrees.

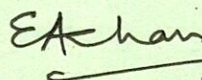
AND WHEREAS, TRF was created as a Trust in 1982, and formally registered in 1998 as non-profit Trust under Societies Registration act 1860 by Prof. G.P. Talwar, Founder-Director, National Institute of Immunology. TRF is a full-fledged Organization engaged in R&D on problems of relevance to the country. TRF undertakes mission oriented research to translate a concept into a product of utility for mankind.

AND WHEREAS, both parties viz., JH and TRF realize that in the current context, working together is desirable to promote scientific research using facilities and expertise available at JH and TRF. Therefore, both parties are agreeable to enter into a MoU for working and cooperating with one another and using their respective expertise, knowledge and resources.

AND WHEREAS, JH and TRF, agree to develop their academic links under the principles of mutual understanding, common interest and mutually complementary activities as outlined hereunder.

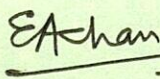
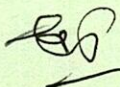
1. The objective of collaboration will be to promote contacts among scholars, students and personnel of both institutions.
2. The Scientists/Researchers working at TRF will be recognized as Co-supervisors for Ph.D. and Post-graduate (PG) theses. Bye-laws governing Ph.D. programme of Jamia Hamdard will apply to all the supervisors and candidates.





Registrar
Jamia Hamdard
(Deemed University)
Hamdard Nagar
New Delhi-110062

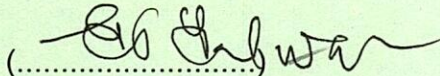
3. Ph.D. and PG students working at JH will be allowed to carry out a part of their research work in TRF and vice-versa depending upon specific requirements. No fee will be charged by either of the parties for such association.
4. JH and TRF will independently cover the cost of research chemicals and other expenditure incurred in connection with research collaboration, if it is absolutely required for success of the joint research work.
5. JH and TRF shall apply for collaborative projects jointly to national and international funding agencies and also organize joint scientific events.
6. JH will not claim any part of the IPR resulting from this collaboration if the invention originates from the work done at TRF. However, out of collaborative research if the invention originates from a JH laboratory, JH will have full right on IPR. In case of joint efforts resulting in patents, JH and TRF researchers involved will share the IPR proportionately. Similarly, in joint publications resulting from the collaboration researchers of JH and TRF will be given credit of authorship proportional to their contribution in the joint research effort.
7. Scientists of TRF will deliver lectures in areas of their specialization to students of JH as Visiting Faculty on days and timings mutually agreed.
8. This MoU is effective as of the date of signatures by the Authorities of JH and TRF and shall remain in effect for FIVE (5) years. The tenure of MoU may be extended or amended with mutual agreement of the parties.
9. This MoU may be terminated by either party by the provision of written notice of termination not less than six months prior to the desired termination date. However, both parties agree that during the notice period, all continuing obligations to students, staff funding bodies or other entities are met in full subsequent to the notice of termination.
10. The progress of collaboration between JH and TRF will be reviewed time to time.
11. The parties agree to comply with all laws applicable within the jurisdiction of the signatories below.
12. Nothing in this MOU and no action taken by the parties pursuant to this MOU shall constitute, or be deemed to constitute, a partnership between the parties or shall constitute either party as the agent, employee or representative of the other. Nothing in this MOU is meant to create, nor shall it be deemed to create, a joint venture between the parties hereto.
13. Any dispute arising out of this Memorandum of Understanding or in its enforcement the concerned parties to this MoU will resolve the same amicably. However, in case if the dispute remains unresolved it shall be

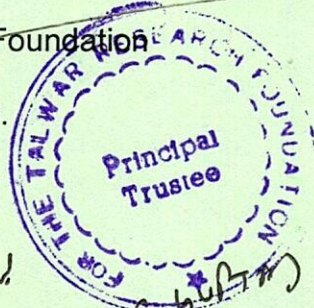


Registrar
Jamia Hamdard
(Deemed University)
Hamdard Nagar
New Delhi-110062

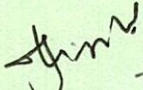
referred to an arbitrator to be appointed by mutual consent of both the parties subject to Delhi jurisdiction. The decision of the arbitrator shall be final and binding upon the party concerned.

IN WITNESS whereof the parties hereto have executed this MoU or caused it to be executed in their names and on their behalf by their duly authorized representatives the date set forth.

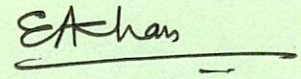

Principal Trustee
Talwar Research Foundation
E-8, Neb Valley
New Delhi-110068.



Witnesses:

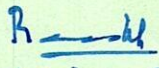
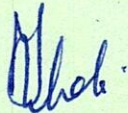
1. 
(Dr. JAGDISHA (b. 1977))
2. _____

Registrar
Jamia Hamdard
(Deemed University)
Hamdard Nagar
New Delhi-110062



(Prof. Ehsan A. Khan)
Registrar
Jamia Hamdard
Hamdard Nagar
New Delhi-110062.

Witnesses:

1. 
(Advisor Ramesh, JH)
2. 
dau apren
Tameer Huda D.



**AIMST
UNIVERSITY**



MEMORANDUM OF UNDERSTANDING

BETWEEN

AIMST UNIVERSITY (MALAYSIA)

AND

JAMIA HAMDARD

(DEEMED TO BE UNIVERSITY)

(INDIA)

(01.04.2019)

MEMORANDUM OF UNDERSTANDING

BETWEEN

AIMST UNIVERSITY, MALAYSIA

Having its registered address at Jalan Semeling-Bedong,
08100 Bedong, Kedah Darul Aman, Malaysia
Represented by its Chief Executive & Vice Chancellor
Emeritus Prof. Dr. Harcharan Singh Sidhu
Hereinafter referred to as "AIMST"

AND

JAMIA HAMDARD (DEEMED TO BE UNIVERSITY), INDIA

Having its registered address at Mehrauli - Badarpur Road, Hamdard Nagar,
New Delhi-110062, India
Represented by the Registrar
Syed Saud Akhtar
Hereinafter referred to as "JH"

Under this Memorandum of Understanding (MoU), the two institutions will proceed to implement the following endeavors:

Proposed Areas of Cooperation

1. Teaching and research development collaboration
2. Student mobility/exchange programme; e.g. study abroad, internship, study visit, etc.
3. Development of study pathways including curriculum mapping and credit transfer
4. Faculty staff mobility including e.g. guest lecture or co-lecture
5. Sharing of relevant online courses including massive online open course (MOOC)
6. Joint Conferences/Seminars/ workshops

The specific activities to be undertaken shall be covered by a corresponding Memorandum of Agreement (MoA) and the activity must commence within six (6) months from the date of this MoU. Failing which, this MoU may be deemed as null and void.

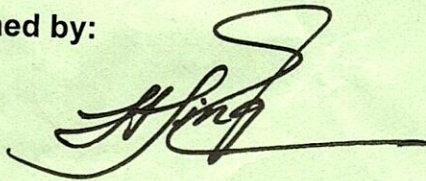
Both the parties understand that all financial arrangement will have to be negotiated and will depend on the availability of funds.

This MoU shall take effect upon signing by both parties and shall remain in force for a period of five (5) years subject to renewal upon mutual consent unless sooner terminated by either party provided that a written notice shall have been served at least sixty (60) days before such termination takes effect.

This MoU is not legally binding and entered into by the parties herein to merely express their intention to collaborate and is therefore subject to the parties herein entering into a legally binding MoA. Nothing contained herein shall be construed as a joint-venture and shall not constitute either party as the agent of the other.

Hereupon the signatures of the representatives of both institutions are affixed with the hope of promoting mutual cooperation effective from 1st of April 2019.

Signed by:

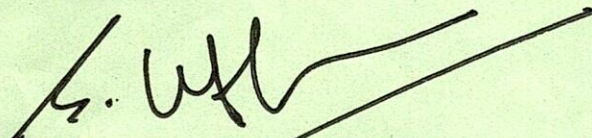


Emeritus Prof. Dr. Harcharan Singh
Chief Executive & Vice-Chancellor
AIMST University
Malaysia



Registrar
Jamia Hamdard
(Deemed University)
Hamdard Nagar
New Delhi-110062
Syed Saud Akhtar
Registrar
Jamia Hamdard
India

Witnessed by:



Sr. Assoc. Prof. Dr. S. Kathiresan
Registrar
AIMST University
Malaysia

Raisuddin
Prof. (Dr.) S. Raisuddin
Advisor Research
Jamia Hamdard

PROF. S. RAISUDDIN
Advisor (Research)
Jamia Hamdard
(Hamdard University)
New Delhi-110062





MEMORANDUM OF UNDERSTANDING

AGREEMENT OF CO-OPERATION

Between

**BK21 Plus Creative Veterinary Research Group and
College of Veterinary Medicine
Chungbuk National University, South Korea**

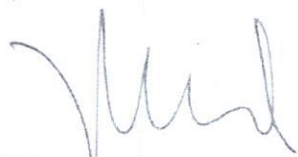
AND

**Jamia Hamdard
(Deemed to be University)
Hamdard Nagar, New Delhi-110062, India**

1. In order to promote mutual friendship and co-operation in academic development and scientific research, Jamia Hamdard and BK21 Plus Creative Veterinary Research Group and College of Veterinary Medicine Chungbuk National University agree to develop a co-operation program aimed at enhanced the teaching and research activities of the institutions and to deepen the understanding of each other's institution.
2. To achieve these goals the partners will promote academic collaboration at faculty, undergraduate and graduate levels in research and student curriculum development, institutional exchanges, professional development and any other appropriate activities on a basis of mutually agreed roadmap between the parties from time to time.
3. The implementation of any activities under this agreement will be the responsibility of a Program Coordinator designated by each party for this purpose. The program coordinator shall act as the Principal Contact for individual and group activities, distribute information, review and evaluate activities under the program and propose new initiatives. The parties shall inform each other in writing of the names and details of the Program Coordinators and of any changes in this regard.
4. The scope of the activities under this agreement shall be determined by the funds available at both institutions for the collaboration undertaken and by financial assistance as may be obtained by either institution from external sources. Unless otherwise agreed, each party shall be responsible for expenses incurred by its employees and students under this agreement. All

funds obtained for this agreement for external funders shall be administrated by the Institute concerned that applied for such funds, unless otherwise agreed between the parties or requested by the sponsor.

5. This general agreement shall serve as the parent document for cooperation. Individual activities under this program may require separate agreements to be approved and signed by the parties. The parties agree that no programs shall be implemented without paper authorization and acceptable proof of adequate funding.
6. This agreement will remain valid for a period of five years from the date of signature and shall be reviewed at that time with a view to possible renewal. It may be amended or terminated earlier at any time at the written request of either party. In the event of termination either party shall be liable for any resultant monetary or other loss was incurred as a request of a binding legal contract authorized by the parties.



