Shoolini University

SDG 9
Industry Innovation and Infrastructure
2025



Shoolini University of Biotechnology and Management Sciences
Bajhol, Solan, Himachal Pradesh 173229

Shoolini University advanced its contribution to Sustainable Development Goal 9 during 2025 through research, invention, technical education and collaboration with industry. Laboratories, digital learning systems and specialised centres supported experimentation, while conferences, practical training and partnerships connected academic knowledge with applications in manufacturing, food processing, biotechnology and emerging technologies.

Intellectual property activity in 2025 comprised 182 utility patent applications, 37 design applications and 51 copyright applications. Separately, 180 patent applications were published and eight patents were granted during the year. These activities represent different stages of intellectual property protection.

Infrastructure development included the inauguration of the Food Incubation Lab on 25 September 2025. The AI and Futures Centre hosted Glitch Tech Fest, bringing students together around coding, projects and technical problem solving. Conferences on human computer interaction and applied artificial intelligence created opportunities for academic and industry exchange. Innovation Day, patent education and the Ideation Conclave connected student ideas with mentoring, intellectual property knowledge and prototype development.

University expertise also reached rural communities. Project Pragati introduced women to enterprise development and value-added food production. Training in mushroom cultivation, digital literacy and protected cultivation supported practical technology adoption. These initiatives linked the university's knowledge and facilities with small enterprise capability and participation in the digital economy.

Partnerships active during all or part of 2025 covered academic collaboration, research, consultancy, professional training and entrepreneurship. The university's contribution to SDG 9 rests on the connection between these partnerships, its scientific infrastructure and the ability of students, researchers and communities to apply knowledge.

Intellectual property in 2025

Intellectual property protection supports the development of inventions at Shoolini University. In 2025, the university recorded 270 applications across patents, designs and copyright. Utility patents accounted for 182 of these applications. Design and copyright filings are reported separately from patents.

SR No.	Intellectual property activity	2025 total
1	Utility patent applications filed	182
2	Patent applications published	180
3	Utility patents granted	8
4	Design applications filed	37
5	Design registrations	9
6	Copyright applications filed	51
7	Copyright registrations	3
8	Total applications filed across the three categories	270

Annual counts cover 1 January to 31 December 2025, using filing, publication and grant or registration dates respectively. Publications and grants may relate to applications filed in earlier years; they are not added to filings as a count of unique inventions. Patent totals cover the utility category in the university's IP portfolio.

Innovation education connects this output with student development. Patent schools, laboratory programmes and the university's intellectual property office help students understand how an idea is investigated, refined and protected. Industry engagement adds opportunities to consider technical feasibility, production requirements and potential uses beyond the campus

Research publications related to SDG 9 in 2025

Shoolini University recorded 96 publications associated with SDG 9 in 2025. The research addresses advanced materials, clean technologies, digital systems, industrial processes and sustainable production.

SR No.	Publication title	Authors	Article No.	SDG mapping
1	MOFs-based S-scheme heterojunction photocatalysts: Challenges and prospects to break the selectivity limitation for intensified C1 products in CO2 photoreduction	Malhotra, M.; Soni, V.; Kumar, R.; Tarannum; Singh, P.; Thakur, S.; Le, Q.V.; Nguyen, L.H.; Nguyen, V.-H.; Raizada, P.	160238	SDG 7; SDG 9; SDG 13
2	Sustainable management of post-phytoremediation biomass	Mukherjee, S.; Leri, A.C.; Bandaranayaka, C.; Vázquez-Núñez, E.; Barros, R.; Khan, A.H.A.; Zhou, P.; Zhang, T.; Bernal, M.P.; Clemente, R.; Bolan, N.	-	SDG 7; SDG 9; SDG 12; SDG 15
3	Applications of citrus peels valorisation in circular bioeconomy	Kumar, H.; Guleria, S.; Kimta, N.; Nepovimova, E.; Dhanjal, D.S.; Sethi, N.; Suthar, T.; Shaikh, A.M.; Bela, B.K.; Harsányi, E.	101780	SDG 3; SDG 6; SDG 7; SDG 9; SDG 12
4	Fabrication of Bi4O5I2/CuO S-scheme heterojunction photocatalyst with enhanced visible light degradation of Rhodamine B	Dhiman, P.; Sharma, J.; Kumar, A.; Verma, Y.; Sharma, G.; Kondal, N.; Lai, C.W.	178793	SDG 6; SDG 9
5	Multi-mechanism synergistic adsorption of lead and cadmium in water by structure-functionally adapted modified biochar: A review	Zhang, D.; Wu, B.; Wang, T.; Yılmaz, M.; Sharma, G.; Kumar, A.; Shi, H.	101156	SDG 6; SDG 9; SDG 12; SDG 15
6	A review on hybrid nanofluids for heat transfer: advancements, synthesis, challenges and applications	Kalsi, S.; Kumar, S.; Kumar, A.; Alam, T.; Sharma, A.; Yadav, A.S.	698	SDG 7; SDG 9

SR No.	Publication title	Authors	Article No.	SDG mapping
7	Emerging EM wave sensors for non-invasive glucose monitoring: Review, techniques and developments	Dutt, S.; Thakur, R.; Kandwal, A.; Kumar, P.; Jasrotia, R.; Lakshmaiya, N.; Liu, L.W.; Kumar, S.; Luadang, B.; Kit Chan, C.	100282	SDG 3; SDG 9
8	Artificial intelligence-driven intelligent nanocarriers for cancer theranostics: A paradigm shift with focus on brain tumors	Pourmadadi, M.; Shabestari, S.M.; Abdouss, H.; Rahdar, A.; Fathi-Karkan, S.; Pandey, S.	152429	SDG 3; SDG 9; SDG 16
9	Advancement in Anaerobic Ammonia Oxidation Technologies for Industrial Wastewater Treatment and Resource Recovery: A Comprehensive Review and Perspectives	Singh, P.; Bisen, M.; Kulshreshtha, S.; Kumar, L.; Choudhury, S.R.; Nath, M.J.; Mandal, M.; Kumar, A.; Patel, S.K.S.	330	SDG 6; SDG 9; SDG 14
10	Harnessing 3D printing for tailored TiO_2 structures redefining organic pollutant degradation	Kaur, B.; Singh, P.; Thakur, S.; Singh, A.; Chaudhary, V.; Kumar, N.; Khan, A.A.P.; Rub, M.A.; Azum, N.; Raizada, P.	116042	SDG 9
11	Pulsed electric fields for sustainable meat, poultry, and fish processing: Recent advances, prospects, and industry challenges	Ahmed, M.; Ranjan, H.; Roy, S.	104008	SDG 9; SDG 12
12	Exploring complex silver sulfide nano-systems as efficient photocatalysts for wastewater remediation and clean energy production: Toward sustainable and circular economy	Abhimanyu; Singh, K.; Sable, H.; Sonu, S.; Kumar, V.; Singh, P.; Kaushik, A.; Thakur, P.; Chaudhary, V.	-	SDG 6; SDG 7; SDG 9; SDG 13
13	Extrusion technology in food processing: Principles, innovations and applications in sustainable product development	Yadav, N.; Suvedi, D.; Sharma, A.; Khanal, S.; Verma, R.; Kumar, D.; Khan, Z.; Peter, L.	100672	SDG 9
14	Phytosome-based nanotechnology for enhanced efficacy of anticancer phytocompounds: Challenges and prospects	Sadr, S.; Hajjafari, A.; Lotfalizadeh, N.; Lotfalizadeh, M.; Laein, S.S.; Abbasi, A.M.; Jafroodi, P.P.; Roohbaksh Amooli Moghadam, E.; Rahdar, A.; Fathi-karkan, S.; Sohbatzadeh, Z.; Borji, H.; Kang, M.; Pandey, S.	106543	SDG 3; SDG 9

SR No.	Publication title	Authors	Article No.	SDG mapping
15	A comprehensive review of sustainable hydrogels from lignin for advanced wastewater solutions	Raj, K.; Vora, T.; PadmaPriya, G.; Lal, B.; Devi, A.; Sharma, R.S.K.; Chahar, M.; Sudhakar, L.; RJ, S.; Nagraik, R.	139963	SDG 6; SDG 9
16	Potential human health effects of per- and polyfluoroalkyl substances (PFAS) prevalent in aquatic environment: a review	Mayilswami, S.; Raval, N.P.; Tomar, R.; Sharma, S.; Praveena, S.M.; Kataria, N.; Selvasembian, R.; Shanmugam, S.R.; Nath, R.; Malakar, A.; Dutta, S.; Mukherjee, S.	-	SDG 3; SDG 9
17	Insights into the enhanced photocatalytic degradation of congo red using advanced BaDyxFe12−xO19 catalytic hexamaterials	Himanshi; Makasana, J.; Ganesan, S.; Lal, B.; Naidu, K.S.; Ahmed, J.; Prakash, J.; Verma, A.; Lakshmaiya, N.; Jasrotia, R.; Yong, X.; Chan, C.K.	8978	SDG 6; SDG 9
18	Artificial intelligence-driven innovation in Ganoderma spp.: potentialities of their bioactive compounds as functional foods	Khanal, S.; Sharma, A.; Pillai, M.; Thakur, P.; Tapwal, A.; Kumar, V.; Verma, R.; Kumar, D.	-	SDG 9
19	Dynamic landscape of chemiresistive breathomic nanosensors based on fifth-generation chips for complex disease diagnosis and healthcare monitoring	Chaudhary, V.; Sable, H.; Kumar, M.; Prakash, C.; Sonu, S.	41311	SDG 4; SDG 9
20	Surfactant-Assisted Modification of Adsorbents for Optimized Dye Removal	Soni, I.; Kumar, P.; Shandilya, P.; Kumar, M.; Chauhan, V.	-	SDG 6; SDG 9
21	Quaternary transition metal dichalcogenides (M1-xNxX2(1-y)Y2y) for hydrogen evolution: A review on atomic structure, 3D engineering, and electrocatalytic performance	Kumar, R.; Thakur, R.; Kumar, S.; R, S.; Nagaraja, B.M.; Mehla, S.; Kainthla, I.	100532	SDG 7; SDG 9
22	Valorization of Moringa oleifera Lam.: Healthy green biomass for circular bioeconomy	Kumar, H.; Guleria, S.; Dhalaria, R.; Nepovimova, E.; Bhardwaj, N.; Jha, P.; Dhanjal, D.S.; Verma, N.; Malik, T.	102358	SDG 7; SDG 8; SDG 9

SR No.	Publication title	Authors	Article No.	SDG mapping
23	Bacteriogenic metallic and semiconducting nano-system as a potential sustainable solution for one health complexities	Chaudhary, V.; Sonu, S.; Raizada, P.; Kaushik, A.	103648	SDG 3; SDG 9; SDG 12
24	Doubly pertinent p-nitrobenzaldehyde-grafted chitosan for adsorptive sequestration of aqueous anionic surfactant and gaseous CO2	Rathi, T.; Gomase, V.; Saravanan, D.; Pandey, S.; Jugade, R.	127489	SDG 6; SDG 8; SDG 9; SDG 12
25	Innovations in tannery wastewater management: a review of zero liquid discharge technology	Pundir, A.; Thakur, M.S.; Goel, B.; Radha; Kumar, A.; Prakash, S.; Kumar, M.	-	SDG 6; SDG 8; SDG 9
26	Engineered boron-doped biochar for sustainable environmental remediation and circular energy systems: A review	Quang, H.H.P.; Nguyen, P.K.T.; Singh, P.; Raizada, P.; Nguyen, V.-H.	118194	SDG 6; SDG 7; SDG 9; SDG 12
27	Analysis of solar thermal collector with S-shaped ribs via energy, exergy, economic, and environmental (4E) approaches	Kumar, K.; Thapa, S.; Kumar, S.; Prajapati, D.; Samir, S.; Lee, D.; Kumar, R.; Singh, T.	113743	SDG 2; SDG 7; SDG 9; SDG 13
28	The Revolutionary Role of Blockchain Technology in the Agri-Food Sector Focusing on the Food Supply Chain	Pal, T.; Bommisetti, V.; Suvarnakanti, P.; Dudala, S.S.; Asha, S.; Jaiswal, V.	-	SDG 2; SDG 4; SDG 9; SDG 12
29	Recent advances in visible-light-driven photocatalytic synthesis of biologically active N-heterocycles	Sinha, S.; Singh, P.P.; Kumar, D.; Srivastava, V.	-	SDG 9
30	Applications of Solid Waste-Derived Carbon Nanomaterials in Fuel Cell	Sharma, V.; Kumar, S.; Kainthla, I.; Shandilya, M.; Thakur, S.	-	SDG 7; SDG 9; SDG 11; SDG 12
31	Recent advances, materials resources and mechanism insight for designing of renewable photocatalysts and green photocatalytic processes for energy production	Sharma, P.; Rana, S.; Dhiman, P.; Wang, T.; Mola, G.T.; Sharma, G.	120153	SDG 7; SDG 9; SDG 12; SDG 13
32	Applications of Solid Waste-Derived Carbon Nanomaterials in Solar Cell	Kumar, S.; Kumari, N.; Thakur, R.; Kainthla, I.; Shandilya, M.	-	SDG 7; SDG 9; SDG 11; SDG 12; SDG 13
33	Innovative ferrite sensors: Advancing non-enzymatic glucose detection	Jasrotia, R.; Raj, K.; Singh, B.; Alluhayb, A.H.; Younis, A.M.; Suman; Ramya, M.; Kandwal, A.; Khanna, V.; Singh, V.P.; Kit, C.C.	100295	SDG 9

SR No.	Publication title	Authors	Article No.	SDG mapping
34	Advancements in biogenic nanoparticles synthesis, characterization and its mechanism in disease management	Thakur, N.; Tapwal, A.; Kumari, K.; Thakur, R.K.; Ganesamoorthy, R.; Thirugnanasambandham, K.	102227	SDG 2; SDG 8; SDG 9; SDG 12
35	Emerging trends in photocatalytic energy and environmental applications of CuBi2O4: A review of improvement strategies	Dhiman, P.; Sharma, J.; Kumar, A.; Sharma, G.; Dawi, E.A.; Lai, C.W.	126230	SDG 6; SDG 7; SDG 9
36	Enhancing smart grid efficiency: The role of IoT blockchain and fuzzy set theory	Sharma, B.B.; Kumar, R.; Sharma, R.	-	SDG 9
37	The role of CD95 in modulating CAR T-cell therapy: Challenges and therapeutic opportunities in oncology	Bhat, A.A.; Altamimi, A.S.A.; Goyal, A.; Goyal, K.; Kaur, I.; Kumar, S.; Sharma, N.; Kumar, M.R.; Ali, H.; Thapa, R.; Negi, P.; Singh, S.K.; Gupta, G.	113675	SDG 3; SDG 9
38	Treated wastewater irrigation for ornamental plants: a systematic review	Nagial, K.S.; Kumar, N.; Poddar, A.; Shankar, V.; Rustum, R.	-	SDG 6; SDG 9
39	Security and Privacy Issues in AI-Blockchain Enabled Digital Twin–Based Smart Grid	Chintale, P.; Gupta, G.	-	SDG 9
40	Xylitol Production From Brewer's Spent Grain via Pichia fermentans Fermentation: Optimization, Scaling, and Isolation	Mathur, S.; Kumar, D.; Kumar, V.; Verma, R.; Lalhlenmawia, H.; Kumar, D.	9721088	SDG 9
41	Comparative Analysis of Machine Learning Techniques for Predicting Bulk Specific Gravity in Modified Asphalt Mixtures Incorporating Polyethylene Terephthalate (PET), High-Density Polyethylene (HDPE), and Polyvinyl Chloride (PVC)	Kumar, B.; Kumar, N.; Rustum, R.; Shankar, V.	30	SDG 9
42	Emerging prospects of Bacillus species in attaining the sustainable development goals	Kumar, H.; Guleria, S.; Kuča, K.; Peter, L.; Mohammed, A.; Malik, T.; Sethi, N.; Dhanjal, D.S.; Kumar, D.; Harun, H.B.C.	242	SDG 2; SDG 9

SR No.	Publication title	Authors	Article No.	SDG mapping
43	Advances and perspectives of nanomaterials for photocatalytic degradation of biological ethylene toward the postharvest improvement of agricultural products	Nguyen, L.H.; Dinh, D.A.; Thi, L.-A.P.; Pham, P.V.; Singh, P.; Raizada, P.; Lin, K.-Y.A.; Nguyen, V.-H.	-	SDG 2; SDG 9; SDG 12
44	Construction 4.0: Leveraging IoT's Potential in the Construction Site	Vinay, K.Y.; Grover, V.; Gupta, G.; Sharma, J.; Chittibala, D.R.; Mehta, R.; Gochhait, S.	-	SDG 9
45	The Advent of MXene-Based Synthetics and Modification Approaches for Advanced Applications in Wastewater Treatment	Soni, I.; Ahuja, M.; Jagtap, P.K.; Chauhan, V.; Raj, S.K.; Sharma, P.P.	364	SDG 6; SDG 9
46	Emerging trends in Optofluidic biosensing: Techniques, applications, and future directions	Poria, R.; Kumar, S.; Kala, D.; Sakowicz, M.; Tuli, H.; Kattel, K.; Kaushal, A.; Gupta, S.; Kumar, D.	100602	SDG 9
47	Effect of samarium doping on the structural, morphological, optical, magnetic, and antibacterial traits of CuFe2 O4 nanomaterials	Jasrotia, R.; Chaudhary, A.A.; Lal, B.; Kumari, S.; Suman; Ramya, M.; Rudayni, H.A.; Kit, C.C.	4802025	SDG 3; SDG 9
48	Valorization of flowers and their role in circular bioeconomy and sustainable development goals	Kumar, H.; Guleria, S.; Dhalaria, R.; Kimta, N.; Sethi, N.; Dhanjal, D.S.; Kaur, T.; Kumar, M.; Harun, H.B.C.; Mahajan, A.; Malik, T.; Nepovimova, E.	117	SDG 2; SDG 6; SDG 8; SDG 9
49	Gossypium arboreum (L.): A review on its agronomic and industrial potential for sustainable cotton production	Gogari, S.; Radha	102797	SDG 2; SDG 8; SDG 9; SDG 12; SDG 13
50	Microalgae-Based Remediation of Contaminated Water: A Way Forward to Achieve SDG Goal 6	Kumar, S.; Utkarsh, K.; Nivedita; Kumar, P.; Khan, A.	-	SDG 3; SDG 6; SDG 8; SDG 9; SDG 12
51	Unveiling the therapeutic potential of ultrasound-responsive micro/nanobubbles in cancer management	Mahmoodi, M.; Nouri, M.; Ghodousi, M.; Mohseni, A.; Ebrahimzadeh, M.A.; Heidari, A.; Ebrahimi, S.; Pishbin, E.; Rahdar, A.; Pandey, S.	113765	SDG 3; SDG 9

SR No.	Publication title	Authors	Article No.	SDG mapping
52	Efficient Application to Remove Arsenic and Antimony from the Water Environment Using Renewable Carbon-Based Materials: A Review	Wang, T.; Pan, Z.; Zhang, D.; Shi, H.; Yılmaz, M.; Kumar, A.; Sharma, G.; Liu, T.	-	SDG 6; SDG 9
53	Sustainable vinblastine production by Alternaria alternata, an endophytic fungus isolated from Catharanthus roseus in the Northern Himalayan Region	Banyal, A.; Thakur, R.; Thakur, P.; Thakur, V.; Chand, D.; Kumar, P.	187	SDG 3; SDG 9
54	Approved: The Life Cycle of Drug Development	Chirmule, N.; Ghalsasi, V.V.	-	SDG 9
55	Marine Bioresources and Blue Economy	Rai, N.; Sehgal, A.; Sambyal, D.; Julka, J.M.; Yadav, S.; Mishra, S.; Jaiswal, K.	-	SDG 2; SDG 4; SDG 8; SDG 9; SDG 13; SDG 14
56	Proactive approach to biofertilizers for sustainable agriculture	Sharma, N.; Dixit, B.; Kayastha, R.	-	SDG 2; SDG 8; SDG 9; SDG 12
57	Phytochemical Riches, Bioactivities, and Clinical Potential of Prinsepia utilis Royle: A Comprehensive Review	Prakash, S.; Radha; Puri, S.; Dhumal, S.; Kumar, S.; Senapathy, M.; Kumar, M.	e20240 1625	SDG 9
58	Transforming Healthcare with AI and IoT: A Path Towards to Efficiency and Sustainability	Bhardwaj, S.; Gupta, G.; Ahmad, S.; Haque, M.A.	-	SDG 9
59	Integrating molecular farming into sustainable plant biotechnology: a review of transgenic plants as biofactories for protein-based pharmaceutical production	Adedeji, O.S.; Adelodun, B.; Odey, G.; Pal, T.; Ajibade, F.O.; Silva, L.F.O.; Choi, K.S.; Park, K.I.	45	SDG 2; SDG 9
60	Unveiling the approach of campesterol: Its application and circular bio-economy	Rani, R.; Kaushik, D.; Kumar, A.; Rasane, P.; Oz, E.; Kumar, V.; Patra, K.; Oz, F.; Proestos, C.; Kumar, M.	49	SDG 3; SDG 9
61	Metal Oxides: Advances in Sustainability and Nanotechnology	Khanna, V.; Jasrotia, R.; Singh, T.; Singh, G.	-	SDG 8; SDG 9; SDG 12
62	Polyphenol-rich extract from Cyamopsis tetragonoloba straw: Characterization, bioactivity, cytotoxicity, and anti-obesity potential	Rani, R.; Kaushik, D.; Oz, F.; Avila-Quezada, G.D.; Abd_Allah, E.F.; Hashem, A.; Kumar, M.	104569	SDG 3; SDG 9; SDG 12

