Kartik Sunagar

Associate Professor · Evolutionary Biologist & Toxinologist

Centre for Ecological Sciences, Indian Institute of Science, Bangalore

Head, Evolutionary Venomics Lab

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Venom Detective: venomdetective.com · Venomics AI: venomics.ai

103	6,561	INR 41.28 Cr	INR 25.5 Cr	INR 66.78 Cr+
Published works	Citations · h-index 40	Academic funding	VC / venture funding	Combined funding

Academic & leadership appointments

Aug 2023 - Present
Associate Professor
Indian Institute of Science (IISc), Bangalore
Centre for Ecological Sciences (Pay Band 4)

2026 - Present
Founder & Director
Venomics AI Pvt. Ltd., India
AI-Accelerated Biodiscovery from Animal Venoms

2022 - Present
Founder & Director
VISHAM, Bangalore, India
Venom Institute for Snakebite Health and Advanced Medicine

Apr 2022 - Present
Adjunct Faculty
Institute of Bioinformatics and Applied Biotechnology (IBAB)
Bangalore, India

Aug 2017 - Aug 2023
Assistant Professor
Indian Institute of Science (IISc), Bangalore
Centre for Ecological Sciences

Education

01 Dec 2013
Doctor of Philosophy (Ph.D.) · Evolutionary Biology
University of Porto, Porto, Portugal
Distinction · Equivalent to Summa cum laude

Aug 2008
Master of Science (M.Sc.) · Applied Genetics
Karnataka University, Dharwad, Karnataka, India
Distinction · 1st Rank

Aug 2006
Bachelor of Science (B.Sc.) · Genetics, Chemistry & Zoology
Karnataka Science College, Karnataka University, India
Distinction · 1st Rank (Genetics)

Earlier research appointments

May 2015 - Aug 2017
Guest Scientist & Marie Curie Fellow
The Hebrew University of Jerusalem, Israel
Department of Ecology, Evolution and Behavior

May 2014 - May 2015
Postdoctoral Researcher
The Hebrew University of Jerusalem, Israel
PBC & Lady Davis Postdoctoral Fellow

Dec 2013 - Apr 2014
Postdoctoral Researcher
University of Porto, Porto, Portugal
CIIMAR - Interdisciplinary Centre of Marine & Environmental Research

Jan 2010 - Dec 2013
Graduate Researcher
University of Porto, Porto, Portugal
FCT Doctoral Fellow

Awards & fellowships

19 honours and fellowships

Jan 2026 **Deccan Herald Changemaker Award**, Deccan Herald · India

Jan 2023 **Professor Har Swarup Memorial Award**, Indian National Science Academy (INSA) · India

Nov 2021 **Merck Young Scientist Award**, Merck · India

Jan 2021 **DBT/Wellcome Trust India Alliance Intermediate Fellowship** · UK-India

Oct 2020 **INSA Medal for Young Scientists**, Indian National Science Academy · India

Apr 2018 **Ramanujan Fellowship**, Science and Engineering Research Board (SERB) · India

Jan 2018 **Gyandeep Award for Excellence in Scientific Research on Snakes**, OWLS & Dept. of Forest, Maharashtra State · India

Aug 2017 **INSPIRE Faculty Award**, Department of Science and Technology (DST) · India

2016 **Toxins Travel Award**, MDPI · Switzerland

2016 **Young Investigators Registration Reimbursement Award**, Society for Molecular Biology and Evolution (SMBE) · Global

2015-2017 **Marie Skłodowska-Curie Individual Fellowship**, European Commission · EU

2015-2018 **Discovery Early Career Researcher Award (DECRA)**, Australian Research Council (Relinquished) · Australia

2014 **PBC Fellowship for Outstanding Postdoctoral Researchers from India**, The Hebrew University of Jerusalem · Israel

2014 **Lady Davis Postdoctoral Fellowship**, The Hebrew University of Jerusalem · Israel

2014 **Postdoctoral Fellowship**, The Hebrew University of Jerusalem · Israel

2014 **BIOL External Discovery Early Career Researcher Award (DECRA) Travel Grant**, University of Queensland · Australia

2014 **Postdoctoral Fellowship**, Foundation for Science and Technology (PTDC/MAR/115199/2009) · Portugal

2014 **Postdoctoral Fellowship**, Foundation for Science and Technology (PTDC/AAC-AMB/121301/2010) · Portugal

2010-2013 **Doctoral Fellowship**, Foundation for Science and Technology (FCT) · Portugal