(Eui Bae Jeung)
Director
BK21 Plus Creative Veterinary
Research Group
Chungbuk National University
South Korea



(Syed Saud Akhtar)
Registrar
Jamia Hamdard
Hamdard Nagar
New Delhi
India

Dated: 05.03.2019

Dated: 05.03.2019



JAMIA HAMDARD

(HAMDARD UNIVERSITY)

*(Declared as Deemed-to-be University under Section 3 of
the UGC Act, 1956 vide Notification No. F.9-18/85-U.3
dated 10.5.1989 of the Government of India)*

Accredited by NAAC in 'A' Category

Phone : 011 26059688 (12 Lines)
Fax : 011 26059663
E-mail : inquiry@jamiahamdard.edu
Website : www.jamiahamdard.edu

HAMDARD NAGAR
NEW DELHI - 110062

18/02/2019

Dr. Eui-Bae Jeung, D.V.M, Ph.D. FCAST, Professor
Director of BK21 Plus Creative Veterinary Research Group
Lab of Vet. Biochemistry and Molecular Biology
College of Veterinary Medicine
Chungbuk National University
Cheongju, Chungbuk 28644
Republic of Korea


Dear Professor Jeung

This has reference to our conversation through e-mail for potential research collaboration in the field of toxicology and alternative models of toxicity testing and safety evaluation. I have come to know that you will be visiting India in the month of February 2019. We herewith invite you to visit our Department for a discussion and interaction with research scholars and faculty on any of the dates between February 22 to March 01, 2019. Although it will not be possible for us to provide you any travel support, we will be happy to offer you local hospitality. I hope you will accept it.

Kindly confirm date(s) of arrival on our campus.

With regards

Sincerely yours


18/02/2019

Prof. S. Raisuddin, FST, FAEB
Advisor (Research)
Department of Medical Elementology
& Toxicology



Pro-Vice Chancellor JH <pvc@jamiahamdard.ac.in>

Fwd: Visit

S Raisuddin <sraisuddin@jamiahamdard.ac.in>
 To: "PRO.Vice-Chancellor Jamia Hamdard" <pvc@jamiahamdard.ac.in>

Tue, Mar 5, 2019 at 10:11 AM

He will be visiting us today at 3 pm. Kindly see if PVC sb may be available for the event. Shall be grateful.

Rais

----- Forwarded message -----

From: **S Raisuddin** <sraisuddin@jamiahamdard.ac.in>
 Date: Tue, Mar 5, 2019 at 7:51 AM
 Subject: Visit
 To: Professor Seyed E. Hasnain <seyedhasnain@gmail.com>

Respected Sir

ASAK

Prof. Eui-Bae Jeung, D.V.M, Ph.D. Fkast, Director of BK21 Plus Creative Veterinary Research Group, Lab of Vet. Biochemistry and Molecular Biology College of Veterinary Medicine, Chungbuk National University, Chungbuk, South Korea will be on campus today in afternoon. Earlier, he attended the National Conference on Alternatives to Animal Experiments at Jamia Hamdard in November 2018. He wants to have an MoU with us for research collaboration in the field of toxicology and alternative models of toxicity testing. Discussed with PVC. MoU will have no financial obligation.

Seeking your kind approval, please.

With kind regards

Rais

--

Prof. S. Raisuddin, PhD
 Commonwealth Fellow of British Council UK, FST, FAEB
 Professor of Toxicology, Department of Medical Elementology & Toxicology
 Director, IQAC; Advisor (Research); Nodal Officer NIRF, AISHE, NAD
 Vice President, Society of Toxicology (India)
 Jamia Hamdard (A Government-aided Deemed University)
 New Delhi - 110062, India
 +91 11 26059688

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Prof. S. Raisuddin, PhD
 Commonwealth Fellow of British Council UK, FST, FAEB
 Professor of Toxicology, Department of Medical Elementology & Toxicology
 Director, IQAC; Advisor (Research); Nodal Officer NIRF, AISHE, NAD
 Vice President, Society of Toxicology (India)
 Jamia Hamdard (A Government-aided Deemed University)
 New Delhi - 110062, India
 +91 11 26059688



MEMORANDUM OF UNDERSTANDING

AGREEMENT OF CO-OPERATION

Between

**BK21 Plus Creative Veterinary Research Group and
College of Veterinary Medicine
Chungbuk National University, South Korea**

AND

**Jamia Hamdard
(Deemed to be University)
Hamdard Nagar, New Delhi-110062, India**

1. In order to promote mutual friendship and co-operation in academic development and scientific research, Jamia Hamdard and BK21 Plus Creative Veterinary Research Group and College of Veterinary Medicine Chungbuk National University agree to develop a co-operation program aimed at enhanced the teaching and research activities of the institutions and to deepen the understanding of each other's institution.
2. To achieve these goals the partners will promote academic collaboration at faculty, undergraduate and graduate levels in research and student curriculum development, institutional exchanges, professional development and any other appropriate activities on a basis of mutually agreed roadmap between the parties from time to time.
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6. This agreement will remain valid for a period of five years from the data of signature and shall be reviewed at that time with a view to possible renewal. It may be amended or terminated earlier at any time at the written request of either party. In the event of termination either party shall be liable for any resultant monetary or other loss was incurred as a request of a binding legal contract authorized by the parties.

(Eui Bae Jeung)
Director
BK21 Plus Creative Veterinary
Research Group
Chungbuk National University
South Korea

(Syed Saud Akhtar)
Registrar
Jamia Hamdard
Hamdard Nagar
New Delhi
India

Dated:03.2019



S Raisuddin <sraisuddin@jamiyahamdard.ac.in>

Re: Re: NCAAE-2018

17 messages

Prof Eui-Bae Jeung <ebjeung@chungbuk.ac.kr>
To: S Raisuddin <sraisuddin@jamiyahamdard.ac.in>
Cc: Prof Eui-Bae Jeung <ebjeung@chungbuk.ac.kr>

Sun, Feb 10, 2019 at 4:43 AM

Dear Prof. Raisuddin,

Our group is interesting to have a MOU for mutual exchange, especially for student program.

If it is OK I will send a draft to you and sign it.

It is very important to get students from outside country.

Thanks

EB

Eui-Bae Jeung, D.V.M, Ph.D. FCAST, Professor
Director of BK21 Plus Creative Veterinary Research Group
Lab of Vet. Biochemistry and Molecular Biology
College of Veterinary Medicine
Chungbuk National University
Cheongju, Chungbuk 28644, Republic of Korea
Office: +82-43-261-2397, Fax: +82-43-267-3150
E-mail: ebjeung@chungbuk.ac.kr

----- Original Message -----

Sender: "Prof Eui-Bae Jeung" <ebjeung@chungbuk.ac.kr>
Receiver: "S Raisuddin" <sraisuddin@jamiyahamdard.ac.in>
Date: 2018년 12월 10일(월) 오전 07:32 KST (Mon, 10 Dec 2018 07:32:43 +0900)
Subject: Re: NCAAE-2018

Dear Prof. S. Raisuddin,

Thank you for your kind email.

During my stay in Dehli, I am very happy to meet many scientists and congratulations to your successful congress with your many efforts.

We will go a further step to make Asian federation of Alternatives and but also more exchange with your society.

We will see what we could have an opportunity between your University and our group.

Many thanks

EB

Eui-Bae Jeung, D.V.M, Ph.D. FCAST, Professor
Director of BK21 Plus Creative Veterinary Research Group
Lab of Vet. Biochemistry and Molecular Biology
College of Veterinary Medicine
Chungbuk National University
Cheongju, Chungbuk 28644, Republic of Korea
Office: +82-43-261-2397, Fax: +82-43-267-3150
E-mail: ebjeung@chungbuk.ac.kr

----- Original Message -----

Sender: "S Raisuddin" <sraisuddin@jamiyahamdard.ac.in>
Receiver: <ebjeung@chungbuk.ac.kr>
Date: 2018년 12월 05일(수) 오후 01:47 KST (Wed, 5 Dec 2018 10:17:57 +0530)
Subject: NCAAE-2018

Dear Professor Jeung

Hello

Many thanks for your word of appreciation. We are overwhelmed. I must thank you for your participation in NCAAE-2018 and for your deliberation. Because of your active support and kind presence for whole day the Conference became highly successful. We look forward for further collaboration between KSAAE and Indian counterpart SAAE. We also look forward for collaborative programme between our Departments/Universities and research groups. Basically, I have been to Korea for 2 years at Hanyang University and liked the country and its people very much. Let us explore some possibility of collaboration and exchange.

I am attaching two of your photographs. More will be available on the NCAAE-2018 web site.

Looking forward to meet you in Japan or India in very near future.

With kind regards

Prof. S. Raisuddin

--

Prof. S. Raisuddin, PhD
Commonwealth Fellow of British Council UK, FST, FAEB
Professor of Toxicology, Department of Medical Elementology & Toxicology
Vice President, Society of Toxicology (India)
Director, IQAC; Advisor (Research); Nodal Officer NIRF, AISHE, NAD
Jamia Hamdard (A Government-aided Deemed University)
New Delhi - 110062, India
+91 11 26059688

5 attachments

NCAAE-2018_Jeung_1.JPG
168K



JH

MEMORANDUM OF UNDERSTANDING

AGREEMENT OF CO-OPERATION

Between

**BK21 Plus Creative Veterinary Research Group and
College of Veterinary Medicine
Chungbuk National University, Korea**

And

Your institute

*Javia Hamdani (Deemed University)
New Delhi, India.*

1. In order to promote mutual friendship and co-operation in academic development and scientific research, your institute and BK21 Plus Creative Veterinary Research Group and College of Veterinary Medicine Chungbuk National University agree to develop a co-operation program aimed at enhanced the teaching and research activities of the institutions and to deepen the understanding of each other's institution.
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Date:

Date:

For

For

Eui Bae Jeung

Director

BK21 Plus Creative Veterinary

Research Group, Chungbuk National

University, South Korea.

Director

S.S. Akhlaq

Registrar

Jamia Hamdard (Deemed University)

Hamdard Nagar

New Delhi - 110 062, India.

Director

17/06/2019 - 16/06/2024



MEMORANDUM OF UNDERSTANDING

BETWEEN

**JAMIA HAMDARD
(DEEMED TO BE UNIVERSITY)
NEW DELHI (INDIA)**

AND

**ASIA UNIVERSITY
TAICHUNG CITY, TAIWAN**

MEMORANDUM OF UNDERSTANDING

THIS MEMORANDUM OF UNDERSTANDING is made on this 17th day of June 2019 ("Effective Date")

BETWEEN

Jamia Hamdard (Deemed to be University), Hamdard Nagar, New Delhi-110062 (INDIA), represented through its Registrar presently Mr. S.S. Akhtar, (hereinafter referred to as "JH"), PARTY OF THE FIRST PART.

AND

ASIA UNIVERSITY, a non-profit private university established under the Private School Act of the Republic of China (Taiwan), and having its principal address at No. 500, Lioufeng Rd., Wufeng, Taichung City 41354, Taiwan, represented through its President presently Prof. Jeffrey J. P. Tsai, (hereinafter referred to as "AU"), PARTY OF THE SECOND PART.

Jamia Hamdard and Asia University are referred to herein collectively as the "*Parties*" and each individually as a "*Party*".

The expressions of the JH and AU shall, however, mean and include the institutions / organization.