SR No.	Publication title	Authors	Article No.	SDG mapping
63	Revolutionizing wastewater treatment: Breakthroughs in carbon-based nanomaterials	Thakur, T.; Kang, M.; Pandey, S.	-	SDG 6; SDG 9
64	Waste Biomass to Bioenergy with Regulatory Framework for a Sustainable Economy	Bose, D.; Bhattacharya, R.; Raj, R.; Ganti, L.S.P.; Sarkar, A.; Gopinath, M.	-	SDG 2; SDG 7; SDG 9; SDG 11; SDG 12; SDG 13; SDG 15
65	Importance of Artificial Intelligence and the Internet of Things in Smart Agriculture	Sharma, R.; Sharma, D.; Vaidya, P.; Sharma, B.B.	-	SDG 2; SDG 8; SDG 9
66	Challenges of water remediation, waste-water treatment, and its future direction	Saruchi; Kumar, V.; Muskan; Dhiman, J.; Pandey, S.	-	SDG 6; SDG 8; SDG 9; SDG 13; SDG 14; SDG 15
67	Bioprospecting and Biodiscovery for Sustainable Development	Sonia; Banerjee, R.; Yadav, S.; Mishra, S.; Jaiswal, K.	-	SDG 2; SDG 8; SDG 9; SDG 12; SDG 15; SDG 16
68	High performance Ni-Zn-Cu catalysts for photo and electro water splitting green hydrogen generation	Jasrotia, R.; Lal, B.; Fazil, M.; Ahmed, J.; Ahmad, T.; Alshehri, S.M.; Lakshmaiya, N.; Suman; Nidhi, A.V.; Bujran, M.A.	-	SDG 7; SDG 9
69	Wearable and flexible perovskite solar cells	Kumari, N.; Sharma, V.; Kamna; Kumar, S.; Thakur, S.; Kaur, G.A.; Shandilya, M.	-	SDG 7; SDG 9
70	Integrated Framework of Blockchain Technology and Artificial Intelligence for Sustainable Supply Chain Optimization	Dar, A.A.; Reegu, F.A.; Ahmed, S.; Hussain, G.; Thakur, R.	-	SDG 9; SDG 12
71	From source to solution: Addressing microplastic pollution through advanced remediation strategies	Koul, S.; James, A.; Suvedi, D.; Shard, S.; Nanda, R.R.; Verma, S.; Sharma, A.; Nagraik, R.	-	SDG 3; SDG 9; SDG 14; SDG 15
72	Sustainable Solution: Harnessing Artificial Intelligence, Internet of Things and Design Thinking for Climate Action	Sharma, R.; Thakur, V.	-	SDG 2; SDG 7; SDG 8; SDG 9; SDG 11; SDG 12; SDG 13

SR No.	Publication title	Authors	Article No.	SDG mapping
73	A Comprehensive Review and SWOT Analysis of Lean Six Sigma Integration With Industry 4.0 and 5.0 for Sustainable Transformation	Roy, S.; Sharma, S.; Ghatak, A.; Thakur, P.	-	SDG 9
74	Transformative Lean Six Sigma Techniques for the Quality 5.0 Paradigm	de Sá, J.C.V.; Sharma, S.; Kumar, S.; Manjunath, B.R.	-	SDG 9
75	AI-Driven Innovations in the Insurance Sector	Manjunath, B.R.; Sahrawat, M.; Kaul, B.K.	-	SDG 9
76	Harnessing Information Systems for Sustainable Enterprise Development: A Systematic Literature Network Analysis	Ranjan, R.; Singh, R.; Tripathi, S.	-	SDG 1; SDG 8; SDG 9; SDG 12
77	Integrating AI and Machine Learning into Business and Management Education	Manjunath, B.R.; Sunil Kumar, R.	-	SDG 9
78	Bioprospecting and Biomimicry	Fishta, A.; Sobti, R.C.; Thakur, R.	-	SDG 2; SDG 9; SDG 12
79	Microbial Innovations for Sustainable Biocontrol and Bioremediation: Exploring Strategies in Wastewater Treatment and Environmental Restoration	Rana, S.; Sharma, G.	-	SDG 2; SDG 6; SDG 9; SDG 15
80	Approach to Agrobiodiversity Preservation and Sustainable Agriculture in a Changing World	Barsola, B.; Kumari, P.; Yadav, S.; Mishra, S.; Jaiswal, K.	-	SDG 2; SDG 7; SDG 8; SDG 9; SDG 12; SDG 13
81	The Role of Forensic Science in Disaster Management: Advancing Preparedness and Resilience	Kumar, V.	-	SDG 9; SDG 11; SDG 13; SDG 16
82	Study on the Impact of Remote Work: Toward Sustainable HRM	Kaur, A.; Singh, T.; Goel, R.; Chauhan, A.	-	SDG 8; SDG 9

SR No.	Publication title	Authors	Article No.	SDG mapping
83	Future Trends and Implementation in Events and Festivals: A Focus on Himachal Pradesh's Festive Culture and Traditions	Thakur, D.J.; Dayal, G.; Verma, P.; Sehgal, S.	-	SDG 8; SDG 9; SDG 12
84	Applications of UVR Absorbers Cyclodextrin Complexes	Tallapragada, S.D.; Nandy, S.K.; Das, S.; Bhattacharya, S.	-	SDG 3; SDG 9
85	Diversity Management in Indian Luxury Hotels: A Pathway to Inclusion	Kumar, S.; Sakpal, S.S.	-	SDG 5; SDG 9; SDG 10
86	Fermentation process optimization for pharmaceutical production	Devi, N.; Sharma, A.; Kumar, P.; Chauhan, S.; Chand, D.	-	SDG 9
87	IOT ENABLED INTELLIGENT DECISION SUPPORT SYSTEM FOR QUALITY PARENTING, AND CAREGIVING: B-MAPP	Sharma, A.K.; Khanna, A.; Virdee, B.; Sharma, T.	-	SDG 9
88	Advanced wastewater treatment technologies and the spectrum of recovered value-added products	Singla, V.; Rana, S.; Jain, A.; Sharma, G.; Chandel, H.	-	SDG 6; SDG 9; SDG 11
89	Deep learning approach for food science and bioprocess optimizations	Kumar, A.; Pillai, M.; Khanal, S.; Mishra, E.; Kumar, D.; Roy, S.; Biswas, D.	-	SDG 2; SDG 9; SDG 12
90	Shaping the utility of future from wastewater treatment plants to water resource recovery facilities	Bisht, S.S.; Chatterji, T.; Khanna, N.; Pandey, S.	-	SDG 6; SDG 7; SDG 9

SR No.	Publication title	Authors	Article No.	SDG mapping
91	The Role of Green Information Systems in India's Environmental Sustainability: A Review-Based Perspective	Ranjan, R.; Singh, R.; Tripathi, S.	-	SDG 7; SDG 8; SDG 9; SDG 11; SDG 13
92	Introduction to Bioresources and Sustainable Utilization	Thakur, N.; Kumari, P.; Yadav, S.; Mishra, S.; Jaiswal, K.	-	SDG 7; SDG 9; SDG 12
93	Curriculum Learning in Cyber-Physical Systems: Anomaly Detection Using Digital Twins	Jonnalagadda, R.R.; Kalam, K.K.R.; Kiruthika, S.; Manojna, B.; Kunnathully, K.; Rizvi, H.A.	-	SDG 6; SDG 9; SDG 11
94	Digital transformation for business sustainability and growth in emerging markets	Kumar, P.; Dadwal, S.; Verma, R.; Kumar, S.	-	SDG 9
95	Historical advancements in targeted nanoscale drug delivery systems	Singh, S.; Kalia, P.; Kumar, R.; Pundir, S.; Chaturvedi, V.K.; Singh, A.K.; Awasthi, R.; Singh, S.K.; Singh, A.	-	SDG 9
96	Introduction To Ohmic Heating: Principles And Fundamentals	Priyanka, P.; Sain, M.; Birwal, P.; Minz, P.S.; Sinha, C.; Balyan, A.	-	SDG 7; SDG 9

Funded research and innovation capacity in 2025

Research and incubation projects with scheduled periods extending into 2025 supported work in medicinal plants, advanced materials, cyber physical systems, agriculture and enterprise development. The amounts below are total sanctioned project values, rather than annual expenditure or funding received during 2025.

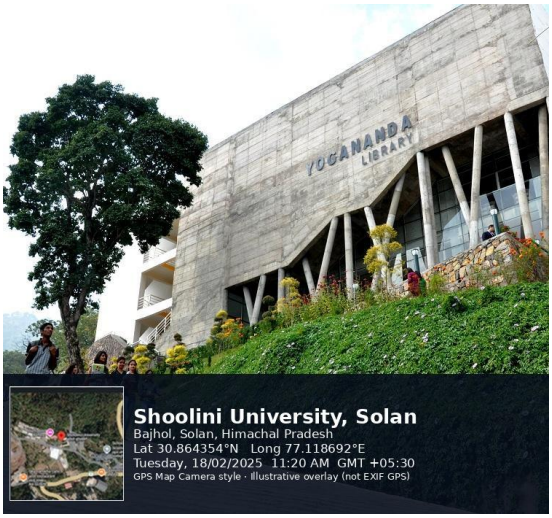
SR No.	Project	Period	Funding body	Sanctioned INR
1	Himalayan medicinal plants and antiviral precursor shikimic acid	2023–2025	HIMCOSTE	6,20,000
2	Inclusive Technology Business Incubator	2023–2026	DST	4,65,88,000
3	Promotion of University Research and Scientific Excellence	2023–2027	DST PURSE	9,00,00,000
4	Agricultural waste and eggshell nanocarbon membranes for rainwater filtration	2023–2025	UCSI University	7,04,030
5	Spark Break IoT fire control for firecracker manufacturing	2023–2025	iHUB DivyaSampark	9,99,860
6	Digital twins empowered drones for agricultural fields	2023–2025	iHUB DivyaSampark	9,99,860
7	Android assistive application and device for Alzheimer patients and caregivers	2023–2025	iHUB DivyaSampark	10,00,000
8	Smart secure farming using IMLoT	2023–2025	iHUB DivyaSampark	10,00,000
9	Automatic device to detect and quantify antimicrobial activity	2023–2025	iHUB DivyaSampark	9,50,000
10	Efinaconazole loaded proposomal gel for onychomycosis	2024–2026	SERB	25,59,832
11	MOF derived g C3N4 heterojunction for photocatalytic VOC removal	2024–2025	SERB	14,79,300
12	BIRAC EYUVA Centre	2024–2026	DBT	2,66,50,000

The Inclusive Technology Business Incubator and BIRAC EYUVA Centre connect research with entrepreneurship and early innovation. DST PURSE supports scientific facilities, including the food processing capacity inaugurated during 2025. Projects in water filtration, digital agriculture, assistive technology and industrial safety bring together scientific enquiry and practical needs.

Infrastructure supporting research and innovation

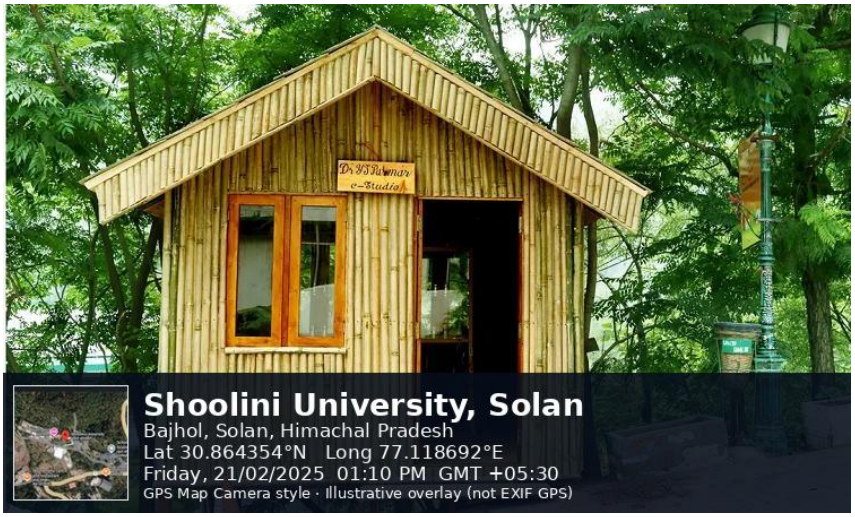
Knowledge and digital learning facilities

Shoolini University's research environment combines access to scientific literature with spaces for independent study, analysis and technology-supported learning. The Yogananda Knowledge Centre provides round-the-clock library access and physical and electronic resources. EBSCO and DELNET extend access to scholarly material, while analytical facilities support research methods and data interpretation.



Yogananda Knowledge Centre

Digital learning complements the library through eUniv, online course material and connected study spaces. The campus eStudios provide settings for online teaching and focused learning. These facilities help students and faculty maintain access to academic resources and collaborate across disciplines.



Connected study spaces and eStudios

Laboratories and spaces for research exchange

Specialised laboratories and centres support research across life sciences, nanotechnology, energy and other technical disciplines. The Cancer Research Centre brings together work on Himalayan medicinal resources and cancer research. Such facilities provide environments in which researchers can investigate scientific questions and develop methods with potential applications in health and industry.



Laboratory research at Shoolini University

Research exchange also depends on shared spaces. The APJ Abdul Kalam Auditorium accommodates lectures, workshops and conferences, while Peter Drucker Hall supports discussions and professional learning. Alongside the AI and Futures Centre, these venues connect technical education with demonstrations, presentations and interaction with external specialists.



APJ Abdul Kalam Auditorium

Food innovation infrastructure in 2025

The Food Incubation Lab at the Crop Cafeteria was inaugurated on 25 September 2025 by Industries, Labour and Employment Minister Harshwardhan Chauhan. Developed with DST PURSE support, the facility brings food processing equipment into a setting for experimentation, product development and practical training.

The facility includes snack food production lines, puffed food equipment, fruit juice processing and vacuum tray drying. Millet-based snack development forms part of its applied focus. Access to these processes supports learning about value addition and the transition from agricultural produce to food products.

Training opportunities for women connect the laboratory with inclusive enterprise development. This complements the university's wider work in food processing and rural entrepreneurship, where practical skills and access to technical guidance can improve product quality and production confidence.

The university's established infrastructure also includes energy-conscious design, renewable energy measures and digital administration. These established systems support the operation of research and teaching facilities. The 2025 inauguration adds a dated development in applied food innovation to this broader campus foundation.

Industry and innovation events in 2025

Conferences, student programmes and industry interactions in 2025 strengthened technical skills, encouraged invention and connected research with practical challenges.

Human Computer Interaction and Cognitive Computing conference

8–9 January 2025

Shoolini University and NIT Hamirpur organised HCICC 2025 with participation from academic and industry specialists. Discussions addressed human-centred software, large language models, brain computer interfaces and behavioural cybersecurity. Engagement with IIT Mandi and iCreate connected computing research with innovation networks. Research presentations and startup discussions encouraged applications designed around human needs.



Human Computer Interaction and Cognitive Computing conference

Faculty development in artificial intelligence and machine learning

February 2025; university announcement dated 14 February

A weeklong faculty development programme introduced practical AI and machine learning tools through the Electronics and ICT Academy, with support from MeitY, IIT Guwahati, iHUB Shoolini and DivyaSampark at IIT Roorkee. Sessions included Python, data analysis, Edge Impulse and chatbot development. The programme strengthened faculty capacity to use emerging technologies in teaching and experimentation.

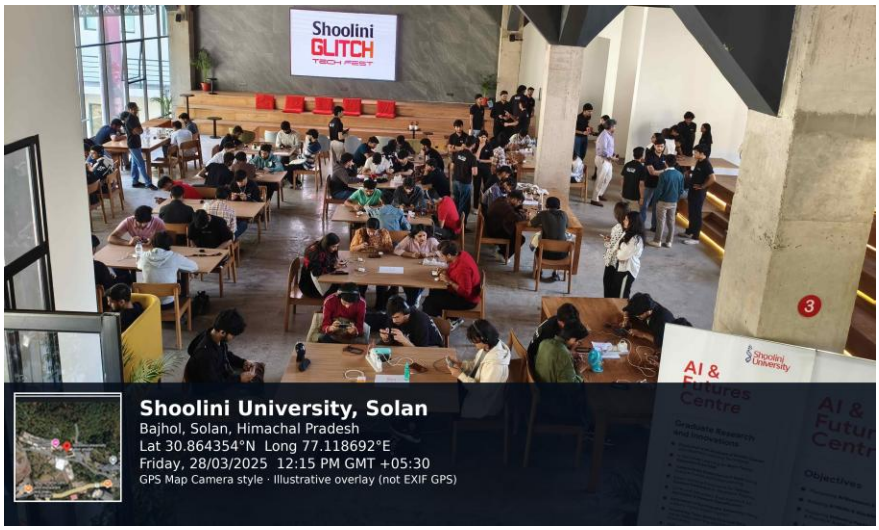


Faculty development in artificial intelligence and machine learning

Glitch Tech Fest

28–30 March 2025

The Yogananda School of AI, Computers and Data Science organised Glitch Tech Fest at the AI and Futures Centre. Coding, technology projects and the CodeMaps Hackathon gave students opportunities to collaborate on practical problems. Participation from other institutions broadened the exchange of ideas, while the festival demonstrated the centre's role in hands-on technical learning.



Glitch Tech Fest

University of Melbourne delegation visit

March–April 2025; university announcement dated 4 April

David Israel and Rose Bryant Smith from the University of Melbourne visited Shoolini University and joined the inauguration of Glitch. Discussions covered international education, career pathways, faculty exchange and educational assessment. The visit strengthened academic dialogue around technology education and future collaboration; exchange and assessment initiatives remained subjects of discussion.



University of Melbourne delegation visit

Innovation Day 4 0

June 2025; university announcement dated 10 June

Innovation Day 4.0 connected students and faculty with the university's One Student One Patent vision. The intellectual property office introduced patenting, design protection, trademarks, copyright and commercialisation support. Academic and industry contributions helped participants consider both the protection of ideas and their potential application.



Innovation Day 4 0

Summer School and Summer Patent School

June–July 2025

More than 100 school students participated in the two-week Summer School, combining patent education with practical laboratory learning. Participants explored the development of an idea towards patent protection and engaged with scientific methods and problem solving. The programme introduced younger learners to research environments and the possibilities of technological invention.



Summer School and Summer Patent School

Applied artificial intelligence and innovation conference

July 2025

AAIIC 2025 brought together researchers and industry practitioners around applications of artificial intelligence in energy, education, ethics and intelligent systems. TCS representatives contributed perspectives on manufacturing, automation and enterprise applications. The two-day programme linked technical research with operational needs and responsible technology use.



Applied artificial intelligence and innovation conference

CEDSA conclave on direct selling and digital transformation

10–11 July 2025

The fourth CEDSA conclave brought industry leaders, academics and policymakers together to discuss direct selling in India. Sessions considered digital transformation, ethical governance, women's participation and the sector's long-term development. Discussion of artificial intelligence connected business evolution with technology adoption and industry knowledge.



CEDSA conclave on direct selling and digital transformation

DigiMantra faculty development programme

October 2025; university announcement dated 6 October

The programme with DigiMantra examined artificial intelligence in teaching and learning. Global Vice President Bikramjit Singh discussed AI, the Internet of Things, renewable energy and interdisciplinary skills. The engagement addressed curriculum, certifications and live projects. An incubation centre was announced as a planned development, extending discussion towards entrepreneurship support.



DigiMantra faculty development programme

Artificial intelligence in pharmaceutical sciences

December 2025; university announcement dated 2 December

The School of Pharmaceutical Sciences, EYUVA Centre and iHUB Shoolini organised a three-day certification programme supported by E-CELL IIT Hyderabad. Students used health datasets, developed predictive models and explored Python, image analysis and AI-assisted drug research. Responsible AI sessions addressed bias. Five students were shortlisted for a subsequent zonal competition.



Artificial intelligence in pharmaceutical sciences

Ideation Conclave

4 December 2025

The Student Research Council, EYUVA and iHUB Shoolini brought students, researchers and industry speakers together for the Ideation Conclave. Thirty teams participated in an Ideathon, while Techcaad demonstrated an interactive robot using computer vision. The programme introduced Winter Innovation Month for selected ideas to receive prototype-development support and strengthened links between student research and entrepreneurship.



Ideation Conclave

Student innovation and enterprise learning

Clean energy and waste to product demonstrations

24 April 2025 | Covered Parking, Shoolini University

The Inter-School Eco-Challenge brought nine schools together to demonstrate working clean-energy models and transform discarded materials into useful products. The Clean Energy Live Demo and Waste-to-Wonder DIY Challenge connected scientific concepts with practical design, resource efficiency and reuse. The Green Bazaar also introduced students to small-scale sustainable enterprise through product displays.



Student demonstrations at the Inter-School Eco-Challenge

Entrepreneurship and design thinking at Under 25 Summits

21–23 August 2025 | Shoolini University

The Under 25 Summits introduced freshers to entrepreneurship, digital content creation and design thinking. Sessions with practitioners combined creative problem solving and hands-on activities with discussion of how ideas develop into ventures. This component of the induction programme supported early exposure to innovation and enterprise skills.



Under 25 Summits at Shoolini University

Technology extension and community enterprise

Technology extension connected university expertise with rural production, digital participation and small enterprise development during 2025.

Protected cultivation and practical farming solutions

17 January 2025 | Kundla Village, Gram Panchayat Shamti, Solan

More than 20 farmers participated in an extension workshop on protected cultivation and greenhouse farming. Field interactions covered pest control, plant disease, fertiliser use and crop management. Agricultural specialists addressed local production challenges and encouraged practical use of scientific farming methods. The programme connected technical knowledge with rural production capability.



Protected cultivation and practical farming solutions

Project Pragati and rural women entrepreneurs

28 January 2025 | Shoolini University and Sanhol Panchayat

The Centre for Leadership Coaching launched Project Pragati with seven rural women participants. Coaches and student mentors introduced business skills, problem solving and self-employment pathways. The Sakhi, Sarthi and Sahyogi mentoring structure connected women with established guidance and practical support for developing small enterprises.



Project Pragati and rural women entrepreneurs

Food processing and enterprise skills

20 March 2025 | Shoolini University

Women participating in Project Pragati received training in mushroom cultivation and value-added food production, including pickles, juices and purées. A candle-making session broadened the range of possible small businesses. Faculty expertise and incubator support connected practical skills with enterprise development.



Food processing and enterprise skills

Oyster mushroom cultivation training

14 May 2025 | Crop Cafeteria, Shoolini University

Women from the Pragati self-help group took part in hands-on training in Dhingri or oyster mushroom cultivation. Practical preparation and cultivation activities introduced a low-cost production option. The programme supported skills for rural agri-enterprise and helped participants explore income generation through applied agricultural knowledge.



Oyster mushroom cultivation training

Digital literacy for rural residents

27 October and 30 November 2025 | Anji Village, Dharampur

Two phases of training introduced farmers, women and young people to smartphones, internet use, digital payments and government services. Demonstrations and guided practice addressed technology adoption and basic cyber safety, including challenges faced by self-help groups. The activity supported participation in digital services and greater confidence in everyday technology use.



Digital literacy for rural residents

Technical support for a rural bakery enterprise

24 December 2025 | Sanhol Village, Solan

A Project Pragati field visit reviewed the bakery enterprise of Mrs Savita and identified operational and technical difficulties. The Centre for Leadership Coaching planned follow-up practical training at Shoolini University to improve product quality and consistency. The visit continued the university's support for a rural entrepreneur through tailored technical guidance.



Technical support for a rural bakery enterprise

School outreach for research and innovation

School-facing activities extended opportunities for learners to encounter research and invention. The 2025 outreach programme included science exhibition participation, research-focused sessions, a patent programme and a laboratory programme. These activities introduced routes into scientific learning and helped connect school education with the university's research environment.

