

Sharun Khan
Marie Skłodowska-Curie Actions (MSCA) Postdoctoral Fellow
Department of Health Science and Technology
The Faculty of Medicine
Regenerative Medicine
Type of address: Visiting address.
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Research profile

Sharun Khan, MVSc, PhD, is a veterinarian and Marie Skłodowska-Curie Actions (MSCA) Postdoctoral Fellow in the Regenerative Medicine Group, Department of Health Science and Technology, Aalborg University, Denmark. He has a bachelor's degree in veterinary science from the Kerala Veterinary and Animal Sciences University, followed by MVSc and PhD degrees in Veterinary Surgery and Radiology from the ICAR–Indian Veterinary Research Institute, India. His research work focused on **bone and skin regeneration** using **stromal vascular fraction**, **mesenchymal stem cells**, and **platelet-rich plasma**. He later completed postdoctoral training at The Stupp Laboratory, Center for Regenerative Nanomedicine, Northwestern University, Chicago, USA, where he focused on the development of **supramolecular biomaterials** and their translational applications in **cartilage regeneration**. He is particularly interested in designing ***in vivo* models** that closely replicate clinical scenarios of tissue damage. His current research focuses on **tissue engineering and regenerative medicine (TERM)**, with particular emphasis on developing cell-based and cell-free therapeutic strategies to promote the regeneration of skin, bone, nerve, and cartilage. By integrating principles of materials science, tissue engineering, and regenerative medicine, Sharun's work seeks to bridge the gap between experimental findings and clinical applications, advancing the next generation of regenerative therapies.

Qualifications

Veterinary Surgery and Radiology, Ph.D., Indian Veterinary Research Institute
2020 → 2023

Veterinary Surgery and Radiology, MVSc, Indian Veterinary Research Institute
2018 → 2020

Veterinary Science and Animal Husbandry, BVSc & AH, Kerala Veterinary and Animal Sciences University
2012 → 2018

Employment

Post.Doc

Postdoc
Department of Health Science and Technology
The Faculty of Medicine
Gistrup, Denmark
1 Nov 2025 → 31 Dec 4712

Post.Doc

Postdoc
The Faculty of Medicine
Gistrup, Denmark
1 Nov 2025 → 31 Dec 4712

Post.Doc

Postdoc
Regenerative Medicine
The Faculty of Medicine
Gistrup, Denmark
1 Nov 2025 → 31 Dec 4712

Postdoctoral Fellow

Center for Regenerative Nanomedicine, Northwestern University
Chicago, United States
7 Oct 2024 → 6 Oct 2025

Honorary Scholar

Yuan Ze University
Taiwan, Province of China
1 Jan 2024 → 31 Dec 2026

Research outputs

Ex Vivo Models: Transforming Standards in Preclinical Bone Regeneration Research

Sharun, K., Shajahan, A. B., El Khassawna, T. & Pennisi, P., 20 Jan 2026, In: *Discovery medicine*. 38, 204, p. 305-309 5 p.

Invisible variables: how erythrocytes and leukocytes define platelet-rich plasma efficacy in veterinary medicine
Sharun, K. & Banu, S. A., Nov 2025, In: *Australian veterinary journal*. 103, 11, p. 763-765 3 p.

Comparative assessment of smartphone-based digital planimetry for wound area measurement
Sharun, K., Banu, S. A., Mamachan, M., Vinodhkumar, O. R., Manjusha, K. M., Kumar, R., Pawde, A. M., Dhama, K. & Pal, A., Aug 2025, In: *Narra J*. 5, 2, p. e1987

Bridging the Translational Gap: Prioritizing the Spontaneous Canine Osteoarthritis Model for Preclinical Studies
Sharun, K., Banu, S. A. & Melotti, L., Jun 2025, In: *Discovery medicine*. 37, 197, p. 1139-1142 4 p.

Characterization and classification of platelet-rich plasma in biomaterial research
Sharun, K. & Banu, S. A., Apr 2025, In: *Acta Biomaterialia*. 196, p. 182 1 p.

Minimum reporting guidelines for platelet-rich plasma in veterinary regenerative medicine
Sharun, K. & Banu, S. A., Apr 2025, In: *Veterinary Research Communications*. 49, 2, 111.