WHEREAS, Jamia Hamdard was conferred the status of a Deemed University in 1989. Jamia Hamdard has School of Science, Pharmacy, Medicine, Nursing, Management Studies, and Allied Health Sciences etc. The University has its own Hospital and Medical College. JH offers higher education in different disciplines of science, pharmacy and medicine leading to UG, PG and Ph.D. Degrees. JH also envisages to launch programmes in interdisciplinary science including translational research. It has been accredited by the National Assessment and Accreditation Council (NAAC) in 'A' grade in the year 2003, 2011 and 2017 by the Govt. of India. It has been ranked amongst the top universities of India by the National Institutional Ranking Framework (NIRF), Ministry of Human Resource Development (HMRD), Govt. of India and in the NIRF – 2019 ranking it was ranked as the 18th highest ranking university of India. In 2017 and in 2019 the NIRF ranked the Pharmacy School of Jamia Hamdard at Number 1 rank.

AND WHEREAS, Asia University is one of the most prestigious and international universities in Taiwan, with roughly 13,000 student population in both undergraduate and graduate programs (including some 610 international students) and having College of Medical and Health Sciences, College of Information and Electrical Engineering (IEET accredited), College of Management (AACSB accredited), College of Humanities and Social Sciences, College of Creative Design, and College of Artificial Intelligence. It also has 12 interdisciplinary university research centers such as Center for Precision Medicine, Center for Big Data and Blockchain, Center for AI, Center for Prevention and Treatment of Internet Addiction, etc., 1 museum of modern art and 1 affiliation hospital and having about 280 international partner universities

around the globe, including Anna Univ., Univ. of Hyderabad, IIT Madras, Univ. of Madras, SRM Univ. etc. in India.

AND WHEREAS, the Parties agree to promote joint research and development activities of mutual interest in accordance with their respective needs and objectives, and shall, by joint agreement, determine the areas and subject of such collaboration, on the basis of the understanding set out in this Memorandum of Understanding ("MOU").

NOW IT IS HEREBY AGREED BY AND BETWEEN THE PARTIES HERETO AS FOLLOWS:

1 AREAS OF COOPERATION:

The Parties agree to collaborate in the following relevant areas:

- (a) the exchange of faculty members and students;
- (b) the exchange of scientific, academic, and technical information and appropriate academic materials and other information of mutual interest for which each Party holds intellectual property rights;
- (c) the identification of opportunities for exchanges and cooperation and joint research and development in disciplines of mutual interest;
- (d) the identification of opportunities for the commercialization of technology; and
- (e) the organization of and participation in joint academic and scientific activities such as seminars and conferences.

2 MANAGEMENT COMMITTEE:

The Parties can appoint representatives to manage and oversee the collaborative activities contemplated under this MOU. The representatives of the Parties can meet as and when necessary to review progress in the implementation of activities related to the areas of collaboration, define new areas and programmes of collaboration as well as discuss matters related to this MOU.

3 ARRANGEMENTS AND FUNDING:

- 3.1 To implement the collaborative activities envisaged under this MOU, representatives of the Parties may meet periodically to negotiate and conclude specific project agreements and programmes of cooperation, including the terms for their financing, with each other and with other parties provided that neither Party shall have the

power to bind the other Party without the other Party's consent in writing.

- 3.2 The financial arrangement relating to each collaborative activity will be in accordance with the specific project agreement and programme of cooperation covering each collaborative activity. The Parties agree that in the absence of any specific agreement to the contrary, all expenses, including but not limited to, salary, travel, living and allied costs relating to each collaborative activity shall be borne by the Party who incurs such expenses.

4 INTELLECTUAL PROPERTY, INVENTIONS AND INNOVATIONS:

- 4.1 The terms with respect to title to and exploitation of intellectual property, inventions and innovations (including but not limited to trademarks and service marks, copyright, patents, know-how, designs and confidential information on the subject of such intellectual property, inventions and innovations) will be negotiated on a project-by- project basis in the specific project agreements and programmes of cooperation referred to in Clause 3. Save as aforesaid, nothing in this MOU shall be construed as a license or transfer or an obligation to enter into any further agreement with respect to any intellectual property currently licensed to or belonging to either Party.
- 4.2 All intellectual property held by a Party prior to entering into this MOU or disclosed or introduced in connection with this MOU and all materials in which such intellectual property is held, disclosed or introduced shall remain the property of the Party introducing or disclosing it.

5 PUBLICATION OF ARTICLES:

Each Party may, with the written consent of the other Party, such consent not to be unreasonably withheld, publish the findings of the collaborative activities of the Parties in the form of an article in a journal, newspaper or other magazine, provided that where an application for registration of a trademark, service mark or design, or an application for a patent, will be made, such an article shall not be published for a period of up to ninety (90) days for the said application to be made. A copy of the article to be published shall be provided to the Party whose written consent is required hereunder prior to publication of the same forth at Party's perusal and written consent.

6 REPRESENTATION TO THE PUBLIC AND CONFIDENTIALITY:

- 6.1 Neither Party shall use the name or logo of the other Party for any purpose whether in relation to any advertisement or other form of publicity without obtaining the prior written consent of the other

Party.

- 6.2 Notwithstanding the generality of the above, the Parties may notify third parties of the fact that this MOU is in effect.
- 6.3 All information furnished in relation to this MOU by one Party to the other, which is clearly identified as proprietary or confidential at the time of disclosure will be kept confidential by the receiving Party, and will not be disclosed to any third party otherwise than to carry out the provisions of this MOU, unless agreed in writing between the Parties.
- 6.4 The provisions of Clause 6.3 above will not apply to information in the public domain; information in the possession of the receiving Party prior to the disclosure of the information; information which is independently developed by the receiving Party; information required to be released by law; and information which is rightfully received by the receiving Party from third parties without any breach of confidentiality obligations
- 6.5 Clauses 6.3, 6.4 and 6.5 will survive the expiry or termination of this MOU for one (1) year from the date of expiry or termination of this MOU.

7 AMENDMENTS:

This MOU may be amended and supplemented in writing at any time by the mutual consent of the Parties in writing.

8 TERM OF MOU:

- 8.1 This MOU shall commence on the Effective Date and shall remain in force for a period of five (5) years. Thereafter, this MOU may be extended for a further period by mutual consent of both parties.
- 8.2 Either Party may terminate this MOU by written notification to the other Party of its desire to terminate six (6) months prior to the desired date of termination. The termination of this MOU shall not affect the implementation of the projects or programmes established under it prior to such termination.

9 DISPUTE RESOLUTION:

Any disputes arising under or in connection with this MOU which cannot be resolved by amicable discussions between the Parties shall be referred to the Head of the Institutions or their nominees for resolution, or may be submitted to such alternative dispute resolution mechanism as may be agreed in writing between the Parties.

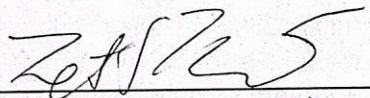
10 NON-BINDING NATURE OF THIS MOU:

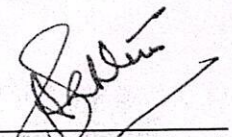
Despite the statements and obligations expressed herein and save for Clauses 4, 5, 6 and 8, this MOU is a non-binding expression of the current intentions of the Parties, and neither Party will incur nor be bound to any legal obligations or expense hereunder to the other Party until and unless define agreements have been negotiated, approved by the necessary management levels of each Party and executed and delivered by authorized representatives of both Parties. Clauses 4, 5, 6 and 8 shall survive the expiry or termination of this MOU and shall be legally enforceable in accordance with their terms in any court of competent jurisdiction.

11 GOVERNING LAW:

This Agreement shall be governed by and construed in accordance with the laws of INDIA and Taiwan.

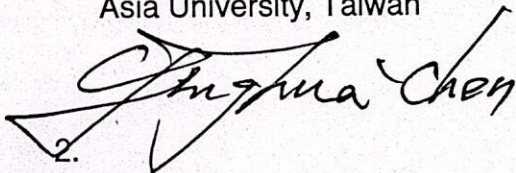
IN WITNESS WHEREOF the parties hereto have caused this MOU to be duly executed on the day and year first above mentioned


(Prof. Jeffrey J. P. Tsai)
President
Asia University
Taichung City 41354
Taiwan

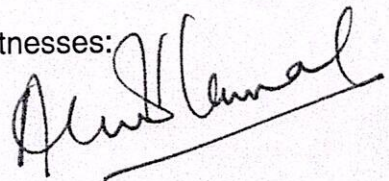

(S.S. Akhtar)
Registrar
Jamia Hamdard
Hamdard Nagar
New Delhi-110062 (INDIA)

Witnesses:

1. Prof. Yinghuei Chen
Dean, the International College
Asia University, Taiwan


2.

Witnesses:



PB-187
25/9/19

School of Nursing Sciences and Allied Health
Rufaida College of Nursing
Jamia Hamdard



To

Prof. S. Raisuddin
Director-IQAC
Jamia Hamdard

25th September 2019

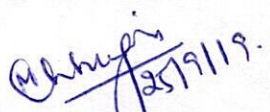
Subject: Regarding MoU between Jamia Hamdard and Dundee University, Scotland.

Sir,

This is for your kind information that an MoU has been signed between Jamia Hamdard and Dundee University, Scotland with initiative from School of Nursing Sciences and Allied Health.

Kindly find herewith attached the copy of the complete signed MoU document for your documentation.

Thanks and Regards,

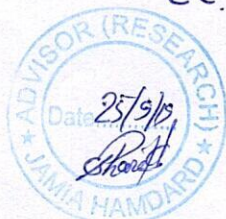

Prof. (Dr.) Manju Chhugani
Dean
School of Nursing Sciences and Allied Health
Jamia Hamdard

Prof. (Dr.) Manju Chhugani
Dean
School of Nursing Sciences and Allied Health
Jamia Hamdard
(Deemed to be University)
New Delhi-110062


Tenure of MoU may
please be indicated.

R. H.
25/9/19

CC: AR(CACd)



Dean/SNAH

It is not written but we proposed
for five years. 
Prof. S. Raisuddin

MEMORANDUM OF UNDERSTANDING

BETWEEN

**JAMIA HAMDARD
(DEEMED TO BE UNIVERSITY)
NEW DELHI, INDIA**

AND

**THE UNIVERSITY OF DUNDEE
DUNDEE, SCOTLAND**

Registrar
Jamia Hamdard
(Deemed University)
Hamdard Nagar
New Delhi-110062

E.A. Khan

9.8.19

MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding (MoU) is executed on this 9th day of August, 2019, at New Delhi.

BETWEEN

Jamia Hamdard (Deemed to be University), Hamdard Nagar, New Delhi-110062 (INDIA), represented through its Registrar presently Prof. Ehsan A. Khan, (Hereinafter referred to as 'JH'), PARTY OF THE FIRST PART.

AND

The University of Dundee, established by Royal Charter dated 20 July 1967 and a registered Scottish Charity (charity number SC015096) and having its principal office at 149 Nethergate, Dundee DD1 4HN, represented through its Vice Principal (Research) presently Prof. J. Rowan, (Hereinafter referred to as 'Dundee'), PARTY OF THE SECOND PART.

Dundee and Jamia Hamdard to be referred to individually as a party and collectively as the parties;

The expression of both the parties shall, however, mean and include the institutions/ organizations.