SR No.	Date	Activity	Focus
1	29 January 2025	Research and Its Impact	Research awareness session
2	31 January 2025	Research and Its Impact	Research awareness session
3	9 June 2025	INSPIRE MANAK Science Exhibition	Science and innovation engagement
4	9 June 2025	Summer Patent Program	Introduction to intellectual property
5	23 June 2025	Summer Lab Program	Exposure to laboratory learning
6	5 August 2025	Research and Its Impact	Two research awareness sessions

Research awareness and practical exposure can help school students connect scientific concepts with questions that can be investigated. Patent education adds an introduction to originality and ownership of ideas, while laboratory engagement offers a route towards understanding experimental work. These contributions complement the university's wider innovation education programmes.

Partnerships active during 2025

Thirty-three relevant partnerships were active during all or part of 2025. The single register below brings together academic, industrial and infrastructure collaborations. The final column distinguishes agreements established at the end of the year from those whose stated terms ended during 2025.

SR No.	Partner	Agreement period
1	Advocate R K Garg Auditorium	Jul 2024–Jul 2074
2	IIT Ropar Technology and Innovation Foundation AWaDH	Mar 2025–Mar 2030
3	DAMCO Soft Private Limited	Nov 2014–until termination
4	Design Media and Entertainment Solutions	Mar 2022–Mar 2027
5	Garudalytics Private Limited	Jul 2022–Jul 2027
6	ICAR Directorate of Mushroom Research	Apr 2022–Apr 2032
7	Indian Institute of Technology Madras	Jun 2025–Jun 2029
8	Indian Institute of Technology Mandi	Feb 2023–Feb 2028
9	Indian Direct Selling Association	Sep 2021–Sep 2026
10	Indian Institute of Information Technology Una	Jan 2025–Jan 2030
11	J K G Bio Science Private Limited	Mar 2021–Mar 2026
12	Maximus Hotel and Catering Services	Jun 2023–Jun 2028
13	Millipixels Interactive LLP	Mar 2025–Mar 2028
14	National Mission for Clean Ganga	Apr 2023–Apr 2026
15	National Institute of Technology Hamirpur	May 2023–May 2028
16	RNAVXA Bio	Jul 2021–Jul 2026
17	Shoolini Safron	Sep 2024–Sep 2027
18	Synoleum Renewables	Mar 2022–Mar 2027
19	Tourism and Hospitality Skill Council	Mar 2022–Mar 2028

SR No.	Partner	Agreement period
20	Unicodz Softcorp	Feb 2023–Feb 2028
21	Vardhman Textiles	Oct 2021–Oct 2026 in functional register
22	Agro Environmental Education and Farmers Welfare Society	Feb 2022–22 Feb 2025
23	Chandigarh Angels Network	Aug 2020–Aug 2025
24	Minchy's	Jul 2020–Jul 2025
25	Morepen Laboratories	Jul 2020–Jul 2025
26	Nectar Lifesciences	Jul 2020–Jul 2025
27	Pharmaceuticals Export Promotion Council of India	Jul 2020–Jul 2025
28	Regal Kitchen Food Limited	Jul 2020–Jul 2025
29	Rohini Biocare Research	Jul 2020–Jul 2025
30	Symphonytech Biologics	Jul 2020–Jul 2025
31	University of Petroleum and Energy Studies	Jul 2020–Jul 2025
32	Upkar Pharmaceuticals	Jul 2020–Jul 2025
33	Zumutor Biologics Private Limited	Jul 2020–Jul 2025

The agreements establish frameworks for cooperation in research, curriculum development, training, consultancy and enterprise support. Activities depend on the scope and implementation of each partnership. Agreements with terms ending during 2025 are included for their period of overlap with the reporting year.

Indian Institute of Technology Madras

Jun 2025–Jun 2029

The university reported the signing of an agreement with IIT Madras in June 2025, with an emphasis on future ready education. Intended activities include CODE chapters and access to digital learning through SWAYAM NPTEL, diplomas, degrees and skill oriented pathways.

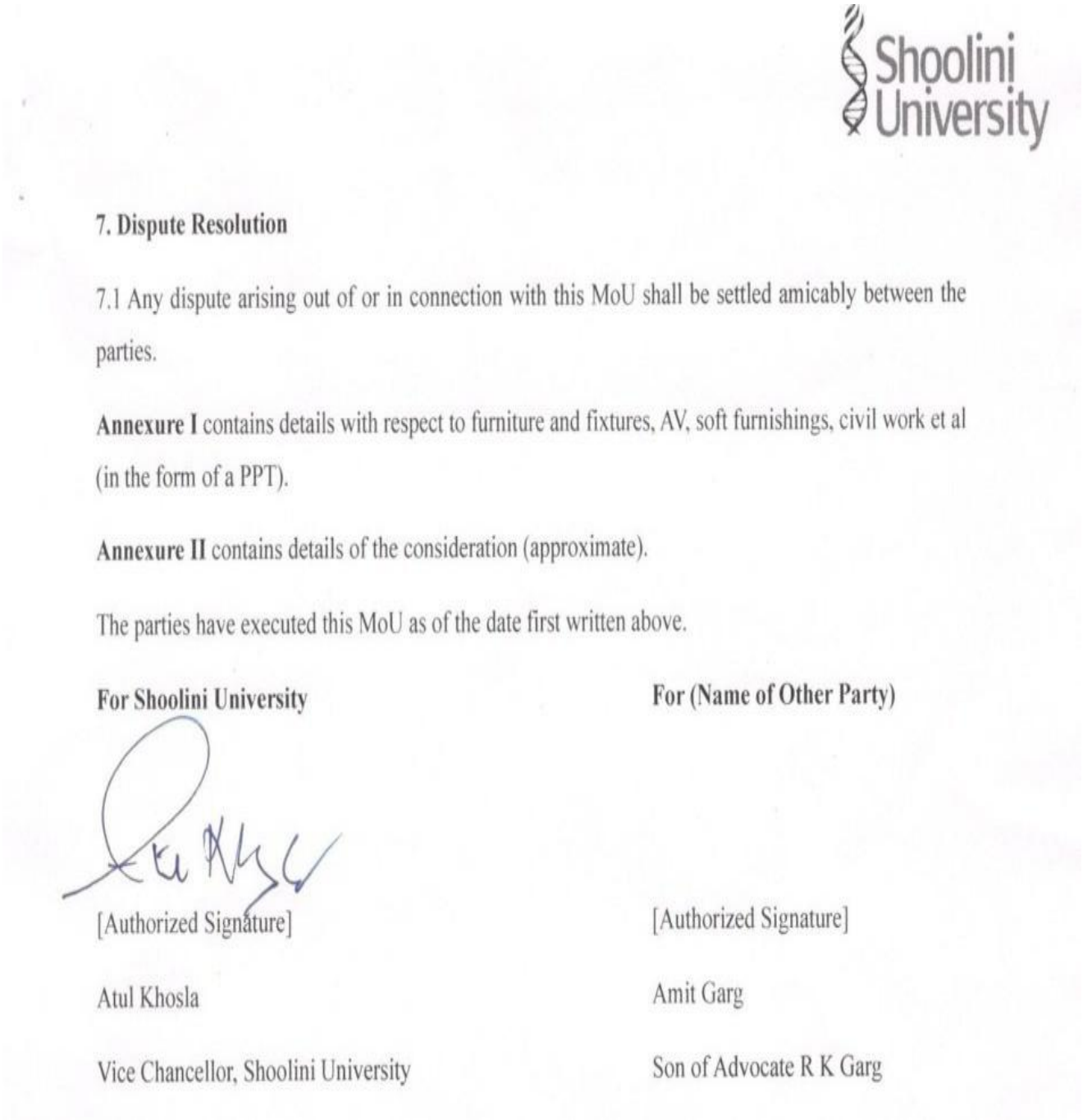


MoU Shoolini University – Indian Institute of Technology Madras

Advocate R K Garg Auditorium

Jul 2024–Jul 2074

The agreement provides a long term framework for upgrading and dedicating the H701 auditorium. Its relevance to SDG 9 is the established provision of shared institutional infrastructure for academic programmes, professional exchange and university activities.



Shoolini University

7. Dispute Resolution

7.1 Any dispute arising out of or in connection with this MoU shall be settled amicably between the parties.

Annexure I contains details with respect to furniture and fixtures, AV, soft furnishings, civil work et al (in the form of a PPT).

Annexure II contains details of the consideration (approximate).

The parties have executed this MoU as of the date first written above.

For Shoolini University	**For (Name of Other Party)**
[Authorized Signature]	[Authorized Signature]
Atul Khosla	Amit Garg
Vice Chancellor, Shoolini University	Son of Advocate R K Garg

MoU Shoolini University – Advocate R K Garg Auditorium

Chandigarh Angels Network

Aug 2020–Aug 2025

The partnership provides a route for entrepreneurship engagement through mentoring, incubation and access to startup related expertise. It connects university innovation activity with an external entrepreneurial network. The five year term overlapped the first part of 2025 and concluded in August.

4. This MOU will remain in force for five years and is subject to revision or modification by mutual agreement. It is also understood that either institution may terminate the MOU at any time, although such action will only be taken after mutual consultation in order to avoid any possible inconvenience to both parties. This MOU shall take effect from the date of the latest signature below.

FOR SHOOLINI UNIVERSITY

Mr Vishal Anand
Founder and President
Shoolini University,
India

Date

FOR CAN

Mr. Kunal Nandwani
Director

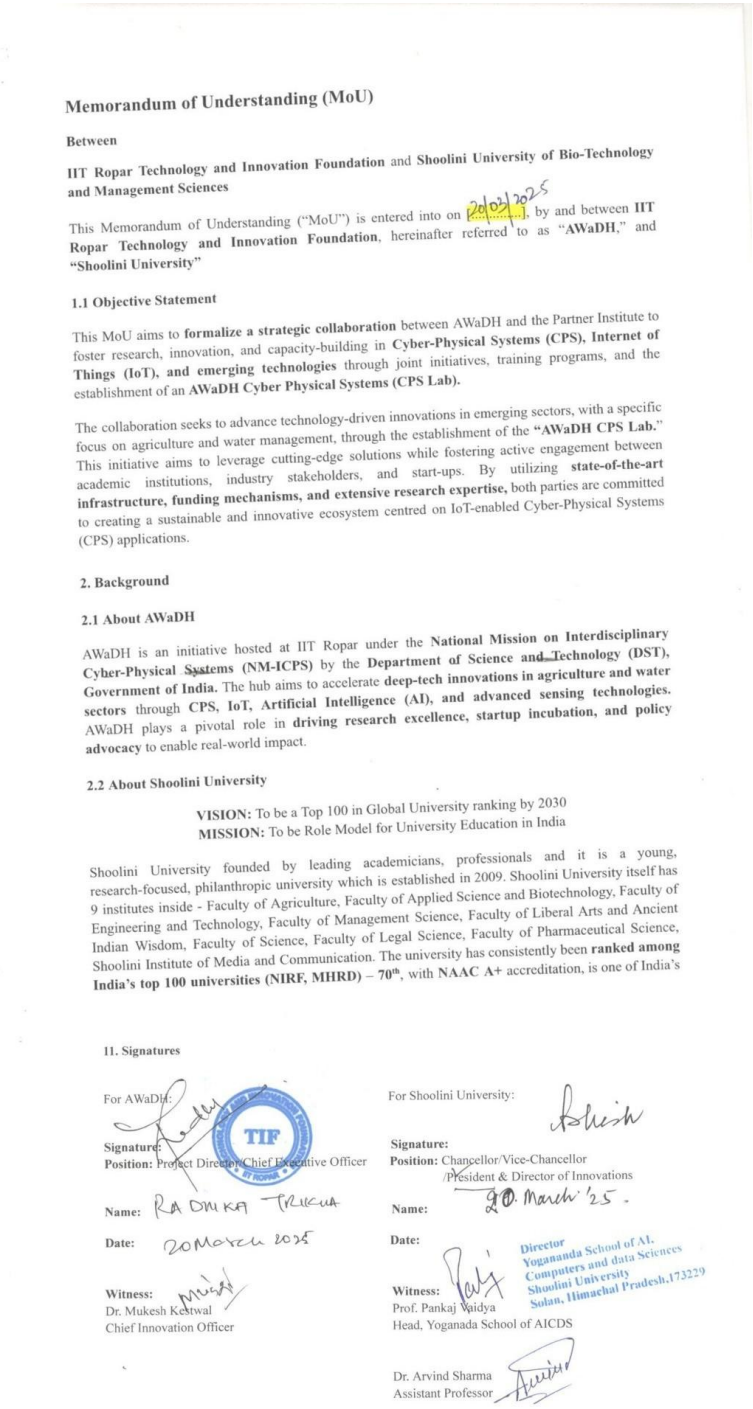
Date:- 25th Aug 2020

MoU Shoolini University – Chandigarh Angels Network

IIT Ropar Technology and Innovation Foundation AWaDH

Mar 2025–Mar 2030

The agreement establishes a five year framework for collaboration in cyber physical systems and related technologies, including training, prototyping and applications connected with agriculture and water. It proposes an AWaDH cyber physical systems laboratory with shared responsibilities. The proposed laboratory is recorded as an agreement commitment; this document alone does not establish that the laboratory had become operational during 2025.



Memorandum of Understanding (MoU)

Between

IIT Ropar Technology and Innovation Foundation and **Shoolini University of Bio-Technology and Management Sciences**

This Memorandum of Understanding ("MoU") is entered into on [20/03/2025], by and between **IIT Ropar Technology and Innovation Foundation**, hereinafter referred to as "**AWaDH**," and "**Shoolini University**"

1.1 Objective Statement

This MoU aims to **formalize a strategic collaboration** between AWaDH and the Partner Institute to foster research, innovation, and capacity-building in **Cyber-Physical Systems (CPS), Internet of Things (IoT), and emerging technologies** through joint initiatives, training programs, and the establishment of an **AWaDH Cyber Physical Systems (CPS Lab).**

The collaboration seeks to advance technology-driven innovations in emerging sectors, with a specific focus on agriculture and water management, through the establishment of the **"AWaDH CPS Lab."** This initiative aims to leverage cutting-edge solutions while fostering active engagement between academic institutions, industry stakeholders, and start-ups. By utilizing **state-of-the-art infrastructure, funding mechanisms, and extensive research expertise,** both parties are committed to creating a sustainable and innovative ecosystem centred on IoT-enabled Cyber-Physical Systems (CPS) applications.

2. Background

2.1 About AWaDH

AWaDH is an initiative hosted at IIT Ropar under the **National Mission on Interdisciplinary Cyber-Physical Systems (NM-ICPS)** by the **Department of Science and Technology (DST), Government of India.** The hub aims to accelerate **deep-tech innovations in agriculture and water sectors** through **CPS, IoT, Artificial Intelligence (AI), and advanced sensing technologies.** AWaDH plays a pivotal role in **driving research excellence, startup incubation, and policy advocacy** to enable real-world impact.

2.2 About Shoolini University

VISION: To be a Top 100 in Global University ranking by 2030
MISSION: To be Role Model for University Education in India

Shoolini University founded by leading academicians, professionals and it is a young, research-focused, philanthropic university which is established in 2009. Shoolini University itself has 9 institutes inside - Faculty of Agriculture, Faculty of Applied Science and Biotechnology, Faculty of Engineering and Technology, Faculty of Management Science, Faculty of Liberal Arts and Ancient Indian Wisdom, Faculty of Science, Faculty of Legal Science, Faculty of Pharmaceutical Science, Shoolini Institute of Media and Communication. The university has consistently been **ranked among India's top 100 universities (NIRF, MHRD) – 70th**, with **NAAC A+** accreditation, is one of India's

11. Signatures

For AWaDH:
Signature:
Position: Project Director/Chief Executive Officer
Name: RADHIKA THAKUR
Date: 20 March 2025
Witness:
Dr. Mukesh Kestwal
Chief Innovation Officer

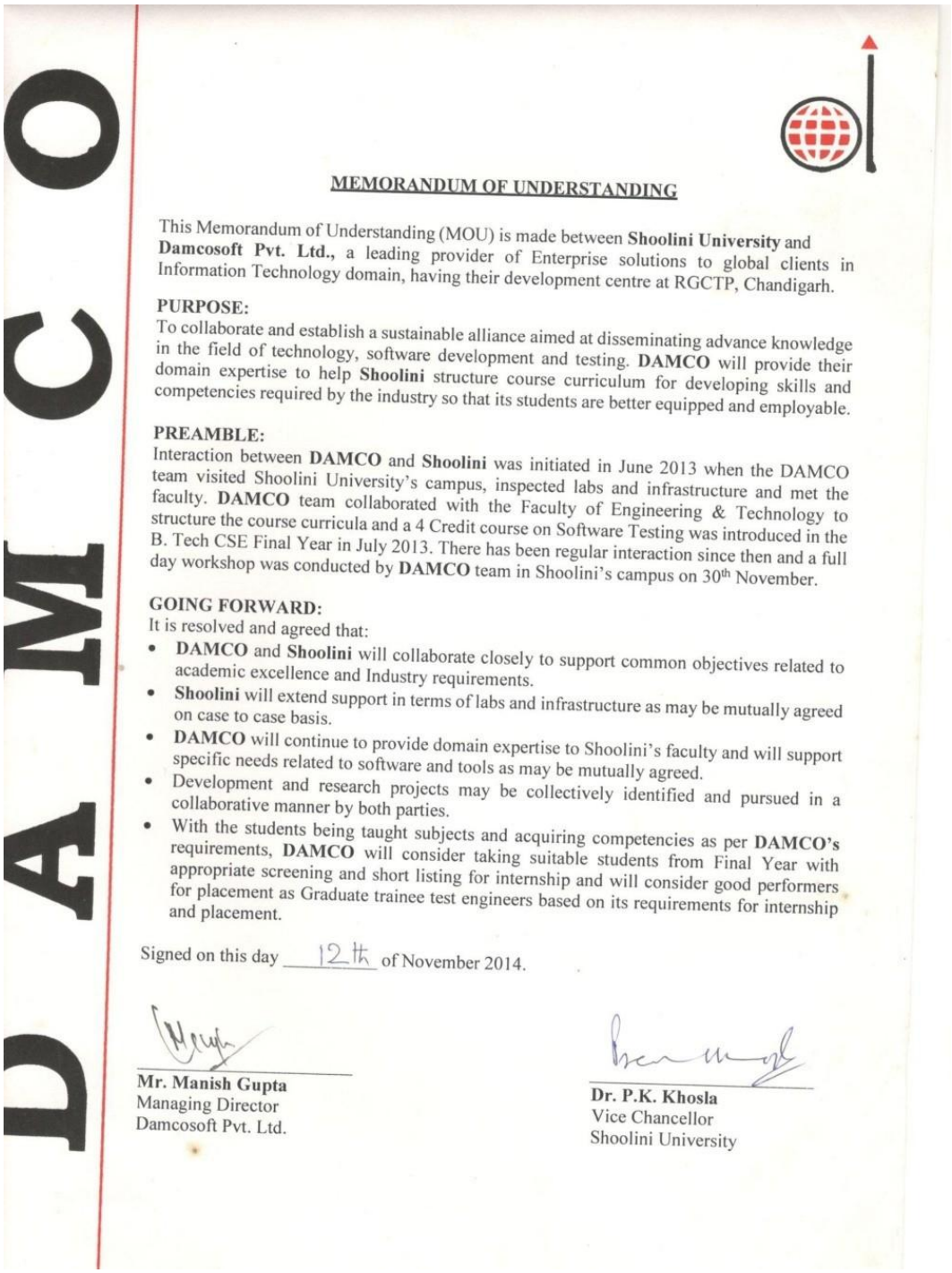
For Shoolini University:
Signature:
Position: Chancellor/Vice-Chancellor /President & Director of Innovations
Name:
Date: 20. March '25.
Witness:
Prof. Pankaj Vaidya
Head, Yoganada School of AICDS
Director
Yogananda School of AI, Computers and data Sciences
Shoolini University
Solan, Himachal Pradesh,173229
Dr. Arvind Sharma
Assistant Professor

MoU Shoolini University – IIT Ropar Technology and Innovation Foundation AWaDH

DAMCO Soft Private Limited

Nov 2014–until termination

The agreement concerns software testing education and industry knowledge. It provides for curriculum input, domain expertise and opportunities associated with student projects and internships.



DAMCO

MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding (MOU) is made between **Shoolini University** and **Damcosoft Pvt. Ltd.,** a leading provider of Enterprise solutions to global clients in Information Technology domain, having their development centre at RGCTP, Chandigarh.

PURPOSE:
To collaborate and establish a sustainable alliance aimed at disseminating advance knowledge in the field of technology, software development and testing. **DAMCO** will provide their domain expertise to help **Shoolini** structure course curriculum for developing skills and competencies required by the industry so that its students are better equipped and employable.

PREAMBLE:
Interaction between **DAMCO** and **Shoolini** was initiated in June 2013 when the DAMCO team visited Shoolini University's campus, inspected labs and infrastructure and met the faculty. **DAMCO** team collaborated with the Faculty of Engineering & Technology to structure the course curricula and a 4 Credit course on Software Testing was introduced in the B. Tech CSE Final Year in July 2013. There has been regular interaction since then and a full day workshop was conducted by **DAMCO** team in Shoolini's campus on 30th November.

GOING FORWARD:
It is resolved and agreed that:

- **DAMCO** and **Shoolini** will collaborate closely to support common objectives related to academic excellence and Industry requirements.
- **Shoolini** will extend support in terms of labs and infrastructure as may be mutually agreed on case to case basis.
- **DAMCO** will continue to provide domain expertise to Shoolini's faculty and will support specific needs related to software and tools as may be mutually agreed.
- Development and research projects may be collectively identified and pursued in a collaborative manner by both parties.
- With the students being taught subjects and acquiring competencies as per **DAMCO's** requirements, **DAMCO** will consider taking suitable students from Final Year with appropriate screening and short listing for internship and will consider good performers for placement as Graduate trainee test engineers based on its requirements for internship and placement.

Signed on this day 12th of November 2014.

Mr. Manish Gupta
Managing Director
Damcosoft Pvt. Ltd.

Dr. P.K. Khosla
Vice Chancellor
Shoolini University

MoU Shoolini University – DAMCO Soft Private Limited

Design Media and Entertainment Solutions

Mar 2022–Mar 2027

The knowledge partnership provides for academic exchange, curriculum development, joint research and consultancy. Its relevance is the connection between university learning and professional expertise in design and media. The five year agreement remained within its term throughout 2025, supporting the institutional framework for engagement with creative and technology related practice.



Shoolini University

DESIGN
Media & Edutainment Solutions

MEMORANDUM OF UNDERSTANDING (MOU)

BETWEEN

SHOOLINI UNIVERSITY

And

DESIGN MEDIA & ENTERTAINMENT SOLUTIONS

Shoolini University of Biotechnology and Management Sciences Solan (herein referred to as Shoolini University), and Design Media & Entertainment Solutions, hereby agree to cooperate and become knowledge partners based on the principle of reciprocity.

This Memorandum of Understanding (MOU) encourages academic partnership e.g. exchange of students and faculty, upgradation of curriculum, joint research and consultancy.