Editorial: Advances in veterinary tissue engineering: unlocking potential with cell-free and cell-based methods
Sharun, K., El-Husseiny, H. M. & Muthu, S., 2025, In: *Frontiers in Veterinary Science*. 12, p. 1591272 1591272.

Mesenchymal stem cell therapy in veterinary ophthalmology: clinical evidence and prospects
Sharun, K., Banu, S. A., Alifsha, B., Abualigah, L., Pawde, A. M., Dhama, K. & Pal, A., Dec 2024, In: *Veterinary Research Communications*. 48, 6, p. 3517-3531 15 p.

Pluronic F127 composite hydrogel for the repair of contraction suppressed full-thickness skin wounds in a rabbit model
Sharun, K., Banu, S. A., Mamachan, M., Subash, A., Karikalan, M., Vinodhkumar, O. R., Manjusha, K. M., Kumar, R., Telang, A. G., Dhama, K., Pawde, A. M., Maiti, S. K. & Amarpal, Dec 2024, In: *Current Research in Translational Medicine*. 72, 4, 103458.

Development and characterization of contraction-suppressed full-thickness skin wound model in rabbits
Sharun, K., Banu, S. A., Mamachan, M., Subash, A., Karikalan, M., Kumar, R., Vinodhkumar, O. R., Dhama, K., Pawde, A. M. & Amarpal, Oct 2024, In: *Tissue and Cell*. 90, 102482.

Impact of Platelet-Rich Plasma and Adipose-Derived Stromal Vascular Fraction on Atrophic Non-union Fracture Healing in a Rabbit Model
Sharun, K., Pawde, A. M., Banu, S. A., Manjusha, K. M., Kalaiselvan, E., Kumar, R., Kinjavdekar, P., Singh, K. P., Verma, M. R., Chandra, V., Mukherjee, R. & Amarpal, Jun 2024, In: *Regenerative Engineering and Translational Medicine*. 10, 2, p. 253-265 13 p.

Minimal criteria for reporting mesenchymal stem cells in veterinary regenerative medicine

Sharun, K., Banu, S. A., Pawde, A. M., Dhama, K. & Pal, A., Jun 2024, In: Veterinary Research Communications. 48, 3, p. 1973-1976 4 p.

Thermoresponsive and Injectable Pluronic F127 Hydrogel for Loading Adipose-Derived Mesenchymal Stem Cells

Sharun, K., Banu, S. A., Mamachan, M., Emmanuel, R. S., Kumar, R., Vinodhkumar, O. R., Dhama, K., Pawde, A. M., Maiti, S. K. & Pal, A., Feb 2024, In: Discovery medicine. 36, 181, p. 294-307 14 p.

Exploring the applications of platelet-rich plasma in tissue engineering and regenerative medicine: evidence from goat and sheep experimental research

Sharun, K., Banu, S. A., El-Husseiny, H. M., Abualigah, L., Pawde, A. M., Dhama, K. & Amarpal, 2024, In: Connective Tissue Research. 65, 5, p. 364-382 19 p.

Comparative Evaluation of Masson's Trichrome and Picrosirius Red Staining for Digital Collagen Quantification Using ImageJ in Rabbit Wound Healing Research

Sharun, K., Banu, S. A., Mamachan, M., Subash, A., Mathesh, K., Kumar, R., Vinodhkumar, O. R., Dhama, K., Abualigah, L., Pawde, A. M. & Amarpal, 30 Nov 2023, In: Journal of Experimental Biology and Agricultural Sciences.

ChatGPT and artificial hallucinations in stem cell research: assessing the accuracy of generated references - a preliminary study

Sharun, K., Banu, S. A., Pawde, A. M., Kumar, R., Akash, S., Dhama, K. & Pal, A., Oct 2023, In: Annals of Medicine and Surgery. 85, 10, p. 5275-5278 4 p.

Advances and prospects of platelet-rich plasma therapy in veterinary ophthalmology

Sharun, K., Chandran, D., Manjusha, K. M., Mankuzhy, P. D., Kumar, R., Pawde, A. M., Dhama, K., El-Husseiny, H. M. & Amarpal, Sept 2023, In: Veterinary Research Communications. 47, 3, p. 1031-1045 15 p.

Pluronic F-127 Hydrogel for Delivering Antimicrobial Agents: A Bibliometric Analysis using Scopus Database

Sharun, K., Banu, S. A., Nair, S. S., Kumar, R., Pawde, A. M., Dhama, K. & Pal, A., Sept 2023, In: Journal of Pure and Applied Microbiology. 17, 3, p. 1516-1531 16 p.