WHEREAS, the purpose of this MOU is to record formally the parties' intentions to explore and determine the areas and subject of collaboration in the field of maternal and child health in India and to set out the general principles under which the parties intend to cooperate.

Both the parties' are mutually agreed on the following: -

Objectives:

The MoU, which is being signed between Jamia Hamdard and Dundee, has the objective for the enhancement of implementation of collaborative research opportunities with a global partner.

NOW THE PARTIES AGREED HERE TO AS FOLLOWS:-

1. Both the institutions intend to work together to develop a collaborative arrangement, whereby the institutions may participate in collaborative research and other agreed activities that further enhance the relationship between the institutions in the field of maternal and child health.
2. The institutions will use their reasonable endeavours to effect, within the institutions' limitations:
 - Collaboration on research and/or publications;
 - Organisation of academic conferences, seminars, workshops;

Registrar
Jamia Hamdard
(Deemed University)
Hamdard Nagar
New Delhi-110062
Ehsan
9.8.19

- Opportunities for Jamia Hamdard visiting scholars/researchers at Dundee;
 - Opportunities for Dundee visiting scholars/researchers at Jamia Hamdard
3. That this document is in no way intended to create legal or binding obligations on either party, it serves only as a record of the parties' current intentions to enhance the relationship of the institutions going forward.
 4. That before any of the activities set out in this Memorandum of Understanding are implemented, the institutions must enter into formal and binding agreement/(s) (separate from this Memorandum of Understanding) with each other which will detail the specific form and content of the activities and address the responsibilities and rights of each institution in relation to those activities. The institutions agree to negotiate the terms of any such agreement/(s) in good faith and for the purpose of enhancing the relationship of the institutions.

For and behalf of Dundee

J. Rowan 10/9/19

(Prof. J. Rowan
Vice Principal (Research)
The University of Dundee
149 Nethergate,
Dundee DD1 4HN
Scotland

Witnesses

1. *Julie Begg* 10/9/19
Academic, Corporate Governance
University of Dundee
2. *Louise McInire* 10/9/19
Academic Governance
University of Dundee.

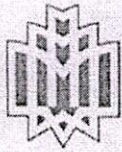
For and behalf of JH

E. Khan
9.8.19

Registrar (Prof. Ehsan A. Khan)
Jamia Hamdard
(Islamic University) Registrar
Hamdard Nagar Jamia Hamdard
New Delhi-110062 Hamdard Nagar
New Delhi-110062 (INDIA)

Witnesses

1. *Prof (Dr) Manju Chhugani* 9/8/19
Dean, SNSAH
Jamia Hamdard.
2. *Ms. Bindu Shaiju* Bindu 9/8/19
Associate Professor
SNSAH, Jamia Hamdard.



Kharazmi University



IN THE NAME OF GOD
MEMORANDUM of UNDERSTANDING (MoU)

ON
Educational, Research and Technological Cooperation

This MEMORANDUM OF UNDERSTANDING (Hereinafter referred to as 'MoU') is made on this 11th day of February 2020 ("Effective Date").

BETWEEN

Kharazmi University, Tehran, located in No.43, Shahid Mofatteh Ave., Tehran, I.R. Iran, PO Box, 15719-14911, represented by its Rector, **Prof. (Dr.) Azizollah Habibi** on the **ONE PART**

AND

Jamia Hamdard (Deemed to be a University), located in Hamdard Nagar, New Delhi-110062 (INDIA), represented by its through its Registrar presently Mr. S.S. Akhtar duly authorized on behalf of Jamia Hamdard of the **OTHER PART** with the aim of developing and expanding the educational, research and technological cooperation between the two countries, have agreed upon the followings:

ARTICLE - 1

GENERAL PROVISIONS

- 1- M.O.U. shall be pursued in areas of mutual interest, on a basis of equality and reciprocity.
- 2- Parties will encourage the expansion and development of educational, scientific and technological relations in mutually interested fields within the framework of internal governing laws and regulations of both the countries.

ARTICLE - 2

FORMS OF M.O.U. and FIELD OF COOPERATION

- 1- Parties will fulfill the objectives of this M.O.U., through the scientific and technological cooperation, not limited, but specifically in the following faculties:

Faculty of, Engineering, Management, Biological Sciences, Chemistry, Law and Political Sciences, Humanities, Mathematical Sciences and Computer, Interdisciplinary studies, in the following:
 - A. Exchange of scientists, professors, scholars due to implementing the joint study program, research and educational projects, dissertations supervise and co-supervise.
 - B. Holding joint International Conferences, educational workshops, seminars, e-Learning and virtual learning programs.
 - C. Exchange of students in different courses and degree programs upon mutual agreement and endeavor in awarding scholarships based on proposed programs of the parties.
 - D. Collaborations in sharing of academic data, data and knowledge sharing, scientific information, intellectual property, articles and publications.
- 2- Reciprocal arrangements based on mutually acceptable terms shall be accomplished to give an impetus to collaborative research and joint projects. Teachers, researchers, guides, and students of both institutions shall be encouraged to work in tandeml the laboratories, workshops, faculties and departments of both the institutions.
- 3- Parties will support and co-operate in the vocational education fields.
- 4- Both parties accept that financial arrangements shall be negotiated in each case and shall be dependent on the availability of funds. The parties shall aim to find sources of financial assistance for the activities and exchanges to be undertaken in the terms of this Agreement. For this purpose, it is suggested that both the universities, consider these students as SAARC countries' students for their related payments.
- 5- Based on all above terms, for the initiation of this MoU, the following courses will be focused and specifically will be coordinated by Dr. Omid Mahdi Ebadati, Faculty Member & ICT Advisor to the Chancellor, Kharazmi University, Tehran—(coordinators for other courses and programmes will be appointed in due course and as per specific case):

M. Tech (Bioinformatics)	M.Tech (Computer Science & Engineering)	M.Tech (Big Data Analytics)
M. Sc (CS/IT) & MCA	M.Tech (Information Security & Forensics)	Ph.D. (CS/CSE)
MBA (All fields)	Ph.D. (Management Studies)/DBA	

ARTICLE – 3

EXECUTIVE PROTOCOLS

- 1- The development and implementation of specific forms of M.O.U. based on this M.O.U, will be separately established upon between Parties and outlined in executive protocols, specifying the nature of joint activities, financial and other arrangements.
- 2- Parties will exchange information and documents of higher education system for evaluating higher education certificates.

ARTICLE – 4

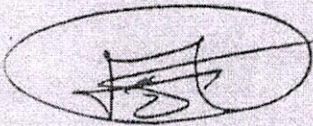
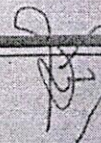
LIAISON OFFICE & COORDINATOR

For the purpose of implementing this M.O.U. an office to serve as liaison shall be designated by each Party:

For Kharazmi University, the contact will be International Scientific Cooperation office: No.43, 15719-14911, Mofateh Ave., Tehran, I.R of Iran, Tel: (+9821)88825818, Fax: (+9821)86070905, E-mail: international@khu.ac.ir

For Jamia Hamdard University, the contact will be Registrar, Jamia Hamdard (Deemed to be a University), Located in Hamdard Nagar, New Delhi-110062 (INDIA). Contact: +91-26059688, Extn. 5303. E-mail: ssakhtar@jamiyahamdard.ac.in

To help make this M.O.U operational and implement its contents, coordinators will be appointed by the liaison offices on both sides upon / shortly after it is signed. Parties shall agree upon an internal or external office or agent for the purpose of implementing and coordinating of this M.O.U, if required.

ARTICLE - 5

ASSISTANCE AND SUPPORT

Each Party, in accordance with its respective statutes and regulations, shall ensure assistance and support to scholars of the partner university visiting the institution.

ARTICLE - 6

INTELLECTUAL PROPERTY

All background Intellectual Property will remain in the ownership of the originating Institution. Access to such Intellectual Property will be negotiated on a case to case basis.

ARTICLE - 7

PROMOTIONAL MATERIAL AND USE OF LOGOS

Neither institution, party to this M.O.U., shall use the name and logo of the other in any form of publicity or promotional material without the written consent of the party concerned.

ARTICLE - 8

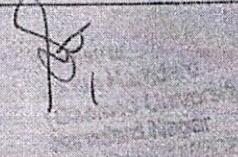
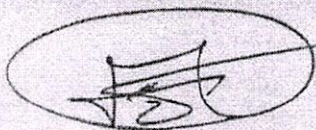
TERMS AND CONDITIONS

This M.O.U. is subject to approval by competent authorities, according to the national laws of each University. This M.O.U. shall become effective when both signatures are affixed.

ARTICLE - 9

VALIDITY

This M.O.U. shall remain in force from the signing date for five (5) years, unless one of the parties announces its intention for the amendment or termination of it in writing, six months prior to its expiry. This M.O.U signed in city of Tehran and New Delhi in English versions, in case of any misunderstanding related to the Interpretation of this M.O.U, the English text shall prevail.



ARTICLE – 10

RENEWAL

Parties may apply for renewal of the M.O.U. for a further period of equivalent duration. If not renewed, the M.O.U. expired ceases its effects, without prejudice to the continuation of any ongoing activities.

ARTICLE – 11

SETTLEMENT OF DISPUTES

In order to settle any doubts that may arise under the performance or in the implementation of this Agreement, the Parties shall exert their best efforts to arrive at a solution by mutual consent and the Parties shall negotiate in good faith and shall endeavour to resolve the dispute amicably, or may be submitted to such alternative dispute resolution mechanism as may be agreed in written between the Parties.

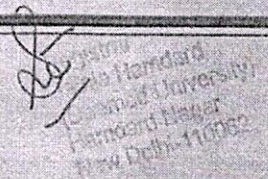
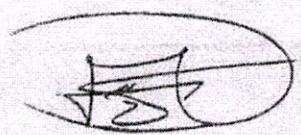
Drawn up in two (2) original copies in English.

ARTICLE – 12

NOTICES AND COMMUNICATIONS

Any notice to be given under this MOU shall be in writing and sent by registered post, courier, e-mail etc., to the other party and the same shall be deemed to have been given on the date of dispatch. All notices by one party to the other party shall be deemed to be valid at receipt of the notice, if sent by registered post, courier or e-mail to the address of the other party as shown below:

To First Party:	To Second Party:
Rector, Prof. (Dr.) Azizollah Habibi Kharazmi University, Tehran, Located in No.43, Shahid Mofatteh Ave., Tehran, I.R. Iran, PO Box, 15719-14911 E-mail: ----- Contact: -----	Mr. S.S. Akhtar (Registrar) Jamia Hamdard (Deemed to be a University), Located in Hamdard Nagar, New Delhi-110062 (INDIA) E-mail: ssakhtar@jamiyahamdard.ac.in Contact: 011-26059688, Extn. 5303

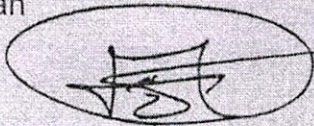


Jamia Hamdard
Deemed to be a University
Hamdard Nagar
New Delhi-110062

IN WITNESS WHEREOF, the parties hereto have caused this MOU to be duly executed on the day and year first above-mentioned.

For and on behalf of First Party

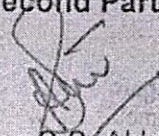
Prof. (Dr.) Azizollah Habibi
Chancellor
(Authorised Representative)
Kharazmi University,
Tehran, Iran



WITNESS:

1.