The scope of this MOU is expandable: specific issues and terms will be mutually agreed upon on case-by case basis. This MOU shall take effect from the date of the latest signature below and will remain in effect for five years hence. This MOU is subject to revision or modification by mutual agreement. It is also understood that either institution may terminate the MOU at any time, although such action will only take place after mutual consultation in order to avoid any possible inconvenience to the parties

This MOU is non-binding and has no legal monetary implication to either party.

On behalf of the Shoolini University, Solan, Himachal Pradesh, India

ASHISH KHOSLA
5-Mar-2022

On behalf of the Design Media & Entertainment Solutions

ASHISH SK.
5th March 2022

MoU Shoolini University – Design Media and Entertainment Solutions

Garudalytics Private Limited

Jul 2022–Jul 2027

The agreement establishes a knowledge partnership covering research, consultancy, exchange and curriculum development. It connects academic work with a technology enterprise and creates a framework for practical engagement with external expertise. The five year term includes the whole of 2025. Specific outcomes are not inferred solely from the existence of the agreement.

MEMORANDUM OF UNDERSTANDING (MOU)

BETWEEN

SHOOLINI UNIVERSITY

And

GARUDALYTICS PRIVATE LIMITED

Shoolini University of Biotechnology and Management Sciences Solan (herein referred to as Shoolini University), and, hereby agree to cooperate and become knowledge partners based on the principle of reciprocity.

This Memorandum of Understanding (MOU) encourages academic partnership e.g. exchange of students and faculty, upgradation of curriculum, joint research and consultancy.

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This MOU is non-binding and has no legal monetary implication to either party.

On behalf of the Shoolini University,
Solan, Himachal Pradesh, India

(Prof Atul Khosla)
Vice Chancellor
Date: 19-07-2022

On behalf of the Garudalytics Private ltd.

Dr. V. S. S.. Kiran
CEO Co-Founder, Garudalytics

MoU Shoolini University – Garudalytics Private Limited

ICAR Directorate of Mushroom Research

Apr 2022–Apr 2032

The agreement supports research and dissertation training connected with mushroom science. Access to specialised scientific expertise can strengthen student research and the translation of biological knowledge into applied agricultural work. The ten year term extends across 2025. The reproduced clause page and signature section document the collaboration and its institutional execution.

additional co-authors, depending upon their contribution in the research work, may be decided by mutual consent between the student and Major Advisory/Co-Guide.

ii) Both the parties may ensure that for the students admitted in the year 2020-21 & onward for submission of Ph.D. thesis one research paper should have been accepted/presented in national/international/symposium/conference/seminar or one patent submitted/filed in lieu of the research publication out of the thesis work.

ARTICLE-III

i) The student will be expected to protect the Intellectual Property Rights generated likely to be generated during his/her research work. Intellectual property and benefits arising out of commercialization of technologies generated out of co-operation under his agreement shall be jointly shared by Shoolini University and ICAR-DMR.

ii) The IPR generated in the collaborative research between ICAR-DMR, Solan and Shoolini University will be shared by both the parties.

ARTICLE-IV

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

ARTICLE-V

The MoU shall be effective from the date of its signing by both the parties and shall remain in operation for ten years or until either party serves notice on the other of its intention to terminate it, in which event; the MoU shall stand terminated at the end of one calendar month from the date of issue of such a notice.

ARTICLE-VI

The parties would act strictly accordingly to the relevant provisions of law while implementing this MoU. In case of any dispute that may crop up during execution of MoU the matter would be settled through arbitration by referring it to a committee appointed by the Vice-Chancellor Shoolini University and Director, ICAR-DMR, Solan.

IN WITNESS, where of, the two Parties hereunder signed this Memorandum of Understanding on the dates indicated below:

Prof P.K. Khosla
Chancellor
(Signature of Authorized Representative of Shoolini University with name & address)

Vice Chancellor
Shoolini University of Biotechnology & Management Sciences
Solan - 173212 (H.P.)

Date:: 27-04-2022

Dr V.P.Sharma
Director
(Signature of Authorized Representative of ICAR-DMR with name & address

निदेशक / Director
भाकृअनुप - खु.अनु. नि. / ICAR-DMR
...)/C/Ghat Solan (HP)

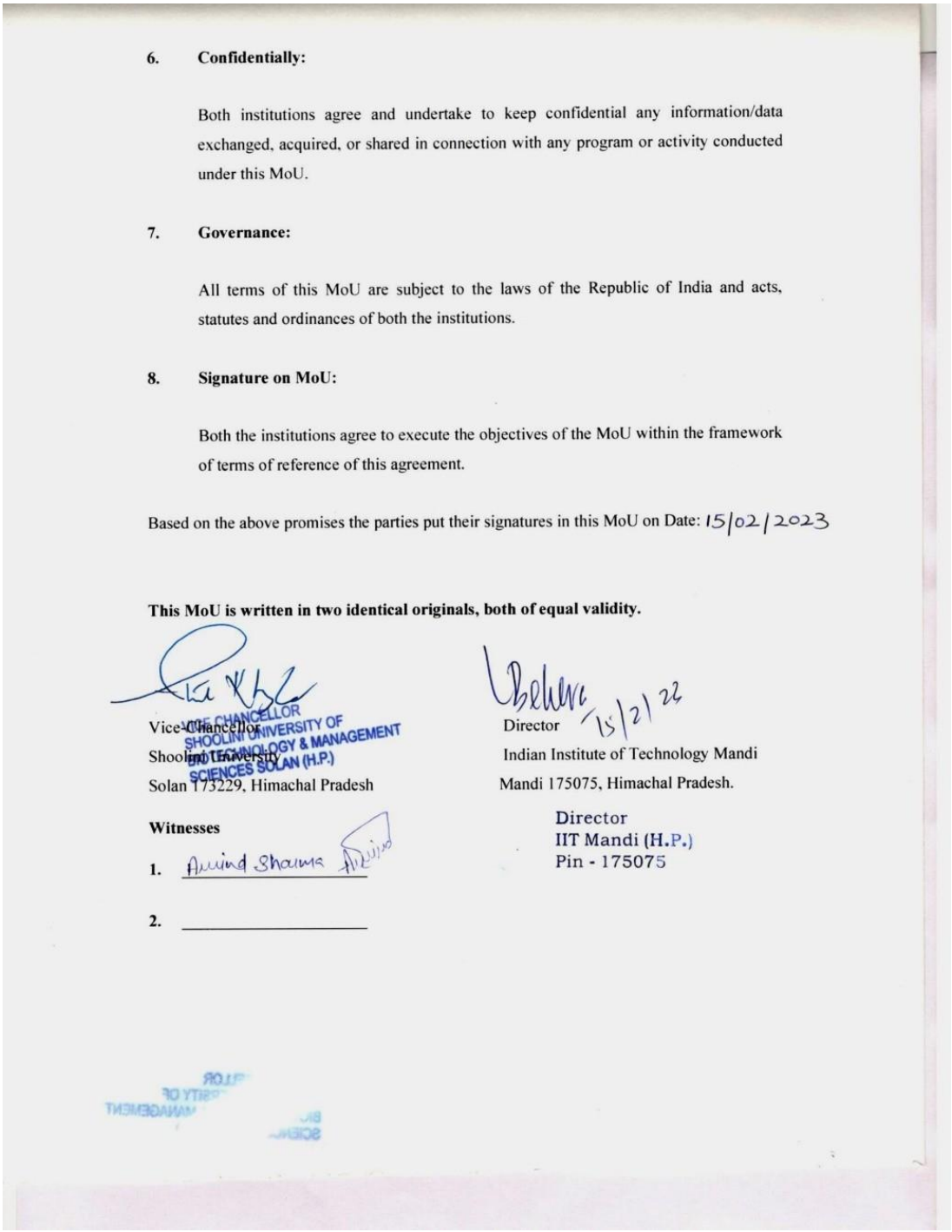
Date: 27-04-2022

MoU Shoolini University – ICAR Directorate of Mushroom Research

Indian Institute of Technology Mandi

Feb 2023–Feb 2028

The agreement supports research and academic collaboration, knowledge exchange and institutional interaction. It provides a framework for bringing complementary expertise into university learning and research. The five year term includes 2025. The signed section is reproduced as documentary support for the established collaboration framework.



6. **Confidentially:**

Both institutions agree and undertake to keep confidential any information/data exchanged, acquired, or shared in connection with any program or activity conducted under this MoU.

7. **Governance:**

All terms of this MoU are subject to the laws of the Republic of India and acts, statutes and ordinances of both the institutions.

8. **Signature on MoU:**

Both the institutions agree to execute the objectives of the MoU within the framework of terms of reference of this agreement.

Based on the above promises the parties put their signatures in this MoU on Date: 15/02/2023

This MoU is written in two identical originals, both of equal validity.

Vice Chancellor
Shoolini University
Solan 173229, Himachal Pradesh

VICE CHANCELLOR
SHOOLINI UNIVERSITY OF BIOTECHNOLOGY & MANAGEMENT SCIENCES SOLAN (H.P.)

Director
Indian Institute of Technology Mandi
Mandi 175075, Himachal Pradesh.

Director
IIT Mandi (H.P.)
Pin - 175075

Witnesses

1. Arvind Sharma

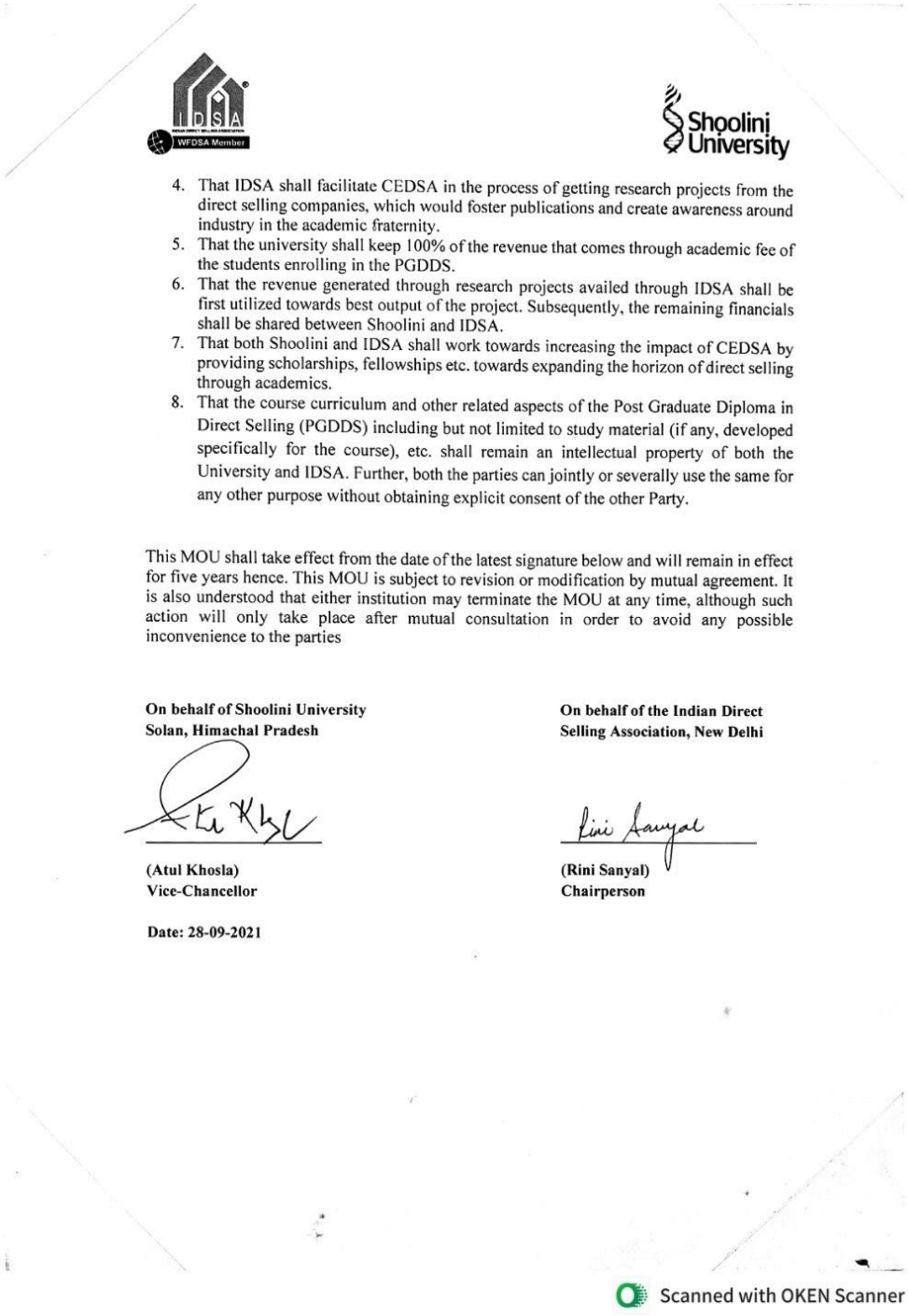
2. _____

MoU Shoolini University – Indian Institute of Technology Mandi

Indian Direct Selling Association

Sep 2021–Sep 2026

The partnership supports industry education, research and curriculum engagement associated with direct selling. It provides an institutional context for the Centre of Excellence in Direct Selling in Academics. The agreement remained within its five year term throughout 2025. The CEDSA conclave described earlier provides a separately documented example of related industry exchange during the reporting year.



4. That IDSA shall facilitate CEDSA in the process of getting research projects from the direct selling companies, which would foster publications and create awareness around industry in the academic fraternity.
5. That the university shall keep 100% of the revenue that comes through academic fee of the students enrolling in the PGDDS.
6. That the revenue generated through research projects availed through IDSA shall be first utilized towards best output of the project. Subsequently, the remaining financials shall be shared between Shoolini and IDSA.
7. That both Shoolini and IDSA shall work towards increasing the impact of CEDSA by providing scholarships, fellowships etc. towards expanding the horizon of direct selling through academics.
8. That the course curriculum and other related aspects of the Post Graduate Diploma in Direct Selling (PGDDS) including but not limited to study material (if any, developed specifically for the course), etc. shall remain an intellectual property of both the University and IDSA. Further, both the parties can jointly or severally use the same for any other purpose without obtaining explicit consent of the other Party.

This MOU shall take effect from the date of the latest signature below and will remain in effect for five years hence. This MOU is subject to revision or modification by mutual agreement. It is also understood that either institution may terminate the MOU at any time, although such action will only take place after mutual consultation in order to avoid any possible inconvenience to the parties

On behalf of Shoolini University
Solan, Himachal Pradesh

(Atul Khosla)
Vice-Chancellor

Date: 28-09-2021

On behalf of the Indian Direct Selling Association, New Delhi

(Rini Sanyal)
Chairperson

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MoU Shoolini University – Indian Direct Selling Association

Indian Institute of Information Technology Una

Jan 2025–Jan 2030

The agreement provides for joint research, academic mobility, teaching and exchange of knowledge. Its five year term begins in January 2025, making it a new collaboration framework within the reporting year.



Based on the above promises the parties put their signatures in this MoU on Date: 15th Day of January 2025.

This MoU is written in two identical originals, both of equal validity.

Chancellor/~~Vice-Chancellor~~
Shoolini University, Solan, Himachal

Chancellor
Shoolini University of Biotechnology
and Management Sciences
Solan - 173212 (H.P.)

Director
Indian Institute of Information Technology
Una, Vill. Saloh, Distt. Una, Himachal
Pradesh (177209)

Witnesses

1 Prof. Virender Rihani
Dean School of Engineering,
Shoolini Univerisity

2 Prof. M. S. Thakur,
Head of School of Core
Engineering
Shoolini University

3 Dr. Arvind Sharma
Assistant Professor, Yoganada
School of Artificial Intelligence,
Computers and Data Sciences,
Shoolini University

Dr. Shatrughan Modi
Head of School, School of Computing
IIIT Una

Dr. Shivdutt Sharma
Assistant Professor, School of Computing,
IIIT Una

SHOOLINI UNIVERSITY OF BIOTECHNOLOGY
POST BOX NO-9 HEAD OFFICE SOLAN (H.P.)

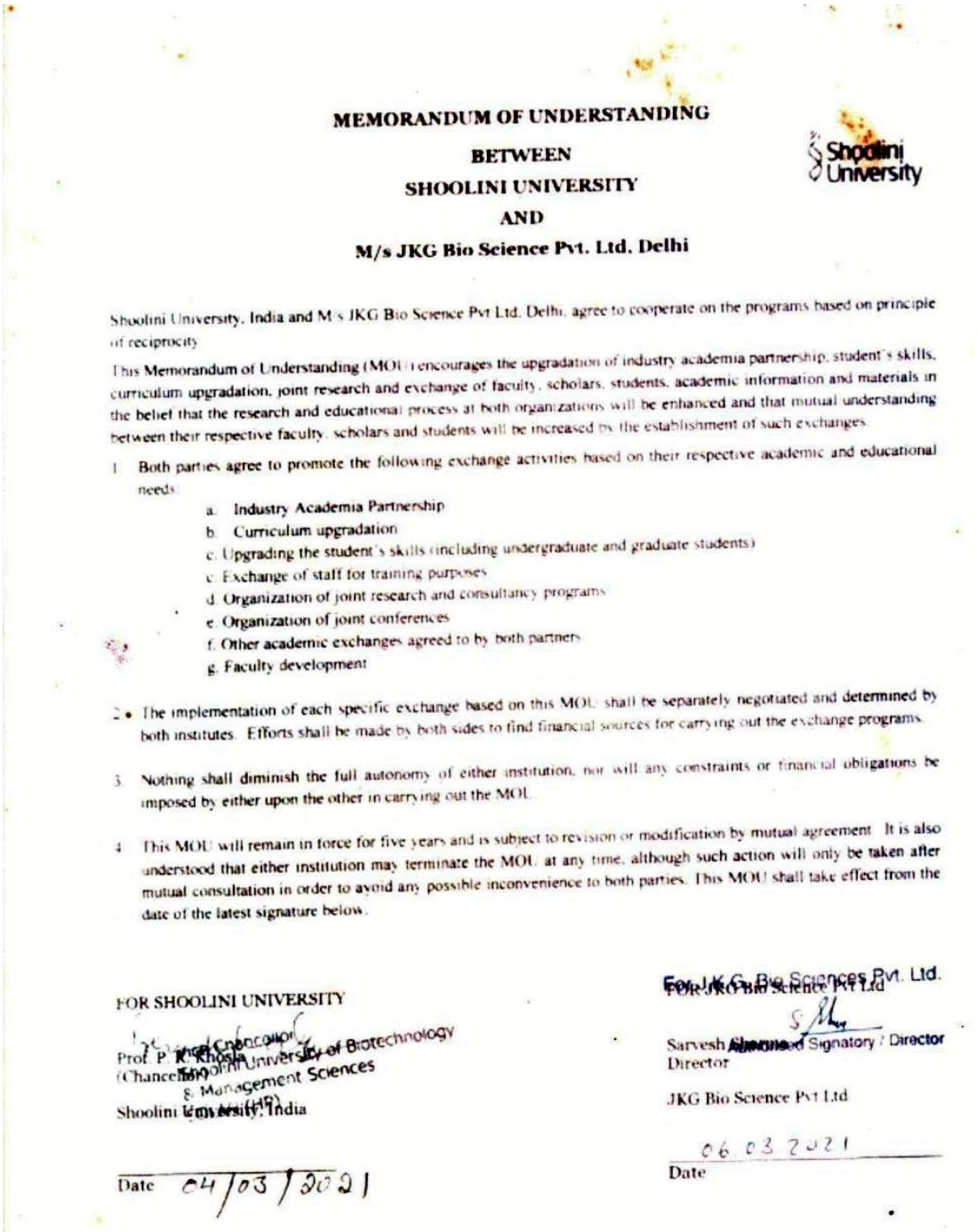
INSTITUTE OF INFORMATION TECHNOLOGY
INDIAN * UNA *

MoU Shoolini University – Indian Institute of Information Technology Una

J K G Bio Science Private Limited

Mar 2021–Mar 2026

The agreement links academic learning with bioscience industry expertise through curriculum engagement, skills, training, research and consultancy. Its five year term runs from the latest counter signature in March 2021. The agreement therefore remained within its term during 2025. The scanned signed document is retained to show the parties and the agreed knowledge partnership.



MEMORANDUM OF UNDERSTANDING

BETWEEN

SHOOLINI UNIVERSITY

AND

M/s JKG Bio Science Pvt. Ltd. Delhi

Shoolini University, India and M/s JKG Bio Science Pvt Ltd. Delhi, agree to cooperate on the programs based on principle of reciprocity.

This Memorandum of Understanding (MOU) encourages the upgradation of industry academia partnership, student's skills, curriculum upgradation, joint research and exchange of faculty, scholars, students, academic information and materials in the belief that the research and educational process at both organizations will be enhanced and that mutual understanding between their respective faculty, scholars and students will be increased by the establishment of such exchanges.

1. Both parties agree to promote the following exchange activities based on their respective academic and educational needs:
   a. Industry Academia Partnership
   b. Curriculum upgradation
   c. Upgrading the student's skills (including undergraduate and graduate students)
   c. Exchange of staff for training purposes
   d. Organization of joint research and consultancy programs
   e. Organization of joint conferences
   f. Other academic exchanges agreed to by both partners
   g. Faculty development

2. The implementation of each specific exchange based on this MOU shall be separately negotiated and determined by both institutes. Efforts shall be made by both sides to find financial sources for carrying out the exchange programs.

3. Nothing shall diminish the full autonomy of either institution, nor will any constraints or financial obligations be imposed by either upon the other in carrying out the MOU.

4. This MOU will remain in force for five years and is subject to revision or modification by mutual agreement. It is also understood that either institution may terminate the MOU at any time, although such action will only be taken after mutual consultation in order to avoid any possible inconvenience to both parties. This MOU shall take effect from the date of the latest signature below.

FOR SHOOLINI UNIVERSITY

Prof. P. K. Khosla
(Chancellor)
Shoolini University, India

Date 04/03/2021

For J K G Bio Sciences Pvt. Ltd.

Sarvesh Sharma
Authorised Signatory / Director
JKG Bio Science Pvt Ltd

Date 06.03.2021

MoU Shoolini University – J K G Bio Science Private Limited

Maximus Hotel and Catering Services

Jun 2023–Jun 2028

The partnership brings hospitality industry knowledge into curriculum development, research, consultancy and exchange. Such engagement supports applied professional education and the connection between university learning and service industry requirements. The signed agreement specifies a five year term from June 2023, extending through 2025.

SHETTY SONS
HOSPITALITY PAR EXCELLENCE

Shoolini University

MEMORANDUM OF UNDERSTANDING (MOU)

BETWEEN

MAXIMUS HOTEL CATERING SERVICES PVT. LTD.

and

SHOOLINI UNIVERSITY

Maximus Hotel Catering Services Pvt. Ltd. and Shoolini University of Biotechnology and Management Sciences Solan (herein referred to as Shoolini University), hereby agree to cooperate and become knowledge partners based on the principle of reciprocity.