Pluronic F-127 hydrogel for stem cell research: a bibliometric analysis using Scopus database

Sharun, K., Banu, S. A., Abualigah, L., Kumar, R., Pawde, A. M., Dhama, K. & Amarpal, 30 Jun 2023, In: Journal of Experimental Biology and Agricultural Sciences. 11, 3, p. 612-624 13 p.

In vitro Antimicrobial Properties of Pluronic F-127 Injectable Thermoresponsive Hydrogel

Sharun, K., Nair, S. S., Amitha Banu, S., Manjusha, K. M., Jayakumar, V., Saini, S., Pawde, A. M., Kumar, R., Dhama, K. & Pal, A., Jun 2023, In: Journal of Pure and Applied Microbiology. 17, 2, p. 1231-1237 7 p.

Clinical Applications of Substance P (Neurokinin-1 Receptor) Antagonist in Canine Medicine

Sharun, K., Jambagi, K., Arya, M., Aakanksha, Chaithra, S. N., Patel, P. K., Dixit, S. K. & Dhama, K., Nov 2022, In: Archives of Razi Institute. 76, 5, p. 1175-1182 8 p.

Mapping global trends in adipose-derived mesenchymal stem cell research: A bibliometric analysis using scopus database

Sharun, K., Musa, T. H., Musa, H. H., Kumar, R., Pawde, A. M., Chandra, V., Tuli, H. S., Dhama, K., Amarpal & Sharma, G. T., May 2022, In: Annals of Medicine and Surgery. 77, 103542.

Cell-free therapy for canine osteoarthritis: current evidence and prospects

Sharun, K., Muthu, S., Mankuzhy, P. D., Pawde, A. M., Chandra, V., Lorenzo, J. M., Dhama, K., Amarpal & Sharma, G. T., 2022, In: Veterinary Quarterly. 42, 1, p. 224-230 7 p.

Cell-free Therapy for Inflammatory Diseases: Opportunities and Challenges

Sharun, K., Dhama, K., Jambagi, K., Pawde, A. M. & Amarpal, 2022, In: Recent advances in inflammation & allergy drug discovery. 15, 1, p. 5-8 4 p.

Clinical applications of adipose-derived stromal vascular fraction in veterinary practice

Sharun, K., Jambagi, K., Kumar, R., Gugjoo, M. B., Pawde, A. M., Tuli, H. S., Dhama, K. & Amarpal, 2022, In: *Veterinary Quarterly*. 42, 1, p. 151-166 16 p.

Prevalence of obstructive urolithiasis in domestic animals: An interplay between seasonal predisposition and dietary imbalance

Sharun, K., Manjusha, K. M., Pawde, A. M., Malik, Y. P., Kinjavdekar, P., Maiti, S. K. & Amarpal, 1 Dec 2021, In: *Iraqi Journal of Veterinary Sciences*. 35, 2, p. 227-232 6 p.

Therapeutic potential of platelet-rich plasma in canine medicine

Sharun, K., Jambagi, K., Dhama, K., Kumar, R., Pawde, A. M. & Amarpal, Nov 2021, In: *Archives of Razi Institute*. 76, 4, p. 721-730 10 p.

India's role in COVID-19 vaccine diplomacy

Sharun, K. & Dhama, K., 11 Oct 2021, In: *Journal of travel medicine*. 28, 7

Development of a novel atrophic non-union model in rabbits: A preliminary study

Sharun, K., Pawde, A. M., Banu S, A., Manjusha, K. M., Kalaiselvan, E., Kumar, R., Kinjavdekar, P. & Amarpal, Aug 2021, In: *Annals of Medicine and Surgery*. 68, 102558.

Percutaneous transplantation of allogenic bone marrow-derived mesenchymal stem cells for the management of paraplegia secondary to Hansen type I intervertebral disc herniation in a Beagle dog

Sharun, K., Kumar, R., Saxena, A. C., Pawde, A. M., Kinjavdekar, P., Dhama, K., Amarpal & Sharma, G. T., Mar 2021, In: *Iranian Journal of Veterinary Research*. 22, 2, p. 161-166 6 p.