For and on behalf of Second Party


S.S. Akhtar
Registrar
(Authorised Representative)
Jamia Hamdard
Hamdard Nagar
New Delhi-110062 (INDIA)

WITNESS:

1.

MEMORANDUM OF UNDERSTANDING

BETWEEN



**Jamia Hamdard
(Deemed to be University)
New Delhi-110062 (INDIA).**

AND



**National Institute of Food Technology
Entrepreneurship and Management
Sonapat-131028, Haryana, India.**



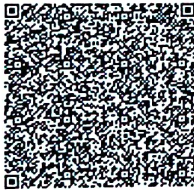
सत्यमेव जयते

INDIA NON JUDICIAL

Government of National Capital Territory of Delhi

e-Stamp

Certificate No. : IN-DL06705672388903S
Certificate Issued Date : 08-Jan-2020 10:33 AM
Account Reference : IMPACC (IV)/ dl857503/ DELHI/ DL-DLH
Unique Doc. Reference : SUBIN-DL06705672388903S
Purchased by : REGISTRAR JAMIA HAMDARD
Description of Document : Article Others
Property Description : Not Applicable
Consideration Price (Rs.) : 0
(Zero)
First Party : REGISTRAR JAMIA HAMDARD
Second Party : Not Applicable
Stamp Duty Paid By : REGISTRAR JAMIA HAMDARD
Stamp Duty Amount(Rs.) : 100
(One Hundred only)



Please write or type below this line.

MEMORANDUM OF UNDERSTANDING

1. Memorandum of Understanding.

BETWEEN

- 1.1. The present Memorandum of Understanding (Hereinafter referred to as "MOU") made and entered into on this 8th day of January, 2020 at New Delhi between Jamia Hamdard (Hereinafter referred to as "JH"); which expression shall, where the contexts so admits, include its employees and officers, of the First Part.

Statutory Alert:

1. The authenticity of this Stamp Certificate should be verified at "www.shcilestamp.com". Any discrepancy in the details on this Certificate and as available on the website renders it invalid.
2. The onus of checking the legitimacy is on the users of the certificate.
3. In case of any discrepancy please inform the Competent Authority.

AND

- 1.2 National Institute of Food Technology Entrepreneurship and Management, Sonapat (Hereinafter referred to as "NIFTEM"), which expression shall, where contexts so admits, include its employees and officers of the Second Part.
- 1.3 Jamia Hamdard and NIFTEM are referred to herein collectively as the "Parties" and each individually as a "Party"

2. PREAMBLE:

WHEREAS, National Institute of Food Technology Entrepreneurship and Management, hereinafter called "NIFTEM" is an autonomous world-class institute of Ministry of Food Processing Industries, Govt. of India and a Deemed to be University (De-novo Category) situated in Sonapat, Haryana. The mandates of the institute are education (B.Tech, M.Tech and PhD degrees), research (in food safety, food processing, food technology, food engineering and basic and applied sciences of food technology) and outreach (Dissemination of knowledge, technologies to food & allied industries).

AND WHEREAS, Jamia Hamdard, a premier Govt. funded Deemed to be University in New Delhi, India and recently it has received the status of Institutions of Eminence (IoEs) from the Government of INDIA. Jamia Hamdard was ranked 18 among Universities in India by NIRF, 2019. Jamia has a well-established Department of Food Technology imparting Bachelors, Masters and Doctorate degrees in the area of Food Technology.

Being situated at a distance of only 55 km, both institutes share a common desire to extend and strengthen the functional relationship between NIFTEM and JH. That both the parties/undersigned mutually agree to share existing facilities and available expertise at our respective institutions.

3. SCOPE OF AGREEMENT:

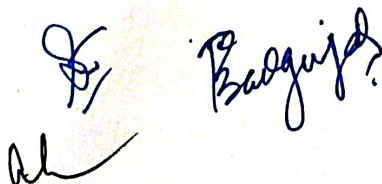
- 3.1 This Agreement deals with modalities and terms and conditions for academic cooperation between NIFTEM, Sonapat and Jamia Hamdard, New Delhi, the rights and obligations of either party thereto and other arrangements between the parties.
- 3.2 The MoU shall come into force from the date of signing of this agreement (Hereinafter called the effective date) and shall remain valid for a period of 5 (Five) years or until superseded or cancelled.



3.3 This MoU will be applicable for faculty and PG students of NIFTEM, Sonapat and Jamia Hamdard, New Delhi, for academic and research work and vice versa.

4. RESPONSIBILITIES OF JAMIA HAMDARD, NEW DELHI AND NIFTEM, SONEPAT:

- 4.1 It is agreed that the collaboration between NIFTEM and Jamia Hamdard shall be established in the area of mutual interest to both the institutions for research and guiding research scholars leading to postgraduate (M. Tech. and Ph.D.) degrees. Accordingly, all the postgraduate students of NIFTEM or Jamia Hamdard can undertake their research work in the areas of mutual interest of both the institutes.
- 4.2 The parties will support sharing of research facilities commensurate with collaborative research projects. Scientific staff of the respective parties will be reciprocally welcomed on the partner site. Prior consent of the collaborating scientists may be undertaken from project to project basis.
- 4.3 The parties agree to extend their infrastructure, laboratory, library facilities and Animal and Animal Experimentation to scientists/research workers/postgraduate students of the NIFTEM and Jamia Hamdard for accomplishing collaborative/joint research programme/projects or postgraduate research work.
- 4.4 A postgraduate student may be assigned to staff members of the collaborating institutions as a Co-Major Advisor/Co-Guide of the Advisory committee depending on the requirement of the work by the competent authority of NIFTEM or Jamia Hamdard. Co-Major Advisor should already be a member of postgraduate faculty.
- 4.5 The technical programme of student's research can be decided by the Advisory Committee in consultation with Co-Guide/Co-Major Guide of NIFTEM and Jamia Hamdard as the case may be.
- 4.6 Programme of research duly approved by competent authorities of NIFTEM and Jamia Hamdard pertaining to partial fulfilment of said degree can be termed as joint programme.
- 4.7 Such a faculty member/scientist shall abide by the academic rules and regulations of the NIFTEM and Jamia Hamdard. The concerned Major Advisor/HOD shall ensure observance of the Academic rules and regulations of the parties.
- 4.8 Consumable items (chemicals, reagents, glassware, etc.) shall be the liability of the respective parties/institutes.



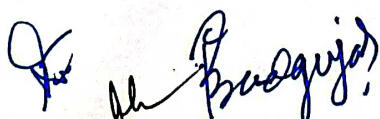
- 4.9 The number of students from NIFTEM and Jamia Hamdard to be accommodated under the MoU will be decided by the concerned HoD and the Registrar of the parties NIFTEM/concerned HoD with concurrence of concerned faculty Dean of Jamia Hamdard depending on the available facilities in the university/institute and technical programme of the students.
- 4.10 Students will be bound by the rules and regulations of both the institutes from time to time and will be provided accommodation subject to availability.
- 4.11 If the scientists/professors of both institutes submit a collaborative project, the said project will be approved by the institutes. Both NIFTEM and Jamia Hamdard will promote submission of collaborative research proposals of mutual interest to outside agencies and within institutes for funding.
- 4.12 The orientation/refresher programme for the early and mid-career faculty members of NIFTEM may be conducted at Jamia Hamdard, Hisar and vice versa. Duration, frequency, adequacy and other modalities of such programme can be decided on mutually agreeable basis.

5. INTELLECTUAL PROPERTY:

- 5.1 Intellectual property, research publications and benefits arising out of commercialization of technology generated out of cooperation under this Agreement shall be jointly owned by NIFTEM, Sonapat and Jamia Hamdard, New Delhi or as per guidelines of funding agency on mutual agreeable terms between NIFTEM, Sonapat and Jamia Hamdard, New Delhi.
- 5.2 Emergence of any intellectual property issue/publications from the joint research/project/student's research work shall be dealt by both institutions on sharing basis between NIFTEM and Jamia Hamdard.
- 5.3 In case of patentable inventions, both parties will apply as co-applicants for the protection of intellectual property rights subject to exclusive rights of both the parties. Commercialization in any other country shall be done jointly through a separate agreement. The ownership of IP rights shall be in proportion to research contribution by each party, which shall be borne out through properly maintained data and available on records.

6. TERMINATION OF AGREEMENT:

The MoU shall be effective from the date of its signing by both the parties and shall remain in operation for 5 (Five) years or until either party serves notice to the other for its intention to terminate. In such events,



the MoU shall stand terminated at the end of 1 (One) calendar month from the date of issue of such notice. In case, both the parties agree to terminate the MoU, the ongoing thesis or research work shall be allowed to be completed.

7. NOTICES AND COMMUNICATIONS:

Any notice to be given under this MoU shall be in writing and sent by registered post, courier or e-mail to the other party or its nominee, shall be deemed to have been given on the date of dispatch. All notices by one Party to the other shall be deemed to be valid at receipt of the notice if sent by registered post, courier or e-mail to the address of the other Party as shown below:

To,
S.S. Akhtar
(Authorised Signatory)
Registrar
Jamia Hamdard
Hamdard Nagar, New Delhi-110062
E-mail: ssakhtar@jamiahamdard.ac.in
Contact: 011-26059688 Extn. 5303.


To,
Dr. J. S. Rana
Registrar, NIFTEM
(Authorised Signatory)
Sonapat, Haryana
E-mail:
Contact:

8. AMENDMENTS TO THE AGEEMENT:

The parties of this MoU may, by mutual written consent, add, modify, amend or delete or any word, phrase, sentence or article in this MoU at any time during the operation of MoU.

9. SETTLEMENT OF DISPUTES ETC.:

The parties could act strictly according to the provisions of Indian Law while implementing and interpreting this MoU. In case, there is any dispute regarding any matter arising from this Agreement or from the interpretation of this MoU, the Parties shall negotiate the same in good faith and shall endeavour to resolve the dispute amicably. However, if the dispute is not amicably settled between the parties within 45 (Forty Five) days, the matter /dispute will be settled through an arbitration by referring it to 2 (Two) members Committee jointly appointed by Vice-Chancellor, NIFTEM, Sonapat and Vice-Chancellor, Jamia Hamdard.




The venue of arbitration shall be at New Delhi. The award of arbitrator shall be final and binding on the Parties. Nothing in this clause shall prevent the parties commencing or continuing court proceedings at any time. The arbitration proceedings shall be in English language. This clause shall survive termination or expiry of this MoU. The arbitration proceedings shall be governed by the Arbitration and Conciliation Act, 1996 or any subsequent enactment or amendment thereto.

10. SEAL OF PARTIES:

IN WITNESS WHEREOF, the parties have caused this MoU to be executed by the hands of duly authorised representatives on the day, month and year first before written and that Parties hereto caused this MoU to be executed by their duly authorised signatories in two original copies. The Parties mutually acknowledge and declare to have effectively negotiated and understand all the terms and conditions of this MoU and that; their concurrence on the MoU is the consequence of such negotiations and free will and without any misrepresentation, undue influence, coercion etc.