This Memorandum of Understanding (MOU) encourages academic partnership e.g., exchange of students and faculty, upgradation of curriculum, joint research and consultancy.

The scope of this MOU is expandable: specific issues and terms will be mutually agreed upon on a case-by-case basis. This MOU shall take effect from the date of the latest signature below and will remain in effect for five years hence. This MOU is subject to revision or modification by mutual agreement. It is also understood that either institution may terminate the MOU at any time, although such action will only take place after mutual consultation in order to avoid any possible inconvenience to the parties.

This MOU is non-binding and has no legal monetary implication to either party.

On behalf of the
Maximus Hotel Catering Services Pvt. Ltd.
A5 Laxman Niwas, 11th Road, Santa Cruz East
Mumbai

(Mr Sathyaprasad Shetty)
Managing Director
Date: 23-06-2023

On behalf of the Shoolini University,
Solan, Himachal Pradesh, India

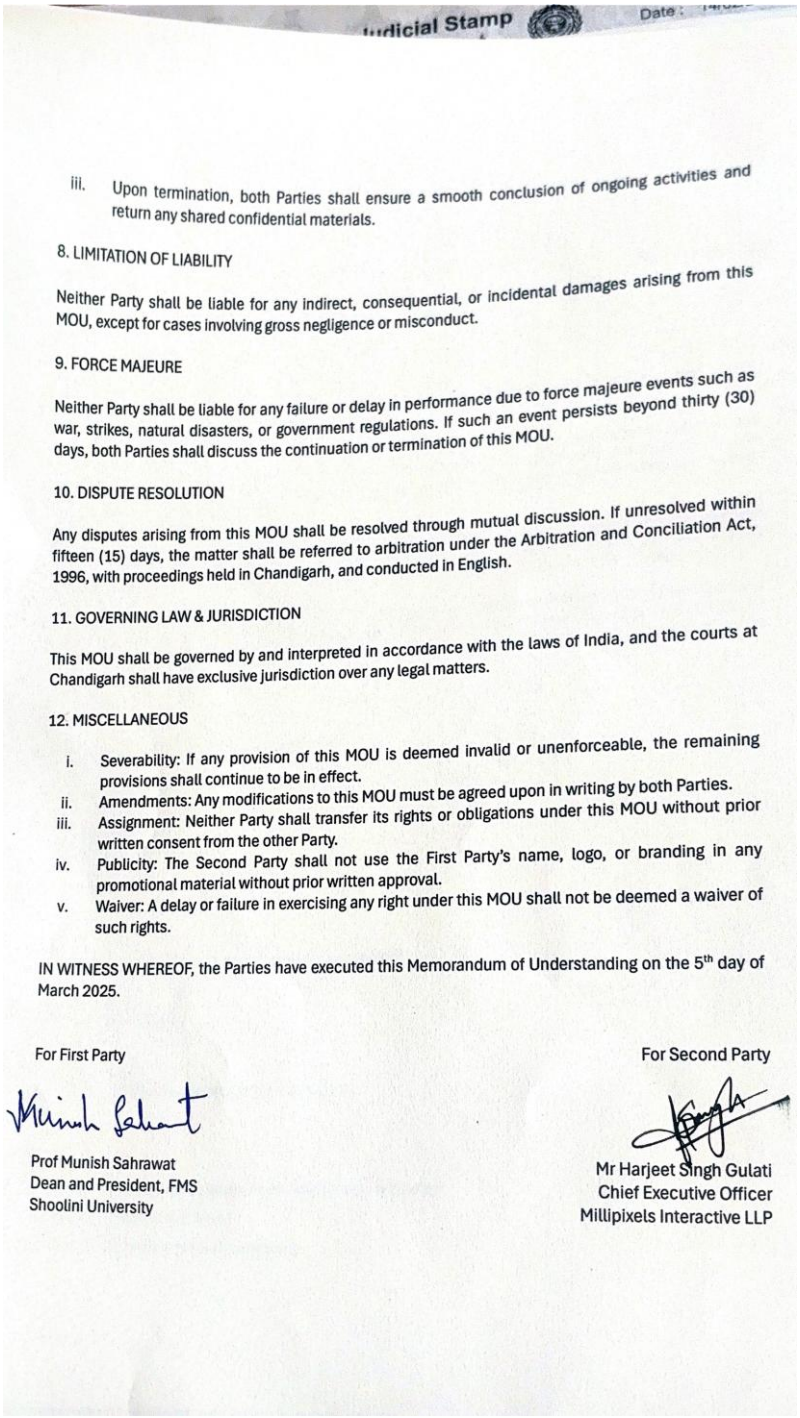
(Prof Atul Khosla)
Vice Chancellor
Date: 23-06-2023

MoU Shoolini University – Maximus Hotel and Catering Services

Millipixels Interactive LLP

Mar 2025–Mar 2028

The agreement provides a framework for digital and professional learning, including social media and marketing, industry exposure, training, internships and research. It was signed in March 2025. The signed document specifies a three year term. Its relevance to SDG 9 is the connection between digital industry expertise and the development of practical skills and collaborative opportunities.



Judicial Stamp Date:

iii. Upon termination, both Parties shall ensure a smooth conclusion of ongoing activities and return any shared confidential materials.

8. LIMITATION OF LIABILITY

Neither Party shall be liable for any indirect, consequential, or incidental damages arising from this MOU, except for cases involving gross negligence or misconduct.

9. FORCE MAJEURE

Neither Party shall be liable for any failure or delay in performance due to force majeure events such as war, strikes, natural disasters, or government regulations. If such an event persists beyond thirty (30) days, both Parties shall discuss the continuation or termination of this MOU.

10. DISPUTE RESOLUTION

Any disputes arising from this MOU shall be resolved through mutual discussion. If unresolved within fifteen (15) days, the matter shall be referred to arbitration under the Arbitration and Conciliation Act, 1996, with proceedings held in Chandigarh, and conducted in English.

11. GOVERNING LAW & JURISDICTION

This MOU shall be governed by and interpreted in accordance with the laws of India, and the courts at Chandigarh shall have exclusive jurisdiction over any legal matters.

12. MISCELLANEOUS

i. Severability: If any provision of this MOU is deemed invalid or unenforceable, the remaining provisions shall continue to be in effect.
ii. Amendments: Any modifications to this MOU must be agreed upon in writing by both Parties.
iii. Assignment: Neither Party shall transfer its rights or obligations under this MOU without prior written consent from the other Party.
iv. Publicity: The Second Party shall not use the First Party's name, logo, or branding in any promotional material without prior written approval.
v. Waiver: A delay or failure in exercising any right under this MOU shall not be deemed a waiver of such rights.

IN WITNESS WHEREOF, the Parties have executed this Memorandum of Understanding on the 5th day of March 2025.

For First Party

Prof Munish Sahrawat
Dean and President, FMS
Shoolini University

For Second Party

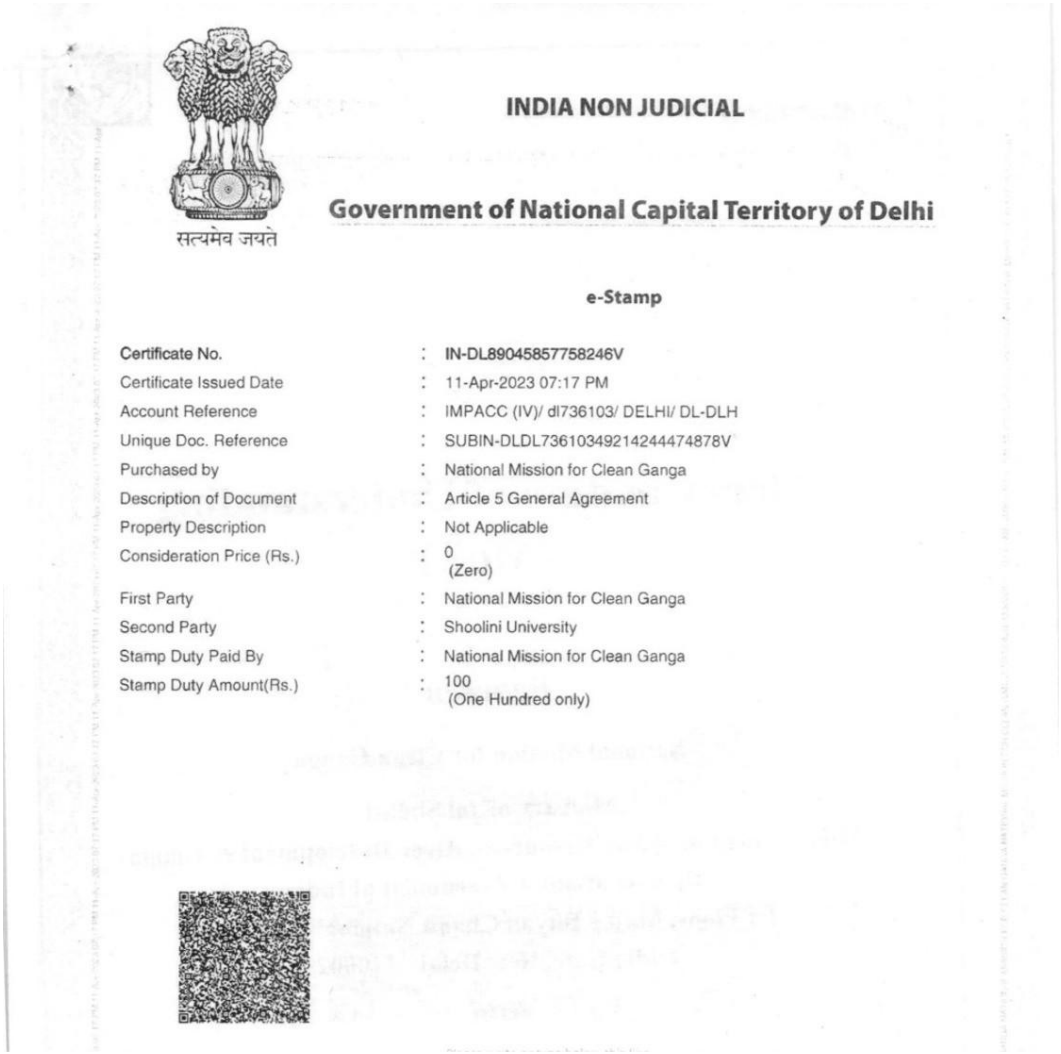
Mr Harjeet Singh Gulati
Chief Executive Officer
Millipixels Interactive LLP

MoU Shoolini University – Millipixels Interactive LLP

National Mission for Clean Ganga

Apr 2023–Apr 2026

The agreement connects the university with the National Mission for Clean Ganga under the Ministry of Jal Shakti. It supports engagement around water conservation and related academic, research and community knowledge activity. The document specifies a 36 month term from April 2023, extending through 2025. The opening page and signing section are reproduced together.



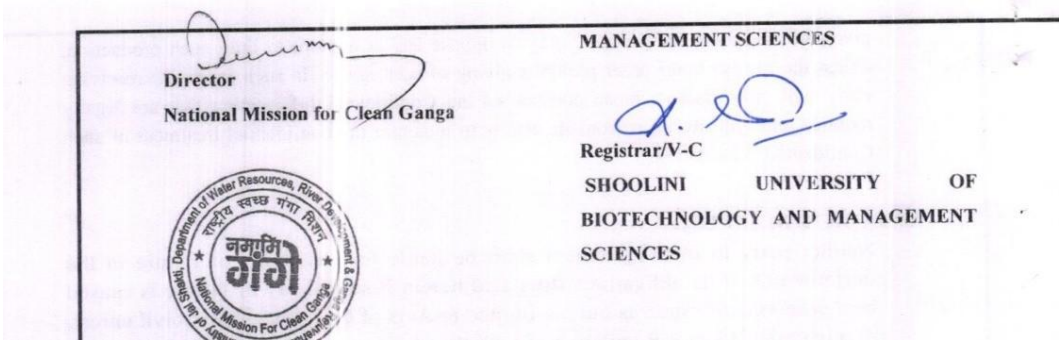
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INDIA NON JUDICIAL

Government of National Capital Territory of Delhi

e-Stamp

Certificate No.	:	IN-DL89045857758246V
Certificate Issued Date	:	11-Apr-2023 07:17 PM
Account Reference	:	IMPACC (IV)/ dl736103/ DELHI/ DL-DLH
Unique Doc. Reference	:	SUBIN-DLDL73610349214244474878V
Purchased by	:	National Mission for Clean Ganga
Description of Document	:	Article 5 General Agreement
Property Description	:	Not Applicable
Consideration Price (Rs.)	:	0 (Zero)
First Party	:	National Mission for Clean Ganga
Second Party	:	Shoolini University
Stamp Duty Paid By	:	National Mission for Clean Ganga
Stamp Duty Amount(Rs.)	:	100 (One Hundred only)



Director

National Mission for Clean Ganga

MANAGEMENT SCIENCES

Registrar/V-C

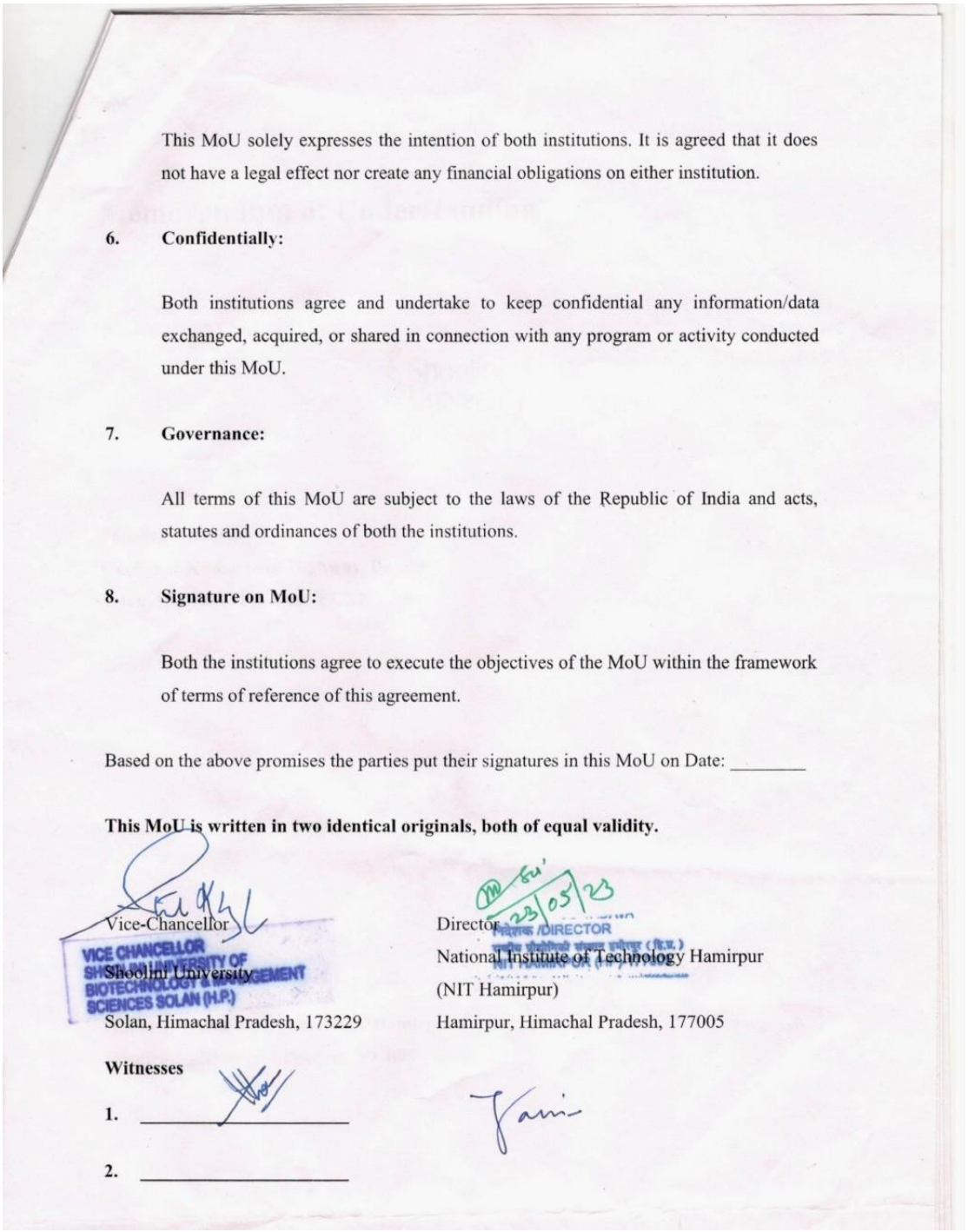
SHOOLINI UNIVERSITY OF BIOTECHNOLOGY AND MANAGEMENT SCIENCES

MoU Shoolini University – National Mission for Clean Ganga

National Institute of Technology Hamirpur

May 2023–May 2028

The agreement covers academic and research collaboration and exchange of expertise. It strengthens the framework for cooperation in technical education and research. The five year term remained active throughout 2025. Separately, the HCICC conference in January 2025 documents cooperation between Shoolini University and NIT Hamirpur in a specific research event.



This MoU solely expresses the intention of both institutions. It is agreed that it does not have a legal effect nor create any financial obligations on either institution.

6. Confidentially:

Both institutions agree and undertake to keep confidential any information/data exchanged, acquired, or shared in connection with any program or activity conducted under this MoU.

7. Governance:

All terms of this MoU are subject to the laws of the Republic of India and acts, statutes and ordinances of both the institutions.

8. Signature on MoU:

Both the institutions agree to execute the objectives of the MoU within the framework of terms of reference of this agreement.

Based on the above promises the parties put their signatures in this MoU on Date: _____

This MoU is written in two identical originals, both of equal validity.

Vice-Chancellor
Shoolini University
Solan, Himachal Pradesh, 173229

Director
National Institute of Technology Hamirpur
(NIT Hamirpur)
Hamirpur, Himachal Pradesh, 177005

Witnesses

1. _____

2. _____

MoU Shoolini University – National Institute of Technology Hamirpur

RNAVXA Bio

Jul 2021–Jul 2026

The knowledge partnership links the university with a biotechnology and pharmaceutical research enterprise. Its framework includes curriculum development, academic exchange, research and consultancy. The five year term extends across 2025.

MEMORANDUM OF UNDERSTANDING (MoU)

BETWEEN

THE SHOOLINI UNIVERSITY OF BIOTECHNOLOGY AND MANAGEMENT SCIENCES
AND
RNA VAX BIO, Solan, Himachal Pradesh

Shoolini University of Biotechnology and Management Sciences Solan (H.P.), and RNA VAX BIO, Solan, Himachal Pradesh, hereby agree to collaborate as knowledge partners and to support each other's endeavors based on the principles of reciprocity. Further Shoolini University and RNA VAX BIO agree upon sharing research infrastructure and other facilities with each other for better utilization of resources.

This Memorandum of Understanding (MoU) encourages industry-academia partnership e.g. exchange of industry experts and faculty, updation of curriculum, internship projects and placements for students, Management Development Programs, joint research and development projects, consultancy assignments etc.

The scope of this MoU is wide and expandable. Specific project engagements and terms will be mutually agreed upon on case-by case basis. This MoU shall take effect from the date of the signatures below and will remain in effect for five years. This MoU is subject to revision or modification by mutual agreement. It is also understood that either institution may terminate the MoU at any time, although such action will only take place after mutual consultation to avoid any possible inconvenience to the parties.

On behalf of Shoolini University, Solan, Himachal Pradesh, India

(Dr. Prem Kumar Khosla)
~~Vice~~ - Chancellor

Date: 7.7.2021

On behalf of RNA VAX BIO, Solan, Himachal Pradesh, India

(Dr Sewa Singh)
Senior Scientist

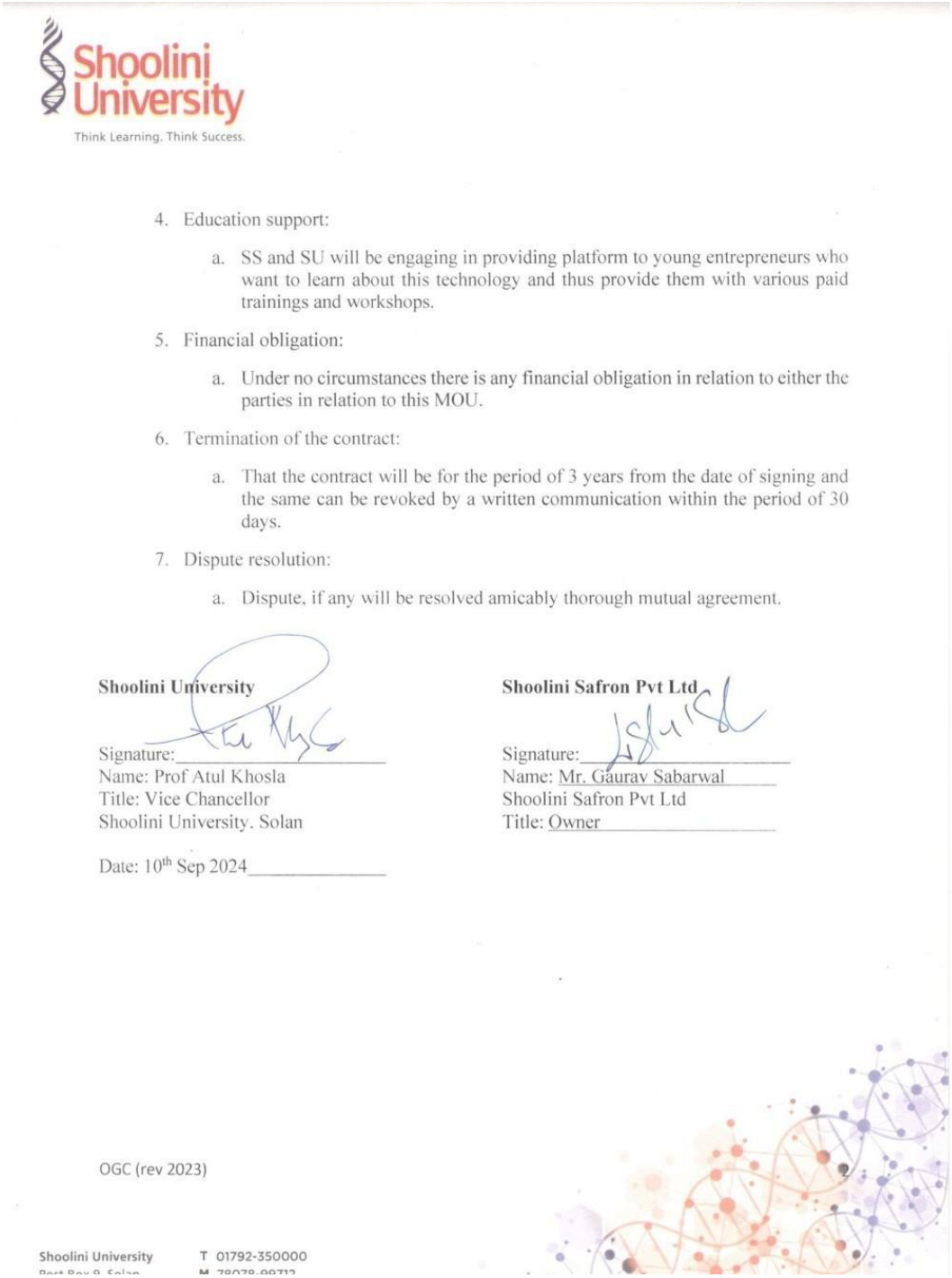
Date: 07/07/2021

MoU Shoolini University – RNAVXA Bio

Shoolini Safron

Sep 2024–Sep 2027

The agreement concerns saffron production and related tissue culture, entrepreneurship, internships and industrial visits. It provides a route for connecting biological research and student learning with an enterprise setting. The three year term began in September 2024 and remained active throughout 2025.