Standardization and characterization of adipose-derived stromal vascular fraction from New Zealand white rabbits for bone tissue engineering

Sharun, K., Pawde, A. M., Kumar, R., Kalaiselvan, E., Kinjavdekar, P., Dhama, K. & Pal, A., Feb 2021, In: *Veterinary World*. 14, 2, p. 508-514 7 p.

Variables affecting the potential efficacy of platelet-rich plasma in dermatology

Sharun, K. & Pawde, A. M., Jan 2021, In: *Journal of the American Academy of Dermatology*. 84, 1, p. e47-e48

Advances in therapeutic and managemental approaches of bovine mastitis: a comprehensive review

Sharun, K., Dhama, K., Tiwari, R., Gugjoo, M. B., Iqbal Yattoo, M., Patel, S. K., Pathak, M., Karthik, K., Khurana, S. K., Singh, R., Puvvala, B., Amarpal, Singh, R., Singh, K. P. & Chaicumpa, W., 2021, In: *Veterinary Quarterly*. 41, 1, p. 107-136 30 p.

Classification and coding of platelet-rich plasma derived from New Zealand white rabbits for tissue engineering and regenerative medicine applications

Sharun, K., Pawde, A. M., Manjusha, K. M., Banu S, A., Kalaiselvan, E., Kumar, R., Kinjavdekar, P., Amarpal & Verma, M. R., 2021, In: *Expert Opinion on Biological Therapy*. 21, 11, p. 1473-1482 10 p.

International travel during the COVID-19 pandemic: implications and risks associated with 'travel bubbles'

Sharun, K., Tiwari, R., Natesan, S., Yattoo, M. I., Malik, Y. S. & Dhama, K., 23 Dec 2020, In: *Journal of travel medicine*. 27, 8

Clinical evaluation following the percutaneous transplantation of allogenic bone marrow-derived mesenchymal stem cells (aBM-MSC) in dogs affected by vertebral compression fracture

Sharun, K., Rawat, T., Kumar, R., Chandra, V., Saxena, A. C., Pawde, A. M., Kinjavdekar, P., Amarpal & Sharma, G. T., Dec 2020, In: *Veterinary and Animal Science*. 10, 100152.

Platelet-rich plasma for hip osteoarthritis: comparing the variables in production protocol and composition

Sharun, K. & Pawde, A. M., Dec 2020, In: *Clinical Rheumatology*. 39, 12, p. 3899-3901 3 p.

Platelet-rich plasma (PRP) for post-traumatic osteoarthritis: classification and coding systems
Sharun, K. & Pawde, A. M., Dec 2020, In: Osteoarthritis and Cartilage. 28, 12, p. 1581-1582 2 p.

Platelet-rich plasma (PRP) for skin graft enrichment: The need for a universal PRP classification system
Sharun, K., Pawde, A. M. & Pal, A., Dec 2020, In: International Wound Journal. 17, 6, p. 2038-2039 2 p.

Dexamethasone to combat cytokine storm in COVID-19: Clinical trials and preliminary evidence
Sharun, K., Tiwari, R., Dhama, J. & Dhama, K., Oct 2020, In: International Journal of Surgery. 82, p. 179-181 3 p.

Antibody-based immunotherapeutics and use of convalescent plasma to counter COVID-19: advances and prospects
Sharun, K., Tiwari, R., Iqbal Yattoo, M., Patel, S. K., Natesan, S., Dhama, J., Malik, Y. S., Harapan, H., Singh, R. K. & Dhama, K., Sept 2020, In: Expert Opinion on Biological Therapy. 20, 9, p. 1033-1046 14 p.

How close is SARS-CoV-2 to canine and feline coronaviruses?
Sharun, K., Sircar, S., Malik, Y. S., Singh, R. K. & Dhama, K., Aug 2020, In: The Journal of small animal practice. 61, 8, p. 523-526 4 p.

Treatment of Sarcoptic mange infestation in rabbits with long acting injectable ivermectin
Sharun, K., Anjana, S., Sidhique, S. A. & Panikkassery, S., 1 Dec 2019, In: Journal of Parasitic Diseases. 43, 4, p. 733-736 4 p.

Current therapeutic applications and pharmacokinetic modulations of ivermectin
Sharun, K., Shyamkumar, T. S., Aneesha, V. A., Dhama, K., Pawde, A. M. & Pal, A., Aug 2019, In: Veterinary World. 12, 8, p. 1204-1211 8 p.