FOR AND ON BEHALF OF
NIFTEM


Dr. J.S. Rana
Registrar, NIFTEM,
Sonapat, Haryana

Witnesses:


Dr. Ashutosh Upadhyay
Professor and Dean (Academics),
NIFTEM



Dr. Prarabdh C. Badgujar
Assistant Professor, NIFTEM

FOR AND ON BEHALF OF JH


S.S. Akhtar
Registrar
Jamia Hamdard

Witnesses:


Dr. AfrozulHaq
Professor and Dean School of
Interdisciplinary Sciences, Jamia
Hamdard


Dr. Khalid Bashir
Assistant Professor
Jamia Hamdard

INDIA NON JUDICIAL

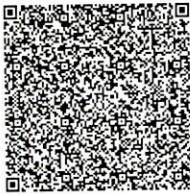
Government of National Capital Territory of Delhi



सत्यमेव जयते

e-Stamp

Certificate No. : IN-DL32858998564338T
Certificate Issued Date : 19-Jan-2021 11:58 AM
Account Reference : IMPACC (IV)/ dl857503/ DELHI/ DL-DLH
Unique Doc. Reference : SUBIN-DL85750368699869834062T
Purchased by : REGISTRAR JAMIA HAMDARD
Description of Document : Article 5 General Agreement
Property Description : Not Applicable
Consideration Price (Rs.) : 0
(Zero)
First Party : REGISTRAR JAMIA HAMDARD
Second Party : Not Applicable
Stamp Duty Paid By : REGISTRAR JAMIA HAMDARD
Stamp Duty Amount(Rs.) : 100
(One Hundred only)



MEMORANDUM OF AGREEMENT

THIS AGREEMENT (the "Agreement"), is entered into on this 15th day of February, 2021 at New Delhi.

BETWEEN

Jamia Hamdard (Deemed to be University), Hamdard Nagar, New Delhi-110062, through its Registrar (herein referred to as '**JH**'), which expression shall, unless it be repugnant to the meaning or context thereof, be deemed to mean and include its successors and permitted assigns of the **FIRST PART**.

Statutory Alert:

1. The authenticity of this Stamp certificate should be verified at 'www.shcilestamp.com' or using e-Stamp Mobile App of State holding. Any discrepancy in the details on this Certificate and as available on the website / Mobile App renders it invalid.
2. The onus of checking the legitimacy is on the users of the certificate.
3. In case of any discrepancy please inform the Competent Authority.

Registrar
Jamia Hamdard
(Deemed University)
Hamdard Nagar
New Delhi-110062

AND

Pure Indian Foods Corporation, whose address is at 1800 Estate St #174 Hamilton, New Jersey 08609, USA through its authorized representative Sandeep Agarwal, President (hereby known as **the "Client"**); which expression shall, unless it be repugnant to the meaning or context thereof, be deemed to mean and include its successors and permitted assigns of the **SECOND PART**.

AND

Prof. (Dr.) Vidhu Aeri, Department of Pharmacognosy & Phytochemistry, School of Pharmaceutical Education & Research, Jamia Hamdard (Deemed to be University), Hamdard Nagar, New Delhi-110062 (hereby known as **the "Consultant"**) of the project, which expression shall, unless it be repugnant to the meaning or context thereof, be deemed to mean and include its successors and permitted assigns of the **THIRD PART**.

(The JH, Client and Consultant shall hereinafter be collectively referred to as "Parties" and individually referred to as "Party")

WHEREAS, the Client desires to hire the services of the Consultant to render services to Pure Indian Foods.

NOW THIS AGREEMENT WITNESSETH that in consideration of mutual promises and covenants contained herein the parties have agreed as follows:


1. **The Services:** The Consultant agrees that she shall render her services to the Client and will remotely assist the Client in the development of Classical Asavas and Aristas by offering technical assistance, know-how and knowledge transfer (the "Services").

2. **Payment:**

A. Payment from the Client to JH:

The Client agrees to make a total payment of INR 1,10,000/- (total consideration) to JH, payable at New Delhi as follows:

a) The first tranche of 50 % advance payment of INR 55,000/- is payable within 7 days of the execution of this Agreement. The payment shall be made via electronic transfer.


Registrar
Jamia Hamdard
(Deemed University)
Hamdard Nagar
New Delhi-110062

- b) The second tranche of 40% of INR 44,000/- is payable within 7 days of delivery of last instalment of services by the Consultant to the Client and confirmed by the Consultant to JH and client in writing. The third tranche of balance 10 % INR 11,000/- is payable within 7 days on completion of Term of 12 months or once the Client verifies all the information at its end and confirms in writing to JH and the Consultant that the services stand completed, whichever is earlier.
- c) In case the Agreement is terminated by either of the parties by the Client or the Consultant before the expiry of the Term then 50% of the remaining/balance payment shall immediately be due and payable to JH.

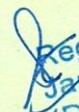
B. Payment from JH to Consultant:

The JHU agree to make a total payment of INR 70,000/- (total consideration) to Consultant, payable at New Delhi as follows:

- a) The first tranche of 50 % advance payment of INR 35,000/- is payable within 7 days of the receipt of first tranche payment by JH from the Client. The payment shall be made via electronic transfer.
- b) The second tranche of 40 % of INR 21,000 is payable within 7 days of receipt of second tranche payment by JH from the Client.
- c) The third tranche of balance 10 % INR 14,000/- is payable within 7 days of receipt of third tranche payment by JH from the Client.
- d) In case the Agreement is terminated either by the Client or the Consultant before the expiry of the Term then 50% of the remaining/balance payment shall immediately be due and payable to the Consultant.

3. **Term:** This Agreement shall commence 15 (Fifteen) days after signing by the parties and shall continue for 12 months from the effective date, unless otherwise terminated by the Consultant or Client or by mutual agreement of the parties herein.

Any notice provided under this Agreement must be sent by certified or registered mail, email or facsimile or delivered by hand to the receiving party at the address set out in the Termination Clause.


Registrar
Jamia Hamdard
(Deemed University)
Hamdard Nagar
New Delhi-110062

4. **Termination:** Consultant and Client may terminate this Agreement for convenience, by giving 30 days written notice to the other Party with or without assigning reasons.

In the event that the Client desires to terminate the Services of the Consultant hereunder, the Client shall send a notice by certified or registered mail or email to the Consultant at the following address:

Prof. (Dr.) Vidhu Aeri
Department of Pharmacognosy & Phytochemistry,
School of Pharmaceutical Education & Research,
Jamia Hamdard (Deemed to be University), Hamdard Nagar,
New Delhi-110062
Email: vaeri@jamiahamdard.ac.in

And intimation to JH at:

C/o The Registrar
Jamia Hamdard (Deemed to be University),
Hamdard Nagar, New Delhi-110062
Email: registrar@jamiahamdard.ac.in

In the event that the Consultant desires to terminate this Agreement, the Consultant shall send a notice by certified or registered mail or email to the Client at the following address:

Mr. Sandeep Agarwal
President
Pure Indian Foods Corporation
1800 E State St #174 Hamilton, New Jersey 08609, USA
Phone/Fax: (609)785-9100
Email: sandeep@pureindianfoods.com

And intimation to JHU at:

C/o The Registrar
Jamia Hamdard (Deemed to be University),
Hamdard Nagar, New Delhi-110062
Email: registrar@jamiahamdard.ac.in

In the event that a law or regulation is passed, the operation or implementation of which would result in the non-execution of the obligation of any of the parties to this Agreement, shall

 Registrar
Jamia Hamdard
(Deemed University)
Hamdard Nagar
New Delhi-110062


automatically result to expiration and be deemed terminated upon the date of its occurrence.

5. **Intellectual Property:** The Parties acknowledge that the Client shall hold all rights proprietary in any work product resulting from the Consulting Services including, but not limited to, copyright and patents. The Consultant agrees not to claim any such ownership in any intangible property created insofar as to the services she provided for the Client at any time prior to or after the completion and delivery of work to the said Client.
6. **Confidentiality:** The Consultant agrees to refrain from disclosing to any third party any details regarding the Client's business, including any information regarding any of the Client's customers and businesses.

The terms and conditions contained in this Agreement shall constitute Confidential Information, and the parties undertake and agree to keep the such information received as Confidential Information by applying the same care that it would employ with respect to its own Confidential Information. The Client and the Consultant shall not disclose, transmit, or convey, wholly or partially, the confidential information to any third party without the written consent or approval of the other party/parties.

The foregoing notwithstanding, in the event that the recipient of the confidential information is legally compelled or required by any governmental body, court, or competent authority to disclose any such confidential information if shall promptly notify the other party so that the latter may be able to seek a protective order or avail itself of other appropriate remedies and/or waive compliance with the provisions hereof. The provisions of this section shall survive the termination of this Agreement for whatever reason.

7. **Non-compete:** The Consultant will not engage, directly or indirectly, in any capacity, to be in any competition with the Client or any of its subsidiaries, including any company engaged in the business which is in competition with the Client's business during the terms and upon the termination of this Agreement for further 3 (Months) only.
8. **Indemnification:** The Consultant shall be indemnified and protected by the Client from and against any lawsuit(s) and costs of any kind in relation to the Client's business due to any action or inaction by

 Registrar
Jamia Hamdard
(Deemed University)
Hamdard Nagar
New Delhi-110062

the Client based on this Consulting Services provided herein under this Agreement.

9. **Agreement Modification:** No modification or alteration on this Agreement shall be considered as having been made unless done with mutual consent of the Parties and fully executed in writing and duly signed by the Parties hereto.

10. **SETTLEMENT OF DISPUTES:**

The parties shall act strictly according to the provisions of Indian Law while implementing and interpreting this Agreement. In case, there is any dispute regarding any matter arising from this Agreement or from the interpretation of this Agreement, the Parties shall negotiate the same in good faith and shall endeavor to resolve the dispute amicably. However, if the dispute is not amicably settled between the parties within 45 (Forty Five) days of arising of the dispute, the matter /dispute will be settled through an arbitrator jointly appointed by the mutual consent of the Parties.

The seat and venue of arbitration shall be at New Delhi only. The award of arbitrator shall be final and binding on the Parties. Nothing in this clause shall prevent the parties commencing or continuing court proceedings at any time. The arbitration proceedings shall be in English language. This clause shall survive termination or expiry of this Agreement. The arbitration proceedings shall be governed by the Arbitration and Conciliation Act, 1996 or any subsequent enactment or amendment thereto.


The Parties shall conduct their activities following all the statutory regulations and law of India in letter and spirit. This Agreement shall further be governed, construed and interpreted in accordance with the laws of India. The courts of Delhi/New Delhi (India) alone shall have the sole and exclusive territorial and pecuniary jurisdiction for all the disputes or other matters arising out of or in connection with this Agreement.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed by the hands of duly authorized representatives on the day, month and year first before written and that the parties hereto caused this Agreement to be executed by their duly authorized signatories in three original copies. The Parties mutually acknowledge and declare to have effectively negotiated and understand all the terms and conditions of this

Registrar
Jamia Hamdard
(Deemed University)
Hamdard Nagar
New Delhi-110062

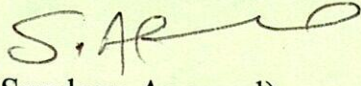
Agreement and that; their concurrence on the Agreement is the consequence of such negotiations and free will and without any misrepresentation, undue influence, coercion etc.