Shoolini University
Think Learning. Think Success.

4. Education support:
   a. SS and SU will be engaging in providing platform to young entrepreneurs who want to learn about this technology and thus provide them with various paid trainings and workshops.
5. Financial obligation:
   a. Under no circumstances there is any financial obligation in relation to either the parties in relation to this MOU.
6. Termination of the contract:
   a. That the contract will be for the period of 3 years from the date of signing and the same can be revoked by a written communication within the period of 30 days.
7. Dispute resolution:
   a. Dispute, if any will be resolved amicably thorough mutual agreement.

Shoolini University

Signature:_____
Name: Prof Atul Khosla
Title: Vice Chancellor
Shoolini University, Solan

Date: 10th Sep 2024_____

Shoolini Safron Pvt Ltd

Signature:_____
Name: Mr. Gaurav Sabarwal
Shoolini Safron Pvt Ltd
Title: Owner

OGC (rev 2023)

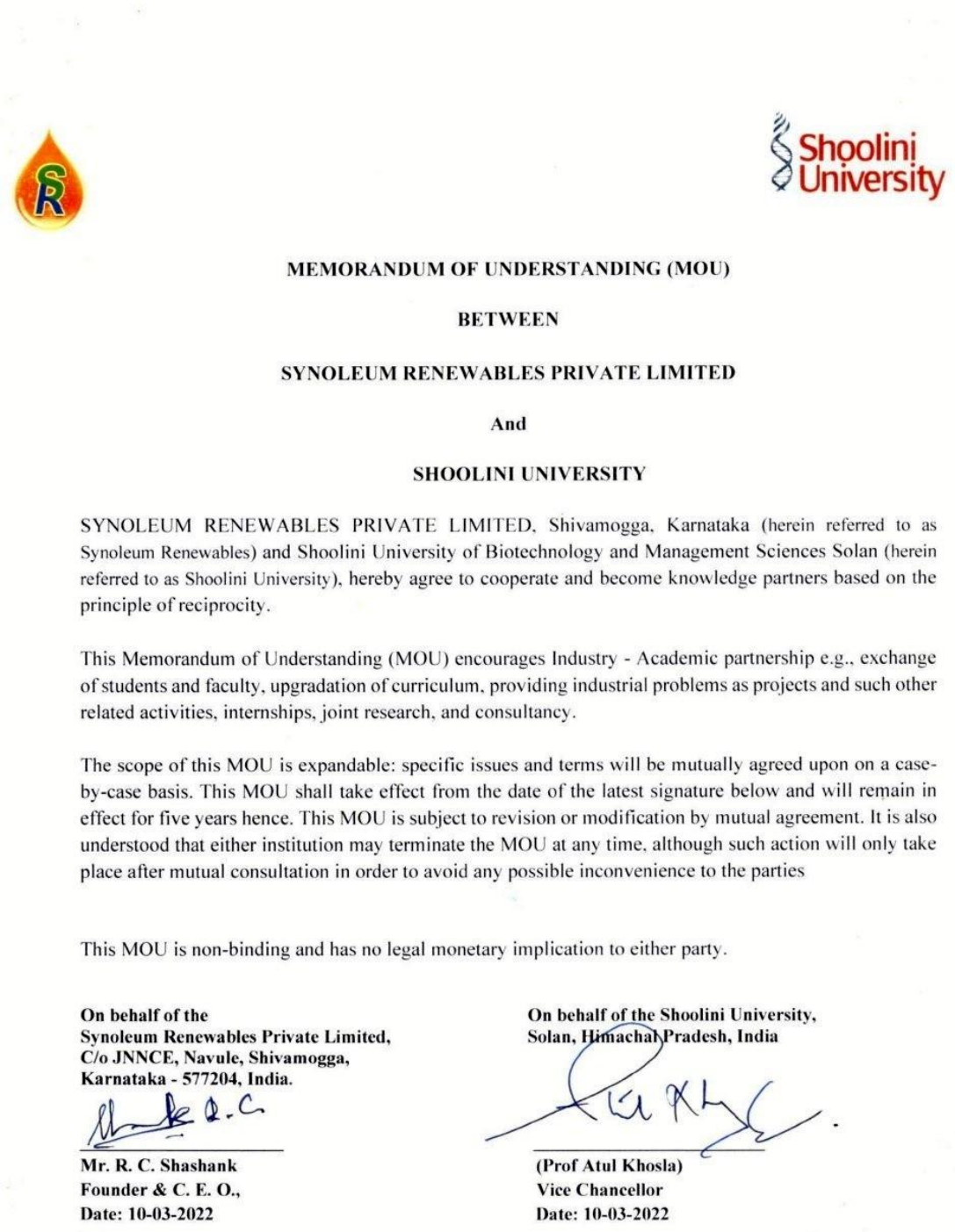
Shoolini University T 01792-350000

MoU Shoolini University – Shoolini Safron

Synoleum Renewables

Mar 2022–Mar 2027

The agreement connects the university with renewable energy expertise through a knowledge partnership covering research, curriculum development, consultancy and exchange. It provides an institutional route for engaging with the technology and skills associated with renewable energy. The five year term remained active throughout 2025.



MEMORANDUM OF UNDERSTANDING (MOU)

BETWEEN

SYNOLEUM RENEWABLES PRIVATE LIMITED

And

SHOOLINI UNIVERSITY

SYNOLEUM RENEWABLES PRIVATE LIMITED, Shivamogga, Karnataka (herein referred to as Synoleum Renewables) and Shoolini University of Biotechnology and Management Sciences Solan (herein referred to as Shoolini University), hereby agree to cooperate and become knowledge partners based on the principle of reciprocity.

This Memorandum of Understanding (MOU) encourages Industry - Academic partnership e.g., exchange of students and faculty, upgradation of curriculum, providing industrial problems as projects and such other related activities, internships, joint research, and consultancy.

The scope of this MOU is expandable: specific issues and terms will be mutually agreed upon on a case-by-case basis. This MOU shall take effect from the date of the latest signature below and will remain in effect for five years hence. This MOU is subject to revision or modification by mutual agreement. It is also understood that either institution may terminate the MOU at any time, although such action will only take place after mutual consultation in order to avoid any possible inconvenience to the parties

This MOU is non-binding and has no legal monetary implication to either party.

On behalf of the
Synoleum Renewables Private Limited,
C/o JNNCE, Navule, Shivamogga,
Karnataka - 577204, India.

Mr. R. C. Shashank
Founder & C. E. O.,
Date: 10-03-2022

On behalf of the Shoolini University,
Solan, Himachal Pradesh, India

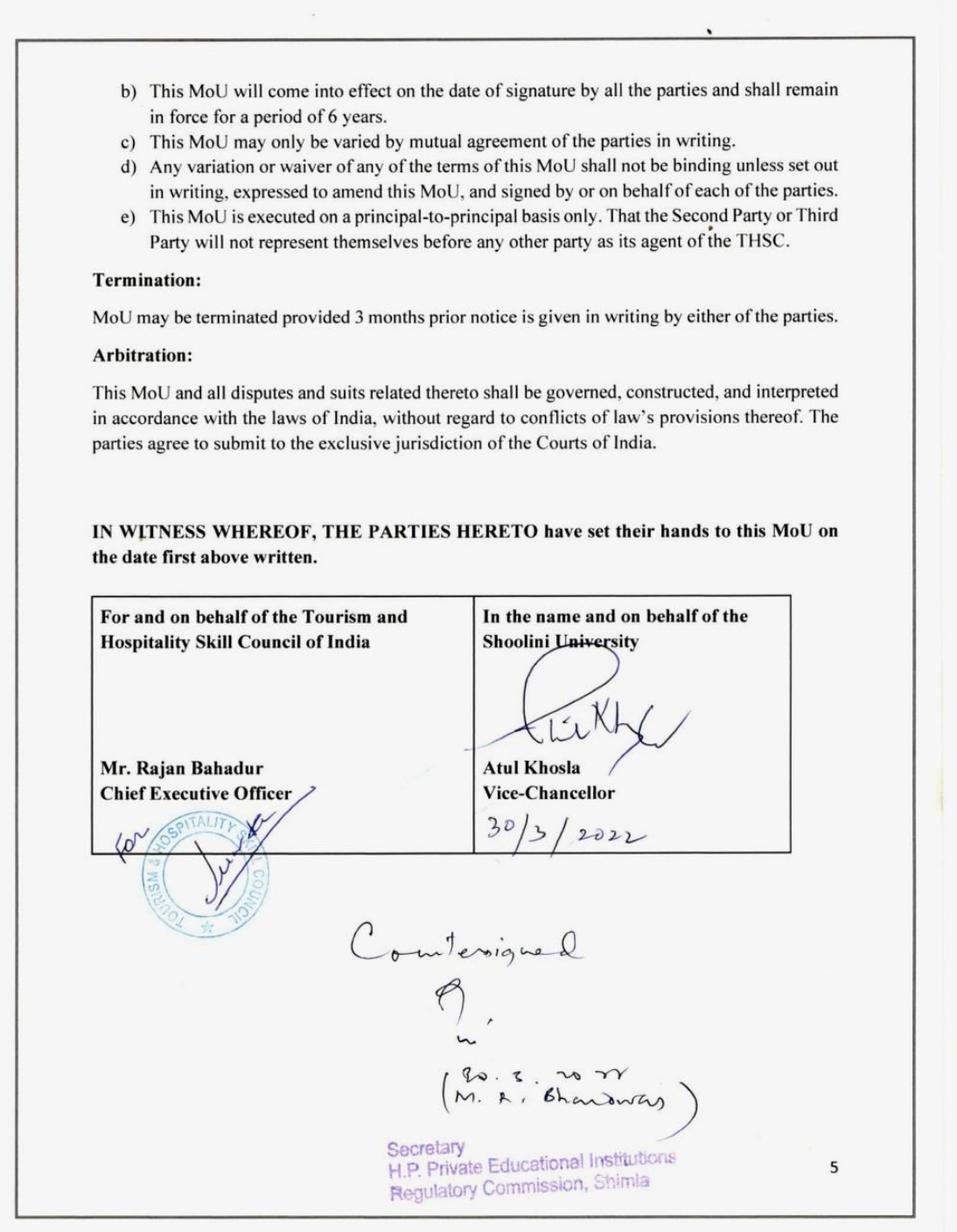
(Prof Atul Khosla)
Vice Chancellor
Date: 10-03-2022

MoU Shoolini University – Synoleum Renewables

Tourism and Hospitality Skill Council

Mar 2022–Mar 2028

The agreement provides a framework for skills, apprenticeships and industry training in tourism and hospitality. It links university education with sector requirements and professional learning. The signed agreement specifies a six year term ending on 30 March 2028, and therefore includes 2025. The signed section is reproduced as support for this established partnership.



b) This MoU will come into effect on the date of signature by all the parties and shall remain in force for a period of 6 years.
c) This MoU may only be varied by mutual agreement of the parties in writing.
d) Any variation or waiver of any of the terms of this MoU shall not be binding unless set out in writing, expressed to amend this MoU, and signed by or on behalf of each of the parties.
e) This MoU is executed on a principal-to-principal basis only. That the Second Party or Third Party will not represent themselves before any other party as its agent of the THSC.

Termination:

MoU may be terminated provided 3 months prior notice is given in writing by either of the parties.

Arbitration:

This MoU and all disputes and suits related thereto shall be governed, constructed, and interpreted in accordance with the laws of India, without regard to conflicts of law's provisions thereof. The parties agree to submit to the exclusive jurisdiction of the Courts of India.

IN WITNESS WHEREOF, THE PARTIES HERETO have set their hands to this MoU on the date first above written.

For and on behalf of the Tourism and Hospitality Skill Council of India	In the name and on behalf of the Shoolini University
Mr. Rajan Bahadur Chief Executive Officer	Atul Khosla Vice-Chancellor 30/3/2022

Countersigned

Secretary
H.P. Private Educational Institutions
Regulatory Commission, Shimla

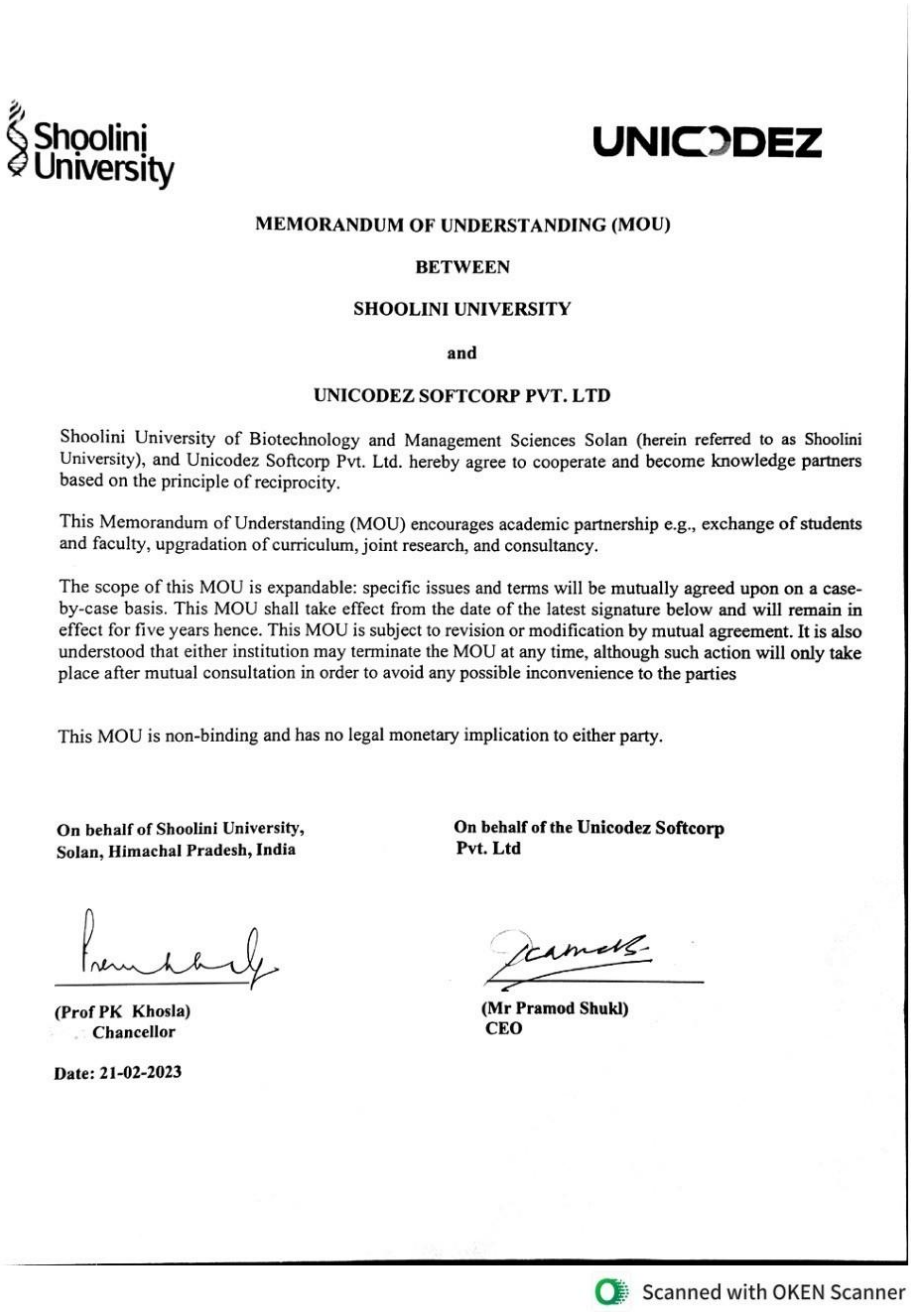
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MoU Shoolini University – Tourism and Hospitality Skill Council

Unicodz Softcorp

Feb 2023–Feb 2028

The knowledge partnership covers software and technology related engagement, including curriculum development, research, consultancy and exchange. It provides a framework for connecting the university with external technical practice. The five year term includes the whole of 2025. The signed agreement supports the established relationship without establishing unreported activity outcomes.



Shoolini University

UNICODEZ

MEMORANDUM OF UNDERSTANDING (MOU)

BETWEEN

SHOOLINI UNIVERSITY

and

UNICODEZ SOFTCORP PVT. LTD

Shoolini University of Biotechnology and Management Sciences Solan (herein referred to as Shoolini University), and Unicodez Softcorp Pvt. Ltd. hereby agree to cooperate and become knowledge partners based on the principle of reciprocity.

This Memorandum of Understanding (MOU) encourages academic partnership e.g., exchange of students and faculty, upgradation of curriculum, joint research, and consultancy.

The scope of this MOU is expandable: specific issues and terms will be mutually agreed upon on a case-by-case basis. This MOU shall take effect from the date of the latest signature below and will remain in effect for five years hence. This MOU is subject to revision or modification by mutual agreement. It is also understood that either institution may terminate the MOU at any time, although such action will only take place after mutual consultation in order to avoid any possible inconvenience to the parties

This MOU is non-binding and has no legal monetary implication to either party.

On behalf of Shoolini University, Solan, Himachal Pradesh, India

(Prof PK Khosla)
Chancellor

Date: 21-02-2023

On behalf of the Unicodez Softcorp Pvt. Ltd

(Mr Pramod Shukl)
CEO

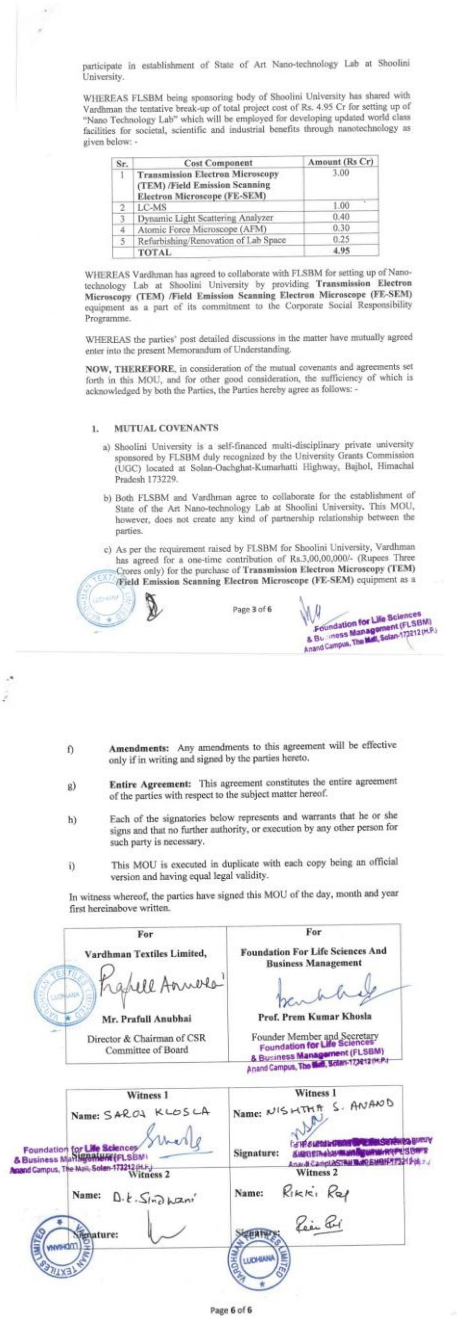
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MoU Shoolini University – Unicodz Softcorp

Vardhman Textiles

Oct 2021–Oct 2026

The agreement with the university's sponsoring body supports a nanotechnology laboratory named for Rattan Chand Oswal. It records a one time contribution of INR 3 crore towards TEM and FESEM equipment within a project cost of INR 4.95 crore. These are agreement values, not 2025 income or expenditure. The nanotechnology centre was also included in the ministerial campus tour reported in September 2025.



participate in establishment of State of Art Nano-technology Lab at Shoolini University.

WHEREAS FLSBM being sponsoring body of Shoolini University has shared with Vardhman the tentative break-up of total project cost of Rs. 4.95 Cr for setting up of "Nano Technology Lab" which will be employed for developing updated world class facilities for societal, scientific and industrial benefits through nanotechnology as given below: -

Sr.	Cost Component	Amount (Rs Cr)
1	**Transmission Electron Microscopy (TEM) /Field Emission Scanning Electron Microscope (FE-SEM)**	3.00
2	LC-MS	1.00
3	Dynamic Light Scattering Analyzer	0.40
4	Atomic Force Microscope (AFM)	0.30
5	Refurbishing/Renovation of Lab Space	0.25
	TOTAL	**4.95**

WHEREAS Vardhman has agreed to collaborate with FLSBM for setting up of Nano-technology Lab at Shoolini University by providing **Transmission Electron Microscopy (TEM) /Field Emission Scanning Electron Microscope (FE-SEM)** equipment as a part of its commitment to the Corporate Social Responsibility Programme.

WHEREAS the parties' post detailed discussions in the matter have mutually agreed enter into the present Memorandum of Understanding.

NOW, THEREFORE, in consideration of the mutual covenants and agreements set forth in this MOU, and for other good consideration, the sufficiency of which is acknowledged by both the Parties, the Parties hereby agree as follows: -

1. **MUTUAL COVENANTS**

a) Shoolini University is a self-financed multi-disciplinary private university sponsored by FLSBM duly recognized by the University Grants Commission (UGC) located at Solan-Oachghat-Kumarhatti Highway, Bajhol, Himachal Pradesh 173229.

b) Both FLSBM and Vardhman agree to collaborate for the establishment of State of the Art Nano-technology Lab at Shoolini University. This MOU, however, does not create any kind of partnership relationship between the parties.

c) As per the requirement raised by FLSBM for Shoolini University, Vardhman has agreed for a one-time contribution of Rs.3,00,00,000/- (Rupees Three Crores only) for the purchase of **Transmission Electron Microscopy (TEM) /Field Emission Scanning Electron Microscope (FE-SEM)** equipment as a

Page 3 of 6

Foundation for Life Sciences & Business Management (FLSBM) Anand Campus, The Mall, Solan-173212 (H.P.)

f) **Amendments:** Any amendments to this agreement will be effective only if in writing and signed by the parties hereto.

g) **Entire Agreement:** This agreement constitutes the entire agreement of the parties with respect to the subject matter hereof.

h) Each of the signatories below represents and warrants that he or she signs and that no further authority, or execution by any other person for such party is necessary.

i) This MOU is executed in duplicate with each copy being an official version and having equal legal validity.