Activities

Veterinary Record Case Reports (Journal)

Khan, S. (Editor)
26 Jan 2026 → ...

Evaluator for International Veterinary Students Association (IVSA), India

Khan, S. (Other)
31 Dec 2025

Research in Veterinary Science (Journal)

Khan, S. (Peer reviewer)
9 Dec 2025

Orthopaedic Research Society (ORS) (External organisation)

Khan, S. (Member)
5 Dec 2025 → ...

Orthoregeneration Network (External organisation)

Khan, S. (Member)
5 Dec 2025 → ...

Communications Biology (Journal)

Khan, S. (Peer reviewer)
26 Nov 2025

Journal of Biomaterials Science, Polymer Edition (Journal)

Khan, S. (Peer reviewer)

9 Nov 2025

Current Stem Cell Research & Therapy (Journal)

Khan, S. (Editor)

1 Sept 2025 → 31 Dec 2025

Life (Journal)

Khan, S. (Editor)

1 Apr 2025 → ...

Sustainable Materials and Technologies (Journal)

Khan, S. (Peer reviewer)

2025 → ...

The International Union of Societies for Biomaterials Science and Engineering (IUSBSE) (External organisation)

Khan, S. (Member)

2025 → ...

Frontiers in Bioengineering and Biotechnology (Journal)

Khan, S. (Editor)

1 Jun 2024 → ...

Heliyon (Journal)

Khan, S. (Peer reviewer)

1 Jun 2024 → ...

Scientifica (Journal)

Khan, S. (Editor)

1 Jun 2024 → ...

Frontiers in Veterinary Science (Journal)

Khan, S. (Peer reviewer)

1 Jan 2024 → ...

Society for Biomaterials and Artificial Organs India (SBAOI) (External organisation)

Khan, S. (Member)

2024 → ...

PLOS ONE (Journal)

Khan, S. (Peer reviewer)

1 Sept 2023 → ...

Tissue Engineering and Regenerative Medicine International Society (TERMIS) (External organisation)

Khan, S. (Member)

2023 → ...

Prizes**Best PhD Student Award (Silver Medal)**

Khan, S. (Recipient), 2025

Dr. C. M. Singh Award (Gold Medal) for the Best Ph.D. Scholar

Khan, S. (Recipient), 2025

Highly Cited Researcher™ 2022 - Clarivate Analytics

Khan, S. (Recipient), 25 Nov 2022

IGNITE Life Science-Indian Society of Cell Biology (ISCB) Travel Fellowship

Khan, S. (Recipient), 2023

International Travel Support (ITS) Award

Khan, S. (Recipient), 2023

Marie Skłodowska-Curie Actions Postdoctoral Fellowship

Khan, S. (Recipient), 1 Nov 2025

Murray Fowler International Conference Scholarship (MFICS)

Khan, S. (Recipient), Jul 2022

Nominated to Participate in the 72nd Lindau Nobel Laureate Meeting (Physiology and Medicine)

Khan, S. (Recipient), 28 Nov 2022

Nominated to Participate in the 75th Lindau Nobel Laureate Meeting (Interdisciplinary)

Khan, S. (Recipient), 12 Nov 2025

Orthoregeneration Network (ON) / Tissue Engineering & Regenerative Medicine International Society (TERMIS) Education Grant 2026

Khan, S. (Recipient), 25 Feb 2026

Outstanding Ph.D. Thesis Research Award 2024

Khan, S. (Recipient), Feb 2025

Student Excellence Award 2022

Khan, S. (Recipient), 2022

TERMIS-AP Young Investigator Award 2024

Khan, S. (Recipient), 25 Jun 2024

TERMIS SYIS Career Development Award 2024

Khan, S. (Recipient), 25 Jun 2024

Awards

BONEGEL: Development of a novel bone-adapting injectable smart hydrogel for bone tissue engineering

Khan, S. (Project Applicant), Pennisi, P. (Project Applicant), Larsen, K. L. (Project Participant) & El Khassawna, T. (Project Participant)

Horizon Europe: DKK1,959,646.00

01/11/2025 → 31/10/2027

Projects

BONEGEL: Development of a novel bone-adapting injectable smart hydrogel for bone tissue engineering

Khan, S. (PI), Pennisi, P. (Supervisor), Larsen, K. L. (Supervisor) & El Khassawna, T. (Supervisor)

Horizon Europe

01/11/2025 → 31/10/2027