ON BEHALF OF FISRT PARTY

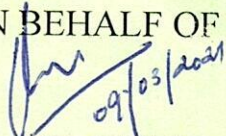

(S.S. Akhtar)
Registrar
Authorised Signatory
Jamia Hamdard
Hamdard Nagar
New Delhi-110062.

Registrar
Jamia Hamdard
(Deemed University)
Hamdard Nagar
New Delhi-110062

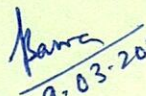
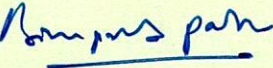
ON BEHALF OF SECOND PARTY


(Sandeep Agarwal)
President
Pure Indian Foods Corporation
1800 E State St #174 Hamilton,
New Jersey 08609

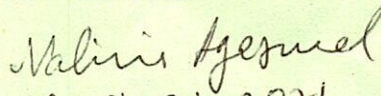
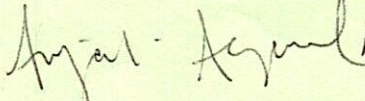
ON BEHALF OF THE THIRD PARTY

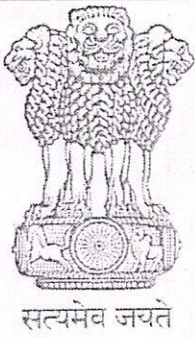

Prof. (Dr.) Vidhu Aeri,
Department of Pharmacognosy & Phytochemistry,
School of Pharmaceutical Education & Research,
Jamia Hamdard (Deemed to be University),
Hamdard Nagar, New Delhi-110062

WITNESSES:

1. 
9.03.2021
Prof. Sandhya Bawa
2. 
9.03.2021
(Dr. B. P. Panda)

WITNESSES:

1. 
MARCH 21, 2021
NALINI AGARWAL
2. 
MARCH 21, 2021
ANJALI AGARWAL



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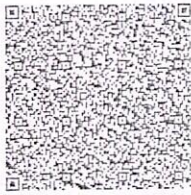
Government of National Capital Territory of Delhi

सत्यमेव जयते

₹100

e-Stamp

Certificate No. : IN-DL04013687635093U
 Certificate Issued Date : 14-Mar-2022 03:44 PM
 Account Reference : IMPACC (IV)/ dl705403/ DELHI/ DL-DLH
 Unique Doc. Reference : SUBIN-DL70540396802332341202U
 Purchased by : REGISTRAR JAMIA HAMDARD
 Description of Document : Article Others
 Property Description : Not Applicable
 Consideration Price (Rs.) : 0
 (Zero)
 First Party : REGISTRAR JAMIA HAMDARD
 Second Party : Not Applicable
 Stamp Duty Paid By : REGISTRAR JAMIA HAMDARD
 Stamp Duty Amount(Rs.) : 100
 (One Hundred only)



Please write or type below this line

IN-DL04013687635093U

MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding (Hereinafter referred to as 'MoU') is entered into and executed on this 28th day of March 2022, at New Delhi.

BETWEEN

Jamia Hamdard (Deemed to be University), Hamdard Nagar, New Delhi-110062, through its Registrar presently Mr. S. S. Akhtar, (Hereinafter referred to as 'JH'), which expression shall, unless it be repugnant to the meaning or context thereof, be

Statutory Alert:

1. The authenticity of this Stamp certificate signed by the Registrar of Jamia Hamdard (Deemed to be University) can be verified by visiting the website www.echiesstamp.com or using e-Stamp Mobile App of Stock Holding Corporation of India Limited. Any discrepancy in the details on this Certificate as available on the website / Mobile App renders it invalid.
2. The onus of checking the legitimacy is on the Users of the Certificate.
3. In case of any discrepancy please inform the Competent Authority.

Registrar
Jamia Hamdard
(Deemed to be University)

JH

deemed to mean and include its successors and permitted assigns of the FIRST PARTY;

AND

Indian Pollution Control Association Solid Waste Management, Address: A-3-6, DDA Shopping Complex, Hargobind Enclave, Vikas Marg Ext., Delhi-110092, through its Director Mr. Ashish Jain, (Hereinafter referred to as the 'IPCA'), which expression shall, unless it be repugnant to the meaning or context thereof, be deemed to mean and include its successors and permitted assigns of the SECOND PARTY.

JH and the IPCA are referred to herein individually as a "Party" and collectively as the "Parties".

NOW, THE PARTIES HERETO AGREE AS FOLLOWS: -


1. Background

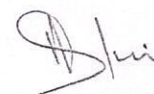
Indian Pollution Control Association (IPCA) and Jamia Hamdard University, share a common goal of making the University area, Clean and improve the quality of life for its students, faculty, and staff. IPCA has more than 21 years of experience of working with different communities on waste management related issues, while JAMIA HAMDARD is educational institute and generate solid waste in its campus based in Delhi.

Whereas, JAMIA HAMDARD is committed to provide waste management infrastructure and facilities in their premises to meet its goal of sustainability and whereas IPCA is having expertise in implementing and operation of Solid Waste Management related project with educational institutes.

Towards achieving its goals JAMIA HAMDARD seeks to undertake a series of awareness campaigns for its students and faculty to bring behavior change towards waste management. It also seeks to develop capacity of its ground staff to deliver services in a planned and efficient manner supported by planned and targeted infrastructure improvements and more effective monitoring. The level of coordination between various stakeholders will be the key success factor to determine if the sanitation services and solid waste can be made functional or not.

IPCA for over last twenty one years, has worked on various projects of solid waste management including door-to-door collection of waste, awareness on source segregation, strengthen secondary segregation through capacity building of waste-pickers community, establish network of recyclers to increase rate of waste recycling. IPCA has developed self sustainable model


Registrar
Jamia Hamdard
(Deemed to be University)
Hamdard Nagar
New Delhi - 110062



of waste management and replicated the same with other parts of country with its associate partners.

This Memorandum of Understanding (MOU) establishes a **non-financial co-operation** between JAMIA HAMDARD and IPCA for each of the parties to share their respective strengths in order to achieve the following objectives. The objectives of this co-operation will be to:

2. Objectives:


- 2.1 Bring sense of responsibility among the students, staff and faculty for their waste management.
- 2.2 Bring about behavior change and awareness among the communities on issues of waste management, particularly zero littering, segregation, waste collection.
- 2.3 Put appropriate efforts for plastic waste management in Jamia Hamdard, which include setting up Material Recovery Facility for efficient collection and segregation of waste followed by treatment of organic waste and recycling of dry waste.

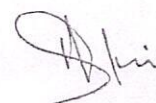
3. IPCA under this MOU with JAMIA HAMDARD shall do the following work, but not limited to:

- i. Create awareness on Solid Waste Management with all stake holders.
- ii. Demonstrate a broad range of options and strategies to optimize available resources.
- iii. Set up and operate Material Recovery Facility for the collection, segregation and storage of segregated waste.
- iv. Set up composting facility for the treatment of organic waste.
- v. Channelize segregated recyclable waste to the respective recyclers for its recycling.

4. JAMIA HAMDARD shall undertake to do the following:

- i. Extend support to IPCA in delivering the above tasks.
- ii. Providing the data and necessary information to develop the SWM Plan.


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(Deemed to be University)
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- iii. Facilitate introductory meetings with the local/ground staff and other stakeholders.
- iv. Allocate necessary ground staff and machinery to help IPCA manage solid waste in the pilot areas.
- v. Provide necessary infrastructure including civil work for set up Material Recovery Facility
- vi. Provide Solid Waste at the Material Recovery Facility from the Campus.

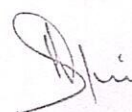
5. Monetary Support:

IPCA shall not seek any monetary support from JAMIA HAMDARD in the implementation, and shall arrange its own resources. JAMIA HAMDARD would however provide infrastructure.

6. General Provisions:

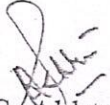
- 6.1 The participants enter into this MOU while wishing to maintain their own separate and unique missions and mandates, and their own accountabilities. Unless specifically provided otherwise, the cooperation among the Participants as outlined in this MOU shall not be construed as a legal entity or personality. Each Party shall accept full and sole responsibility for any and all expenses incurred by itself relating to this MOU. Nothing in this MoU shall be construed as an exclusive working relationship. The Participants specifically acknowledge that this MOU is not an obligation of funds, nor does it constitute a legally binding commitment by any Parties or create any rights in any third parties.
- 6.2 Nothing in this MOU shall be construed as interfering in any way with any separate agreements or contracts entered into by or among the Participants in their individual capacities either prior or subsequent to the signing of this MOU.
- 6.3 This MOU becomes effective on the date of its signature by the Participants and shall remain valid for a period of two (02) years from signing of both the parties. However, the Participants may decide in writing prior to its expiry to extend this period. In addition, this MOU may be modified or amended if the Participants agree in writing. Either participant may terminate this MOU at any time after giving the other Participant at least 30 days' advance written notice.


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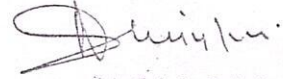
The Participants, each acting through their duly authorized representatives, have caused this MOU to be signed in their names at New Delhi on the above mentioned date.

ON BEHALF OF FIRST PARTY



(S.S. Akhtar)
Registrar
Authorised Signatory
Jamia Hamdard
Hamdard Nagar
New Delhi-110062.

ON BEHALF OF SECOND PARTY

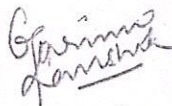
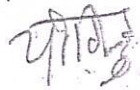


(Ashish Jain)
Director
Authorised Signatory
A-3-6, DDA Shopping Complex,
Hargobind Enclave, Vikas Marg
Ext., Delhi-110092

WITNESSES:

1. Keshava Nasreen
2. Sapna Jain

WITNESSES:

1. 
2. 

Between

Jamia Hamdard (Deemed to be University), Hamdard Nagar, New Delhi-110062, through its Registrar presently **Mr. S. S. Akhtar**, (Hereinafter referred to as '**JH**'), which expression shall, unless it be repugnant to the meaning or context thereof, be deemed to mean and include its successors and permitted assigns of the **FIRST PART**;

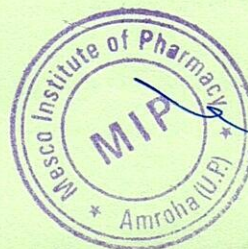
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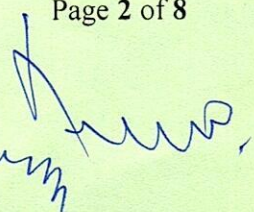
MESCO INSTITUTE OF PHARMACY, AMROHA (UP), having its registered address at 402, Dhanaura Road, Amroha, through its Principal presently **Mr. Mujeeb Ur Rahman** (Hereinafter referred to as '**MIP**' as the context permits), which expression shall, unless it be repugnant to the meaning or context thereof, be deemed to mean and include its successors and permitted assigns of the **SECOND PART**;

JH and **MIP** are referred to herein individually as a "**Party**" and collectively as the "**Parties**".