In witness whereof, the parties have signed this MOU of the day, month and year first hereinabove written.

For	For
Vardhman Textiles Limited,	**Foundation For Life Sciences And Business Management**
Mr. Prafull Anubhai	**Prof. Prem Kumar Khosla**
Director & Chairman of CSR Committee of Board	Founder Member and Secretary

Foundation for Life Sciences & Business Management (FLSBM) Anand Campus, The Mall, Solan-173212 (H.P.)

Witness 1	Witness 1
Name: SAROJ KHOSLA	Name: NISHTHA S. ANAND
Signature:	Signature:
Witness 2	**Witness 2**
Name: D.K. Sindhwani	Name: Rikki Raj
Signature:	

Foundation for Life Sciences & Business Management (FLSBM) Anand Campus, The Mall, Solan-173212 (H.P.)

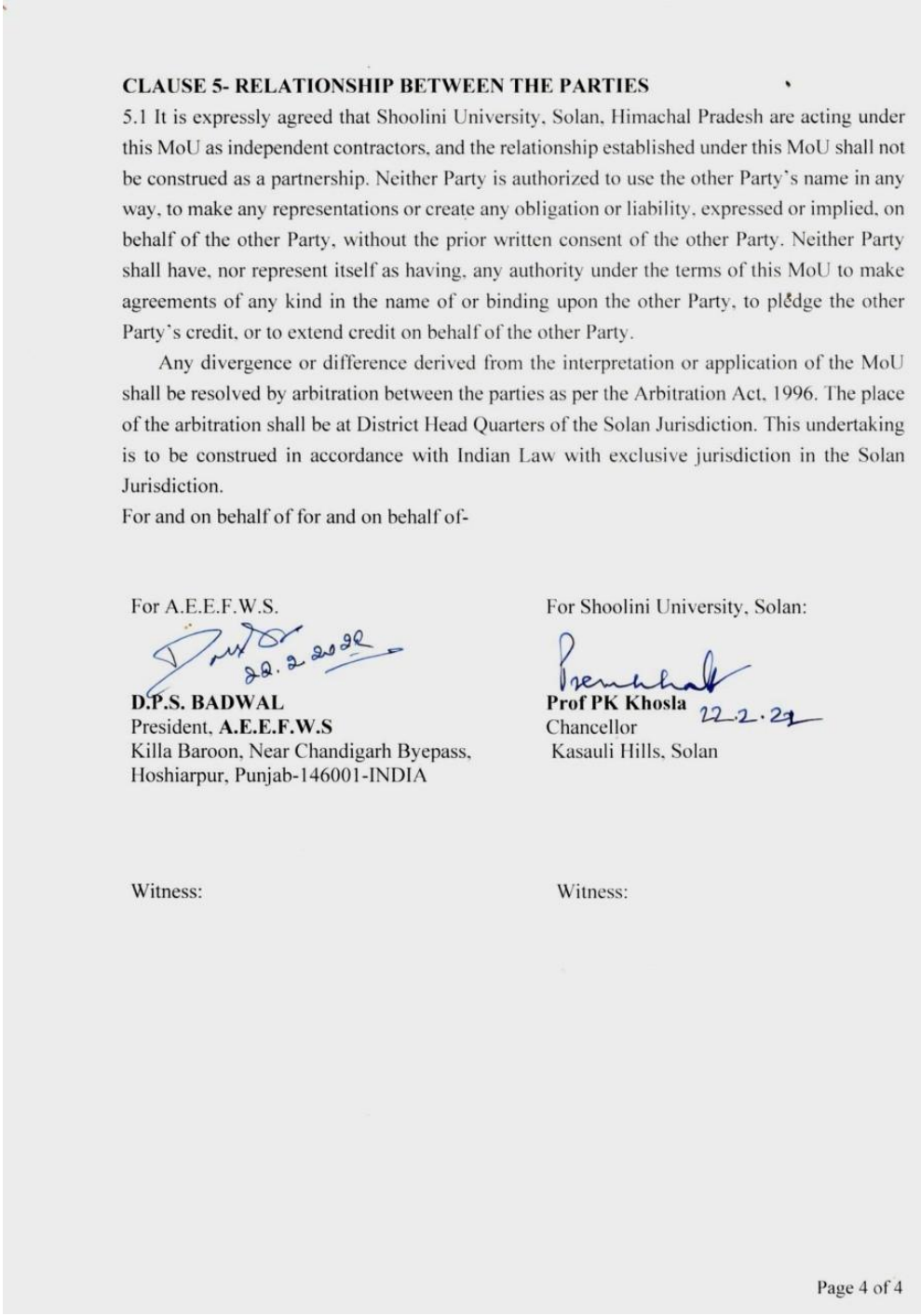
Page 6 of 6

MoU Shoolini University – Vardhman Textiles

Agro Environmental Education and Farmers Welfare Society

Feb 2022–22 Feb 2025

The agreement covers research, education and exchange associated with agriculture and the environment. It offers a framework for connecting academic expertise with farmers and external knowledge networks. The signed agreement specifies a three year term, which ended on 22 February 2025; its inclusion is limited to the portion of 2025 within that term.



CLAUSE 5- RELATIONSHIP BETWEEN THE PARTIES

5.1 It is expressly agreed that Shoolini University, Solan, Himachal Pradesh are acting under this MoU as independent contractors, and the relationship established under this MoU shall not be construed as a partnership. Neither Party is authorized to use the other Party's name in any way, to make any representations or create any obligation or liability, expressed or implied, on behalf of the other Party, without the prior written consent of the other Party. Neither Party shall have, nor represent itself as having, any authority under the terms of this MoU to make agreements of any kind in the name of or binding upon the other Party, to pledge the other Party's credit, or to extend credit on behalf of the other Party.

Any divergence or difference derived from the interpretation or application of the MoU shall be resolved by arbitration between the parties as per the Arbitration Act, 1996. The place of the arbitration shall be at District Head Quarters of the Solan Jurisdiction. This undertaking is to be construed in accordance with Indian Law with exclusive jurisdiction in the Solan Jurisdiction.

For and on behalf of for and on behalf of-

For A.E.E.F.W.S.

22.2.2022

D.P.S. BADWAL
President, **A.E.E.F.W.S**
Killa Baroon, Near Chandigarh Byepass,
Hoshiarpur, Punjab-146001-INDIA

Witness:

For Shoolini University, Solan:

Prof PK Khosla 22.2.22
Chancellor
Kasauli Hills, Solan

Witness:

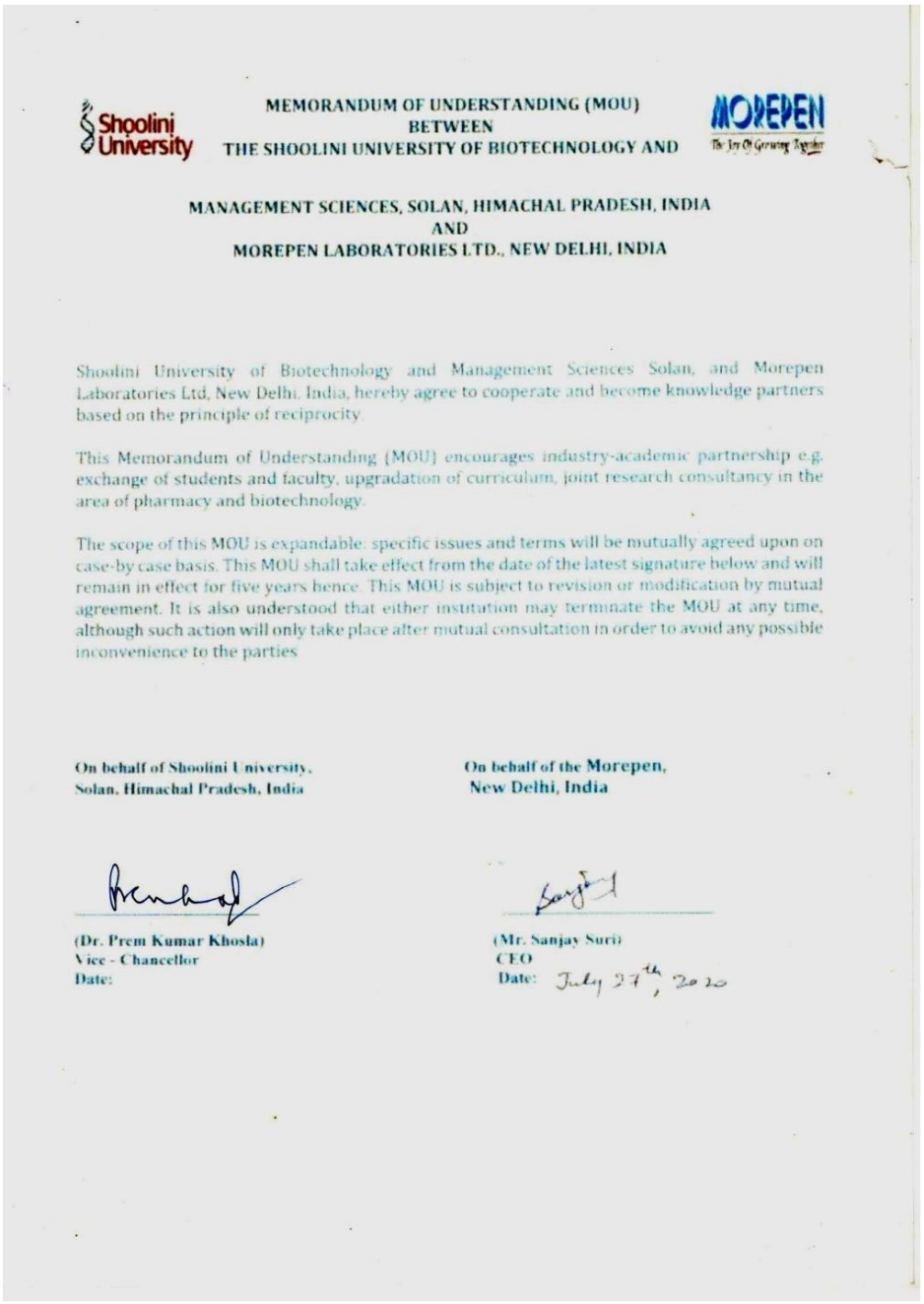
Page 4 of 4

MoU Shoolini University – Agro Environmental Education and Farmers Welfare Society

Morepen Laboratories

Jul 2020–Jul 2025

The agreement provides an industry knowledge framework for pharmacy related education, research, curriculum development and skills. It links university work with pharmaceutical practice. The five year term ended in July 2025.



MEMORANDUM OF UNDERSTANDING (MOU)
BETWEEN
THE SHOOLINI UNIVERSITY OF BIOTECHNOLOGY AND
MANAGEMENT SCIENCES, SOLAN, HIMACHAL PRADESH, INDIA
AND
MOREPEN LABORATORIES LTD., NEW DELHI, INDIA

Shoolini University of Biotechnology and Management Sciences Solan, and Morepen Laboratories Ltd, New Delhi, India, hereby agree to cooperate and become knowledge partners based on the principle of reciprocity.

This Memorandum of Understanding (MOU) encourages industry-academic partnership e.g. exchange of students and faculty, upgradation of curriculum, joint research consultancy in the area of pharmacy and biotechnology.

The scope of this MOU is expandable: specific issues and terms will be mutually agreed upon on case-by case basis. This MOU shall take effect from the date of the latest signature below and will remain in effect for five years hence. This MOU is subject to revision or modification by mutual agreement. It is also understood that either institution may terminate the MOU at any time, although such action will only take place after mutual consultation in order to avoid any possible inconvenience to the parties

On behalf of Shoolini University,
Solan, Himachal Pradesh, India

(Dr. Prem Kumar Khosla)
Vice - Chancellor
Date:

On behalf of the Morepen,
New Delhi, India

(Mr. Sanjay Suri)
CEO
Date: July 27th, 2020

MoU Shoolini University – Morepen Laboratories

Nectar Lifesciences

Jul 2020–Jul 2025

The knowledge partnership supports pharmaceutical research, academic exchange and industry related education. It provides a framework through which students and faculty can connect with an external life sciences enterprise. The five year term overlapped 2025 until July. The reproduced signed agreement supports that period of collaboration.

MEMORANDUM OF UNDERSTANDING (MOU)
BETWEEN

Shoolini University
AND
Nectar Lifesciences Ltd.

Shoolini University of Biotechnology and Management Sciences Solan (Shoolini), and Nectar Lifesciences Ltd (Nectar) hereby agree to cooperate and become knowledge partners based on the principle of reciprocity.

This Memorandum of Understanding (MOU) encourages industry-academic partnership e.g. student internships and apprenticeships, exchange of students and faculty, upgradation of curriculum, joint research and consultancy in the area of pharmacy, biotechnology and other related areas.

The scope of this MOU is expandable: specific issues and terms will be mutually agreed upon on case-by case basis. This MOU shall take effect from the date of the latest signature below and will remain in effect for five years hence. This MOU is non-binding and is subject to revision or modification by mutual agreement. It is also understood that either institution may terminate the MOU at any time, although such action may only take place after mutual consultation in order to avoid any possible inconvenience to the parties.

On behalf of Shoolini University

(Dr. Prem Kumar Khosla)
Vice - Chancellor
Date: 31.07.2020

On behalf of Nectar Lifesciences

(Dr. Dinesh Dua)
Executive Director
Date: 31.07.2020

MoU Shoolini University – Nectar Lifesciences

Pharmaceuticals Export Promotion Council of India

Jul 2020–Jul 2025

The Pharmexcil agreement connects university learning with pharmaceutical sector knowledge. It provides for curriculum, research and skills related interaction within the partnership framework. The five year term concluded in July 2025.

MEMORANDUM OF UNDERSTANDING (MOU)
BETWEEN

Shoolini University
AND
PHARMEXCIL

Shoolini University of Biotechnology and Management Sciences Solan (Shoolini), and PHARMEXCIL hereby agree to cooperate and become knowledge partners based on the principle of reciprocity.

This Memorandum of Understanding (MOU) encourages industry-academic partnership e.g. student internships and apprenticeships, exchange of students and faculty, upgradation of curriculum, joint research and consultancy in the area of pharmacy, biotechnology and other related areas.

The scope of this MOU is expandable: specific issues and terms will be mutually agreed upon on case-by case basis. This MOU shall take effect from the date of the latest signature below and will remain in effect for five years hence. This MOU is non-binding and is subject to revision or modification by mutual agreement. It is also understood that either institution may terminate the MOU at any time, although such action may only take place after mutual consultation in order to avoid any possible inconvenience to the parties.

On behalf of Shoolini University

(Dr. Prem Kumar Khosla)
Vice - Chancellor
Date: 31.7.2020

On behalf of PHARMEXCIL

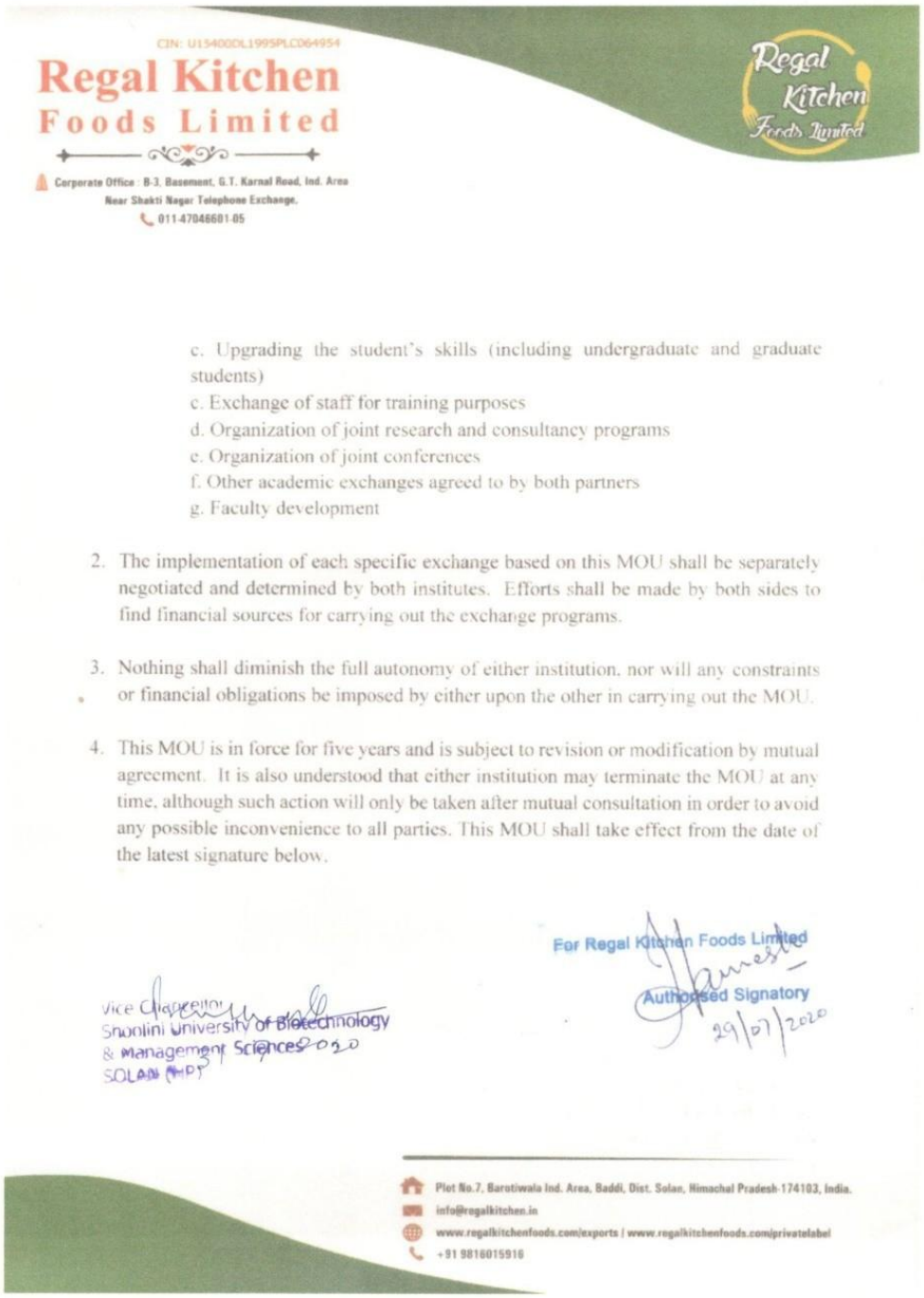
(Dr. Dinesh Dua)
Chairman
Date: 31.07.2020

MoU Shoolini University – Pharmaceuticals Export Promotion Council of India

Regal Kitchen Food Limited

Jul 2020–Jul 2025

The agreement supports engagement with food industry practice through training, research and internship related opportunities. It provides a framework for applying academic learning in industrial settings. The five year period ended in July 2025. The signed section documents the partnership active during the first part of the year.



CIN: U15400DL1995PLC064954

Regal Kitchen Foods Limited

Corporate Office : B-3, Basement, G.T. Karnal Road, Ind. Area
Near Shakti Nagar Telephone Exchange.
011-47046601-05

c. Upgrading the student's skills (including undergraduate and graduate students)
c. Exchange of staff for training purposes
d. Organization of joint research and consultancy programs
e. Organization of joint conferences
f. Other academic exchanges agreed to by both partners
g. Faculty development

2. The implementation of each specific exchange based on this MOU shall be separately negotiated and determined by both institutes. Efforts shall be made by both sides to find financial sources for carrying out the exchange programs.

3. Nothing shall diminish the full autonomy of either institution, nor will any constraints or financial obligations be imposed by either upon the other in carrying out the MOU.

4. This MOU is in force for five years and is subject to revision or modification by mutual agreement. It is also understood that either institution may terminate the MOU at any time, although such action will only be taken after mutual consultation in order to avoid any possible inconvenience to all parties. This MOU shall take effect from the date of the latest signature below.

For Regal Kitchen Foods Limited
Authorised Signatory
29/07/2020

Vice Chancellor
Shoolini University of Biotechnology
& Management Sciences 2020
SOLAN (HP)

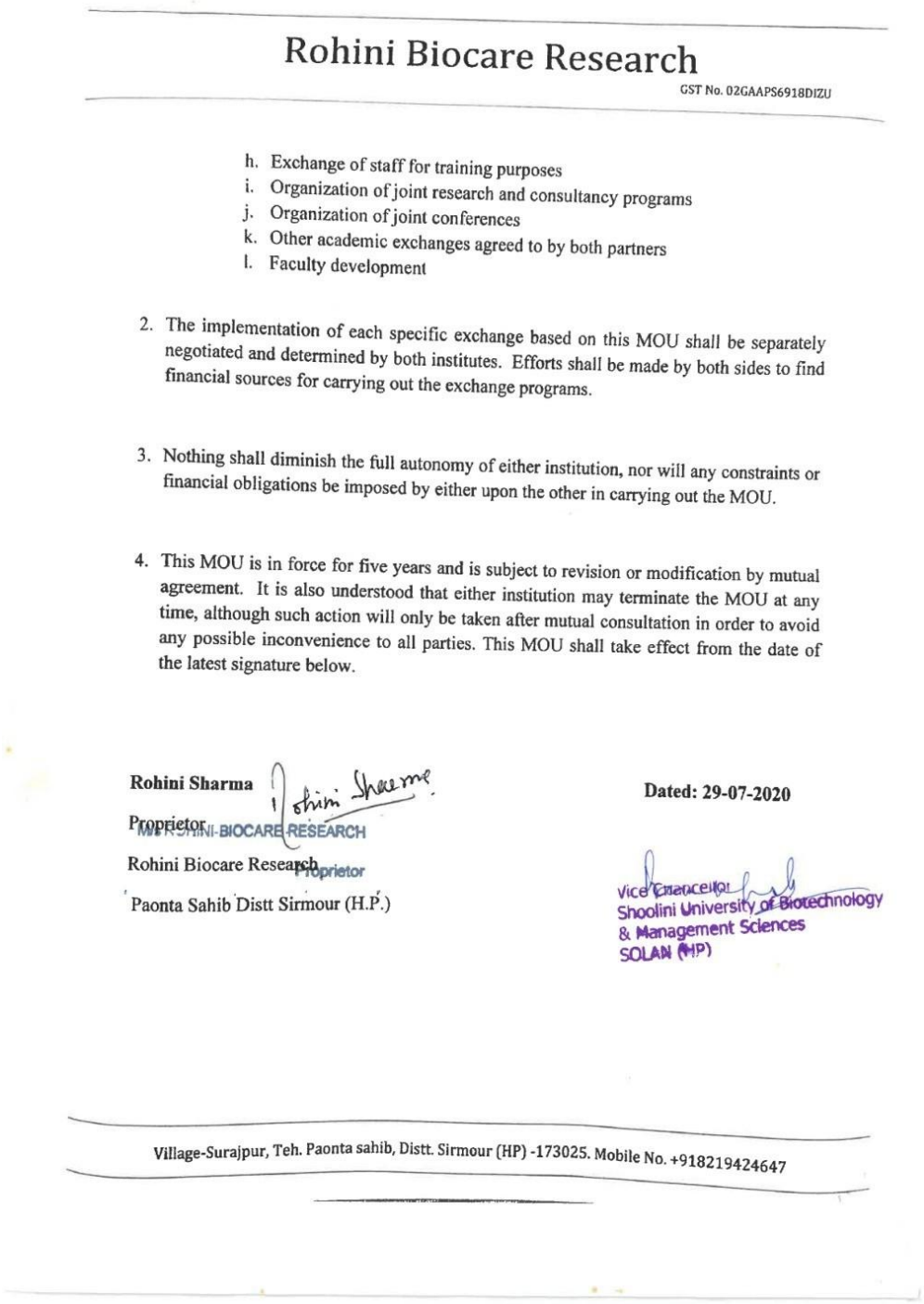
Plot No.7, Barotiwala Ind. Area, Baddi, Dist. Solan, Himachal Pradesh-174103, India.
info@regalkitchen.in
www.regalkitchenfoods.com/exports | www.regalkitchenfoods.com/privatelabel
+91 9816015916

MoU Shoolini University – Regal Kitchen Food Limited

Rohini Biocare Research

Jul 2020–Jul 2025

The agreement provides for research, training and consultancy in the life sciences and pharmaceutical context. It supports exchange between university expertise and an external research organisation. The agreement's five year term concluded in July 2025. It therefore appears in the group of collaborations active for part of the reporting year.



Rohini Biocare Research

GST No. 02GAAPS6918D1ZU

h. Exchange of staff for training purposes
i. Organization of joint research and consultancy programs
j. Organization of joint conferences
k. Other academic exchanges agreed to by both partners
l. Faculty development

2. The implementation of each specific exchange based on this MOU shall be separately negotiated and determined by both institutes. Efforts shall be made by both sides to find financial sources for carrying out the exchange programs.

3. Nothing shall diminish the full autonomy of either institution, nor will any constraints or financial obligations be imposed by either upon the other in carrying out the MOU.

4. This MOU is in force for five years and is subject to revision or modification by mutual agreement. It is also understood that either institution may terminate the MOU at any time, although such action will only be taken after mutual consultation in order to avoid any possible inconvenience to all parties. This MOU shall take effect from the date of the latest signature below.

Rohini Sharma
Proprietor
Rohini Biocare Research
Paonta Sahib Distt Sirmour (H.P.)

Dated: 29-07-2020

Vice Chancellor
Shoolini University of Biotechnology
& Management Sciences
SOLAN (HP)

Village-Surajpur, Teh. Paonta sahib, Distt. Sirmour (HP) -173025. Mobile No. +918219424647

MoU Shoolini University – Rohini Biocare Research

Symphonytech Biologics

Jul 2020–Jul 2025

The agreement supports a knowledge partnership in biologics through research, curriculum development, academic exchange and internship related engagement. Its relevance to SDG 9 lies in the connection between life sciences education and industrial research practice. The five year term concluded in July 2025 and is not assumed to have been renewed.

2. The implementation of each specific exchange based on this MOU shall be separately negotiated and determined by both institutes. Efforts shall be made by both sides to find financial sources for carrying out the exchange programs.

3. Nothing shall diminish the full autonomy of either institution, nor will any constraints or financial obligations be imposed by either upon the other in carrying out the MOU.

4. This MOU is in force for five years and is subject to revision or modification by mutual agreement. It is also understood that either institution may terminate the MOU at any time, although such action will only be taken after mutual consultation in order to avoid any possible inconvenience to all parties. This MOU shall take effect from the date of the latest signature below.

Atul Khosla,
Pro Vice Chancellor,
Shoolini University
Solan (HP)
India

Narendra Chirmule, Ph.D
CEO,
SymphonyTech Biologics Pvt. Ltd. 606
Kapil Zenith IT Park,
Bavdhan, Pune, 411021, India.

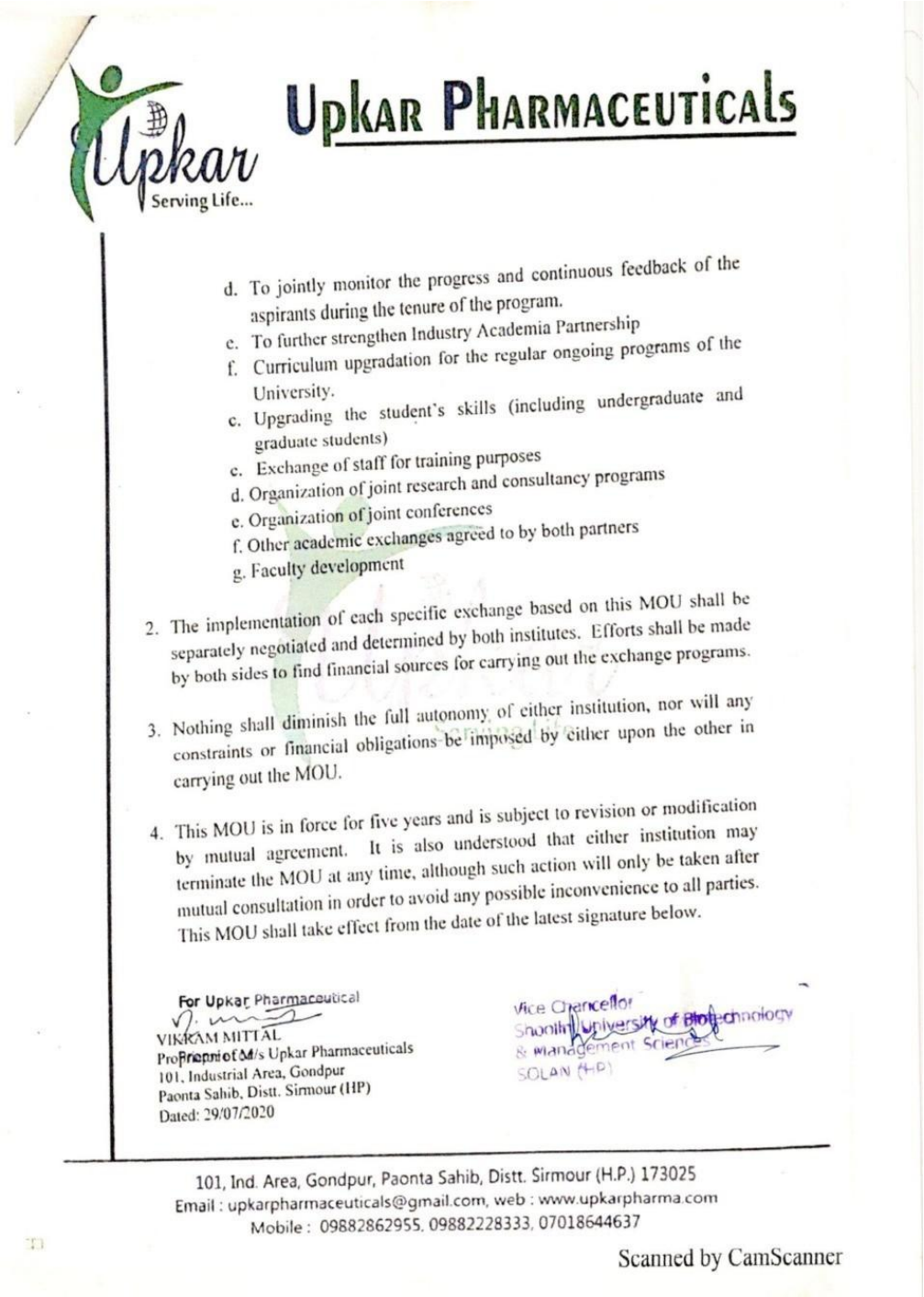
Date: July 27, 2020

MoU Shoolini University – Symphonytech Biologics

Upkar Pharmaceuticals

Jul 2020–Jul 2025

The agreement includes industrial training, internships, research and consultancy opportunities. It connects pharmaceutical learning with an industry setting and offers a framework for practical engagement. The five year term ended in July 2025. The signed document is included within the group active during part of the year.



Upkar
Serving Life...

UPKAR PHARMACEUTICALS

d. To jointly monitor the progress and continuous feedback of the aspirants during the tenure of the program.
e. To further strengthen Industry Academia Partnership
f. Curriculum upgradation for the regular ongoing programs of the University.
c. Upgrading the student's skills (including undergraduate and graduate students)
c. Exchange of staff for training purposes
d. Organization of joint research and consultancy programs
e. Organization of joint conferences
f. Other academic exchanges agreed to by both partners
g. Faculty development

2. The implementation of each specific exchange based on this MOU shall be separately negotiated and determined by both institutes. Efforts shall be made by both sides to find financial sources for carrying out the exchange programs.

3. Nothing shall diminish the full autonomy of either institution, nor will any constraints or financial obligations be imposed by either upon the other in carrying out the MOU.

4. This MOU is in force for five years and is subject to revision or modification by mutual agreement. It is also understood that either institution may terminate the MOU at any time, although such action will only be taken after mutual consultation in order to avoid any possible inconvenience to all parties. This MOU shall take effect from the date of the latest signature below.

For Upkar Pharmaceutical
VIKRAM MITTAL
Proprietor M/s Upkar Pharmaceuticals
101, Industrial Area, Gondpur
Paonta Sahib, Distt. Sirmour (HP)
Dated: 29/07/2020

Vice Chancellor
Shoolini University of Biotechnology
& Management Sciences
SOLAN (H.P.)

101, Ind. Area, Gondpur, Paonta Sahib, Distt. Sirmour (H.P.) 173025
Email : upkarpharmaceuticals@gmail.com, web : www.upkarpharma.com
Mobile : 09882862955, 09882228333, 07018644637

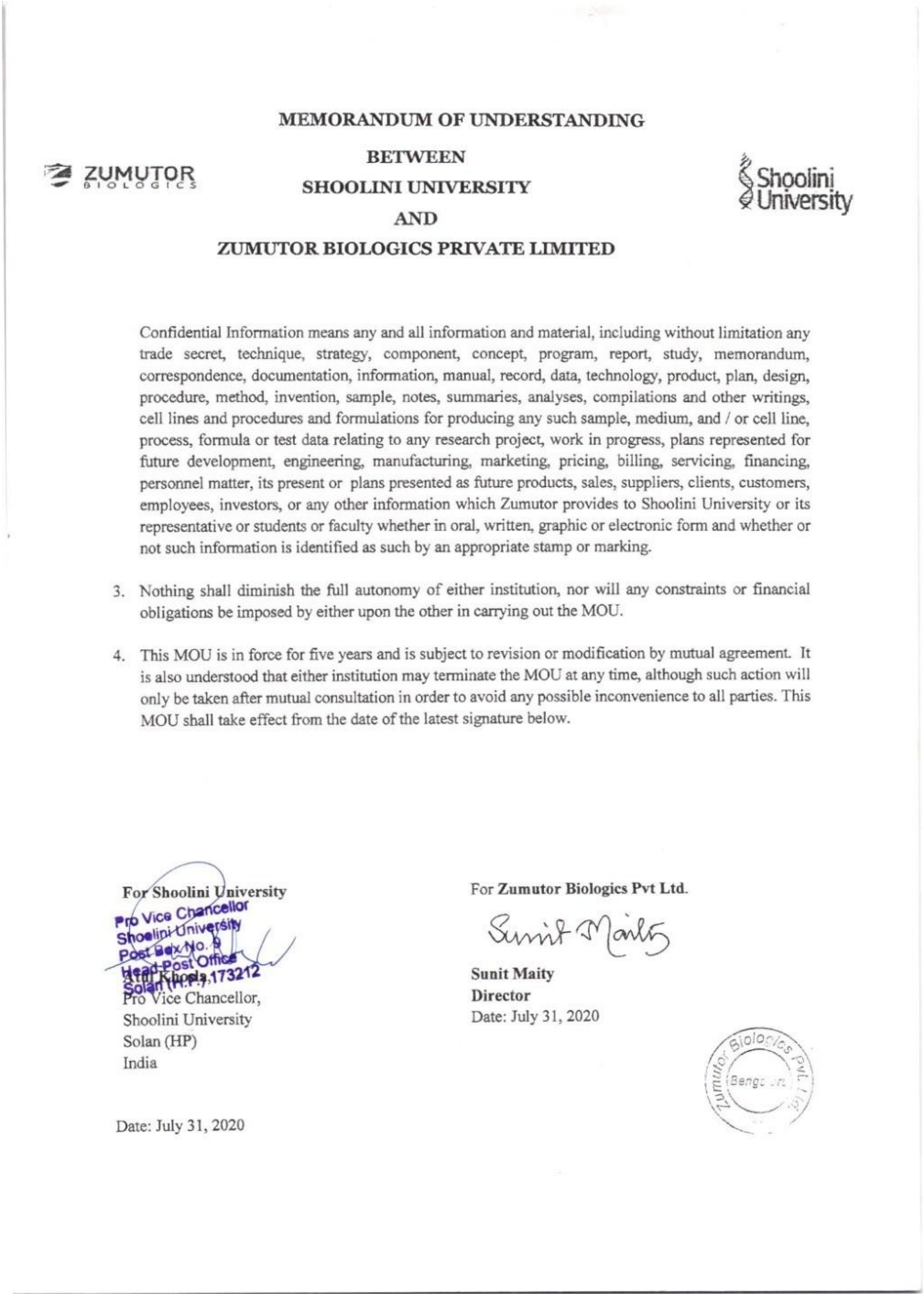
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MoU Shoolini University – Upkar Pharmaceuticals

Zumutor Biologics Private Limited

Jul 2020–Jul 2025

The knowledge partnership supports engagement in biologics and pharmaceutical research, training and academic industry interaction. It creates a framework for connecting university expertise with external research practice. The five year term concluded in July 2025. Its inclusion is confined to the part of the year covered by the agreement.



MEMORANDUM OF UNDERSTANDING

BETWEEN

SHOOLINI UNIVERSITY

AND

ZUMUTOR BIOLOGICS PRIVATE LIMITED

Confidential Information means any and all information and material, including without limitation any trade secret, technique, strategy, component, concept, program, report, study, memorandum, correspondence, documentation, information, manual, record, data, technology, product, plan, design, procedure, method, invention, sample, notes, summaries, analyses, compilations and other writings, cell lines and procedures and formulations for producing any such sample, medium, and / or cell line, process, formula or test data relating to any research project, work in progress, plans represented for future development, engineering, manufacturing, marketing, pricing, billing, servicing, financing, personnel matter, its present or plans presented as future products, sales, suppliers, clients, customers, employees, investors, or any other information which Zumutor provides to Shoolini University or its representative or students or faculty whether in oral, written, graphic or electronic form and whether or not such information is identified as such by an appropriate stamp or marking.

3. Nothing shall diminish the full autonomy of either institution, nor will any constraints or financial obligations be imposed by either upon the other in carrying out the MOU.

4. This MOU is in force for five years and is subject to revision or modification by mutual agreement. It is also understood that either institution may terminate the MOU at any time, although such action will only be taken after mutual consultation in order to avoid any possible inconvenience to all parties. This MOU shall take effect from the date of the latest signature below.

For Shoolini University

Pro Vice Chancellor
Shoolini University
Post Box No. 9
Head Post Office
Solan (H.P.) 173212

Pro Vice Chancellor,
Shoolini University
Solan (HP)
India

Date: July 31, 2020

For **Zumutor Biologics Pvt Ltd.**

Sunit Maity
Director
Date: July 31, 2020

MoU Shoolini University – Zumutor Biologics Private Limited

Minchy's

Jul 2020–Jul 2025

The food industry partnership provides for training, research and placement related engagement. It connects academic knowledge with food processing practice and offers a framework for student exposure to industrial settings. The agreement's five year term concluded in July 2025, so it is included only among partnerships active for part of the reporting year.

2. The implementation of each specific exchange based on this MOU shall be separately negotiated and determined by both institutes. Efforts shall be made by both sides to find financial sources for carrying out the exchange programs.

3. Nothing shall diminish the full autonomy of either institution, nor will any constraints or financial obligations be imposed by either upon the other in carrying out the MOU.

4. This MOU is in force for five years and is subject to revision or modification by mutual agreement. It is also understood that either institution may terminate the MOU at any time, although such action will only be taken after mutual consultation in order to avoid any possible inconvenience to all parties. This MOU shall take effect from the date of the latest signature below.

The agreement is made between two counterparts. Each contracting party shall get one signed counterpart.

SIGNED BY:

Vice Chancellor
Shoolini University of Biotechnology & Management Sciences

Vice Chancellor
Shoolini University

Date: 29/07/2020

Minchy's Food Products

Managing Director
Minchys

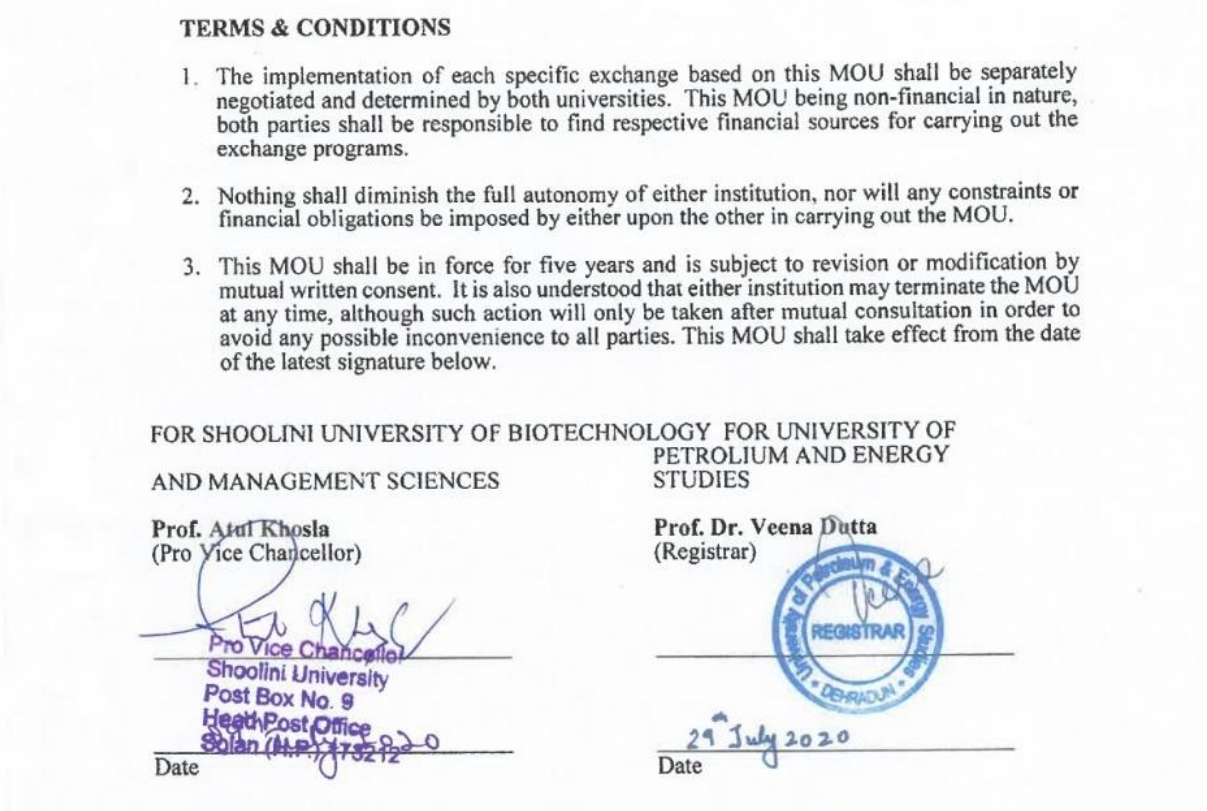
Date: 28/07/2020

MoU Shoolini University – Minchy's

University of Petroleum and Energy Studies

Jul 2020–Jul 2025

The agreement supports academic and research collaboration, including staff and student interaction. The five year term concluded in July 2025. It is retained for the portion of the reporting year within its term and for its relevance to research and technical education.



TERMS & CONDITIONS

1. The implementation of each specific exchange based on this MOU shall be separately negotiated and determined by both universities. This MOU being non-financial in nature, both parties shall be responsible to find respective financial sources for carrying out the exchange programs.
2. Nothing shall diminish the full autonomy of either institution, nor will any constraints or financial obligations be imposed by either upon the other in carrying out the MOU.
3. This MOU shall be in force for five years and is subject to revision or modification by mutual written consent. It is also understood that either institution may terminate the MOU at any time, although such action will only be taken after mutual consultation in order to avoid any possible inconvenience to all parties. This MOU shall take effect from the date of the latest signature below.

FOR SHOOLINI UNIVERSITY OF BIOTECHNOLOGY AND MANAGEMENT SCIENCES

Prof. Atul Khosla
(Pro Vice Chancellor)

Pro Vice Chancellor
Shoolini University
Post Box No. 9
Head Post Office
Solan (H.P.) 173212

Date

FOR UNIVERSITY OF PETROLIUM AND ENERGY STUDIES

Prof. Dr. Veena Dutta
(Registrar)

REGISTRAR

29th July 2020

Date

MoU Shoolini University – University of Petroleum and Energy Studies

Institutional perspective

Shoolini University's engagement with SDG 9 in 2025 connected invention, technical infrastructure and partnerships with industry. Patent activity reflects work across materials, biotechnology, energy, digital systems and applied science. Laboratories and specialised centres provide the setting for this work, while the Food Incubation Lab added capacity for food processing and product development.

The year's conferences and training programmes helped students and faculty apply emerging technologies and exchange ideas with external specialists. Activities in artificial intelligence, human computer interaction and pharmaceutical sciences linked research methods with practical problems. Patent education and the Ideation Conclave reinforced the importance of developing, testing and protecting original ideas.

Partnerships with academic institutions, businesses and sector organisations broaden the expertise available to the university. Their value lies in opportunities for sustained research, practical training, knowledge exchange and enterprise development. The university's established incubation initiatives support the connection between scientific enquiry and potential applications.

Community engagement added an inclusive dimension to this work. Rural women's enterprise training, agricultural extension and digital literacy programmes brought technical knowledge into everyday production and service use. Project Pragati demonstrated how mentoring and practical assistance can accompany the development of a small business beyond an initial training session.

The university will continue to strengthen the relationship between research quality, accessible infrastructure and responsible application. This approach places scientific capability alongside the needs of learners, industry and communities, supporting resilient infrastructure, inclusive industrial development and innovation.