WHEREAS, Jamia Hamdard was conferred the status of a Deemed University in 1989 vide a notification of the Ministry of Human Resource Development, under Section 3 of UGC Act, 1956. JH became the first University of Delhi to be adjudged in a category 'A' by the National Assessment and Accreditation Council (NAAC) of India and subsequently it has been accredited in 'A' grade in three consecutive cycles. It is a top-ranking university in the National Institutional Ranking framework (NIRF) conducted by National Board of Accreditation (NBA), Ministry of Human Resource Development, Government of India. It has also been short-listed for grant of status of Institute of Eminence (IOE) by the Government of India. JH has Schools of Science, Pharmacy, Medicine, Nursing, Management Studies, and Allied Health Sciences etc. The University has its own hospital and a recognized/approved Medical College with the name Hamdard Institute of Medical Science & Research (HIMSR). JH offers higher education in different disciplines of science, pharmacy and medicine leading to UG, PG and Ph.D. Degrees. JH also envisages to launch programmes in interdisciplinary science including translational research. It seeks to collaborate with national and internal reputed institutions and organization for academic and research development and enrichment of students and faculty.


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WHEREAS, MIP has been established by educationists and professionals from pharmaceutical industry, Amroha with a mission to groom future industry leaders and academicians in the pharmacy discipline who are not only thorough professionals but also good human beings with good values and excellent interpersonal skills.

WHEREAS,both parties viz., JH and MIP realize that in the current context,working together is desirable to promote scientific research using facilities and expertise available at JH and MIP. Therefore, both parties are agreeable to enter into a MoU for working and cooperating with one another and using their respective expertise, knowledge and resources.

NOW, THE PARTIES HERETO AGREE AS FOLLOWS: -

ARTICLE I: OBJECTIVES OF COOPERATION

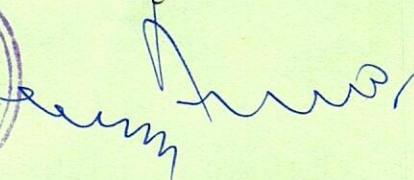
JH and MIP, agree to develop their academic links under the principles of mutual understanding, common interest and mutually complementary activities as outlined hereunder.

- a) To promote individual contacts among scholars, students and personnel of both the institutions.
- b) To provide opportunities for both staff and students to use to maximum the expertise and facilities available in both the organizations through training of students/staff and through exchange of thoughts by brain storming sessions/seminars/workshops and meetings.
- c) To work jointly for the common research interest at national and international levels. This includes preparation of joint supervision of Post-graduate (PG) and Doctoral (Ph.D.) students of JH and MIP and submission of joint proposals for funding from national and international agencies and their implementation. The faculty/scientist from the collaborating institute/organization will be included as co-supervisor only with due approval of the relevant bodies of Jamia Hamdard.
- d) To support the exchange of academic, research and training material.


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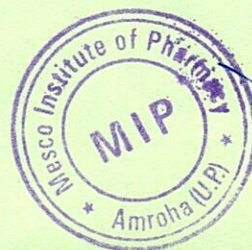


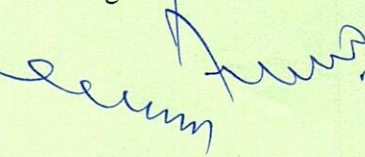
- e) To share experiences and expertise concerning administration and management of both the organizations.
- f) To encourage any other activities that both the parties agree to be on mutual benefit.

ARTICLE II: AREAS OF COOPERATION

1. Research Students/Scientists/Staff working in MIP may be enrolled for Ph.D. programme of JH in any discipline (department) as per the JH guidelines. The Scientists/Researchers working at MIP will be recognized as Co- supervisors for Ph.D. and Post-graduate (PG) theses. However, their recognition as Co-Supervisors will be as per the University norms in this regard and approval by the University. Bye-laws governing Ph.D. programme of Jamia Hamdard will apply to all the supervisors and candidates.
2. This MoU would cover all the constituent Units of MIP desirous of having collaboration with JH for advanced research and joint Ph.D. programme. For this purpose, MIP may individually submit proposal for collaborative research to steering Committee as envisaged in Article III of this MoU.
3. Rules of JH in force from time to time will be applicable to all applications of MIP for the Ph.D. admission formalities.
4. Ph.D. and PG students working at JH will be allowed to carry out a part of their research work in MIP and vice-versa depending upon specific requirements. No fee will be charged by either of the parties for such association.
5. JH and MIP will independently cover the cost of research chemicals and other expenditure incurred in connection with research collaboration, if it is absolutely required for success of the joint research work.
6. JH and MIP shall apply for collaborative projects jointly to national and international funding agencies.


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New Delhi - 110062





7. JH and MIP shall organize joint conferences/Seminars/Symposia/Workshops/Training programmes and shall seek financial support from national and international agencies for such an event.
8. JH and MIP may launch joint academic programme after due approval of statutory bodies of JH and MIP and government as applicable.
9. Mobility of Professors/Faculties of JH and Scientists/Researchers of Pharmacy between JH and MIP and vice-versa will be encouraged.
10. JH will not claim any part of the IPR resulting from this collaboration if the invention originates from the work done at MIP. However, out of collaborative research if the invention originates from a JH laboratory, the University will have full right on IPR.
11. Scientists of JH and MIP will deliver lectures in areas of their specialization to students of the other institute as Visiting Faculty on days and timings pre-arranged on mutual consent by concerned Department.
12. Upon recommendations of the MIP, JH may consider appointing Scientists working at MIP as 'Adjunct Faculty' (Adjunct Professor) for a specific duration in any identified department of the University following the due procedure as per the University norms.
13. Each Institution will be free to have additional MoU's/Agreements with any other organization or agency. However, it would be incumbent upon JH and MIP to safeguard the interest of their respective institutes and to avert any conflict of interest.

ARTICLE III: IMPLEMENTATION AND MONITORING

1. JH and MIP shall constitute a joint 'Steering Committee' which will periodically monitor the progress of the MoU. Different proposals for collaboration will also be considered by the joint Committee. Meeting of the Committee may be held at the premise of JH or MIP.


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The joint Steering Committee will be as follows

From JH:

1. Dr. M. Shahar Yar, Professor, SPER, Jamia Hamdard, New Delhi
2. Dr. Zeenat Iqbal, Professor, SPER, Jamia Hamdard New Delhi
3. Dr. Sayeed Ahmad, Associate Professor, SPER, Jamia Hamdard, New Delhi
4. Prof. S. Raisuddin, Professor & Head, Department of Medical Elementology & Toxicology; Director IQAC; Advisor (Research), JAMIA HAMDARD (A Deemed to be University)

From MIP

- i) Dr. Mujeeb Ur Rahman, Principal, MIP
- ii) Dr. Gazala Parveen, HOD, MIP
- iii) Dr. Ibraheem Husain, Associate Professor, MIP
- iv) Mrs. Sana Kamal, Management representative

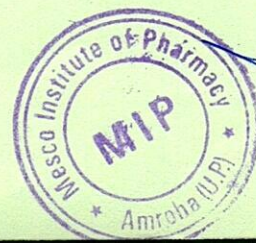
Advisor (Research), JH will be the coordinator of all activities of this collaboration at JH.

Regular meetings of Steering Committee will be organized at JH and MIP, preferably once in every calendar quarter (3 months) and activities will be steering through the above Committee.

2. JH and MIP shall constitute a joint "Governance Board" comprising of senior representatives from both sides that will meet at least once every year to review the impact that this MoU delivers for Pharmacy profession and for both JH and MIP as well.

The Governance Board will comprise of the following-

- Dean, SPER, Jamia Hamdard
- Research and Quality Head at Jamia Hamdard
- Representatives of JH on the Steering Committee as described above
- Chairman, MIP Amroha
- Vice Chairman, MIP Amroha



- Nominated member of MIP's Governing Council
- Director/Principal, MIP

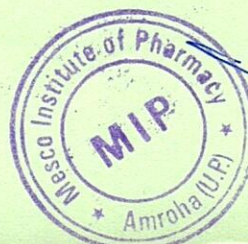
ARTICLE IV: DURATION AND TERMINATION OF THE MOU

1. This MoU is effective as of the date of signatures by the Authorities of JH and MIP and shall remain in effect for a period of Five (05) years.
2. The tenure of MoU may be extended with mutual agreement of the parties.
3. This MoU may be amended at any time by written mutual consent of both the parties.
4. This MoU may be terminated by either party by the provision of written notice of termination not less than six (06) months prior to the desired termination date. However, both the parties agree that all continuing obligations to students, staff funding bodies or other entities are met in full subsequent to the notice of termination.
5. The termination of this MoU shall not affect the rights or obligations of either party regarding any binding offer or firm obligation approved and agreed to either party prior to the termination date.

ARTICLE V: MISCELLANEOUS

1. If any provision of this Memorandum is held by any court or other competent authority to be illegal, void or enforceable in whole or in part, this MoU shall continue to be valid as to the other provisions therefore and the remainder of the effected provision.
2. Nothing in this MoU constitutes or to be construed a party as the partner, agent employee, or representative of the other party. A party must not act independently of the other Party and does not have the right or power to commit the other Party on any matter or incur any obligation on behalf of or pledge the credit of the other Party without the prior written approval of the other Party.
3. The parties agree to comply with all laws applicable within the jurisdiction of the signatories below.
4. Parties shall conduct their activities following all the statutory regulations and law of the land in letter and spirit.


Registrar
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5. Any dispute arising out of this Memorandum of Understanding or in its enforcement the concerned parties to this MoU will resolve the same amicably. However, in case if the dispute remains unresolved it shall be referred to an Arbitrator to be appointed by mutual consent of both the parties subject to Delhi jurisdiction. The decision of the Arbitrator shall be final and binding upon the party concerned.

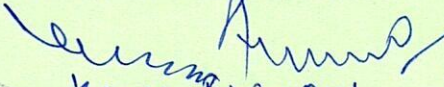
IN WITNESS where of the parties hereto have executed this MoU or caused it to be executed in their names and on their behalf by their duly authorized representatives on the date set forth.

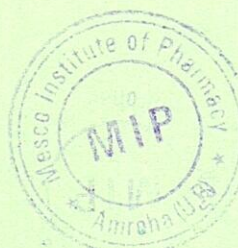
ON BEHALF OF FIRST PARTY


(S.S. Akhtar)
Registrar
Authorised Signatory
Jamia Hamdard
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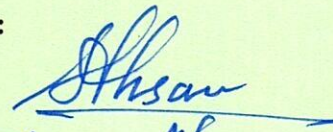
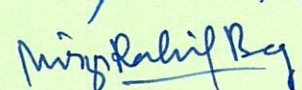
**Registrar
Jamia Hamdard
(Deemed to be University)
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New Delhi - 110062**

ON BEHALF OF SECOND PARTY

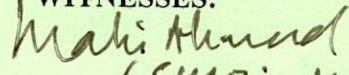

KAMAL FARUQI
(Chairman)
Authorised Signatory
MESCO Institute of Pharmacy
Dhanaura Road, Amroha (UP)



WITNESSES:

1. 
Dr. Sarfaraz Ahsan
2. 
MIRZA RAHIL BEG

WITNESSES:

- 
(SHABI AHMAD)
1. Vice Chairman, MIP
2. Principal 