Recognition & academic service

National, International & Institutional Committees 20 Appointments

Aug 2026-Present	**Committee Member**, Institutional Biosafety Committee (IBSC), Indian Institute of Science (IISc)
Dec 2025	**Jury Member**, Kerala State Young Scientist Award 2025, Kerala State Council for Science, Technology & Environment (KSCSTE), Govt. of Kerala
20 Aug 2025	**Project Selection Committee**, Intermediate Grant and Small Grant Scheme, Indian Council of Medical Research (ICMR)
09 Jul 2025	**Technical Expert Committee**, Review of National Guideline on Regional Venom Centres under the National Programme for Prevention and Control of Snakebite Envenoming (NPSE)
2025-2028	**DBT-BIRAC Joint Screening & Selection Committee**, Biomanufacturing of Precision Biotherapeutics (BioE3)
2024-Present	**Building Committee**, Division of Biological Sciences, Indian Institute of Science (IISc)
2024-Present	**Key Opinion Leader (KOL)** on Snakebite and Antivenom, George Clinical
Feb 2024	**Expert Committee**, National Programme for Prevention and Control of Snakebite Envenoming in India, Ministry of Health and Family Welfare (MoHFW), Govt. of India
2024	**Expert Advisory Committee**, National Action Plan for Prevention and Control of Snakebite Envenoming (NAP-SE), Division of Zoonotic Diseases Programme, NCDC, DGHS, MoHFW, Govt. of India & World Health Organization (WHO)
Jul 2023-Present	**Sectoral Expert Committee** on “Biomanufacturing of Precision Biotherapeutics: Monoclonal Antibodies”, Department of Biotechnology (DBT), Govt. of India
2022-Present	**Special Technical Advisory Committee** on “Aquaculture & Marine Biotechnology and Livestock & Animal Biotechnology”, Department of Biotechnology (DBT), Govt. of India
Jun 2022	**Advisory Committee**, INR 1,600 Crore Project by the Department of Atomic Energy and Government of Maharashtra to develop Haffkine Institute
2022	**Expert Advisory Committee**, ICMR Centre for Advanced Research of Excellence on Snakebite (I-CARE), Indian Council of Medical Research
2022	**Expert Member**, National Task Force for Research on Snakebite in India, Indian Council of Medical Research (ICMR)
2021	**Snakebite Envenoming Roster of Experts & Technical Advisory Group**, World Health Organization (WHO)
2021-Present	**Steering Committee**, The Snakebite Research Network
2019-Present	**Executive Board Member**, Indian Society for Toxinology and Snakebite Mitigation (ISTSM)
Jun 2019	**Technical Advisory Committee**, Indian Pharmacopoeia Commission, Ministry of Health & Family Welfare, Govt. of India
2018-Present	**Advisory Board**, Snakebite Healing and Education Society
2018	**Advisory Board**, ToxiVen Biotech Pvt. Ltd.

Editorial Boards & Conference Organization 16 Roles

Jul 2024-Present	**Editor**, *Journal of Proteins and Proteomics*
2022-Present	**Guest Academic Editor**, *PLOS Neglected Tropical Diseases*
2022-Present	**Guest Editor**, *Journal of Biosciences*
2022	**Guest Associate Editor**, *Frontiers in Ecology and Evolution* (Chemical Ecology: Diversity and Evolution of Animal Venoms)
Jun 2021-Present	**Review Editor & Guest Associate Editor**, *Frontiers in Tropical Diseases: Neglected Tropical Diseases*
Jan 2021-Jul 2022	**Deputy Editor**, *PLOS Neglected Tropical Diseases*
2021	**Guest Editor**, *Frontiers in Ecology and Evolution*

2015-2021	**Editorial Board Member**, *Toxins* (MDPI, Animal Venoms Section)
Dec 2024	**Organizing Committee**, International Society for Toxinology (IST) - Asia Pacific Webinar Series
Jul 2023	**Local Organizing Committee & Symposium Chair**, Annual Congress of the International Society for Chemical Ecology
2018, 2019, 2023	**Course Co-ordinator**, DST-SERB Schools in Chemical Ecology (IISc & NCBS)
Jul 2022	**Scientific Committee**, Pathogens and Natural Toxins e-Conference
Nov 2021	**Judging Panel**, Inspiring Science Award
2021	**Scientific Committee**, Natural Toxins Conference
Oct 2019	**Organiser**, International Symposium on Snakebites

Professional Society Memberships & Governance

Mar 2026-Present	**Life Member**, Society of Biological Chemists (SBC), India
Feb 2024-Present	**Life Member**, Indian Society for Evolutionary Biology (ISEB)
Jan 2024-Present	**Life Member**, International Society for Toxinology (IST)
2018-Present	**IISc Governance & Facilities**: The Great Day Committee (2022-Present); Central Animal Facility Management Committee & Dept. Representative (2018-Present); Common Molecular Ecology Lab CES (2018-Present); Divisional Tissue Culture Upgradation (2021), Mass Spectrometer Procurement (2019) & Computer Cluster (2019) Committees; PhD Interview Coordinator CES (2018-2022).
2017-2023	**National Examinations**: GATE-XL Zoology Chief Paper Setter (2023); GATE-EY Ecology & Evolution Paper Setting/Vetting (2018-2021); CSIR-NET Paper Setting (2020); KVPY Paper Setting, Vetting & Interviews (2017-2021).

Journal Manuscript Referee

Science, *Nature*, *Nature Communications*, *PNAS*, *Molecular Biology and Evolution*, *GigaScience*, *Genome Biology and Evolution*, *Frontiers in Immunology*, *PLOS Neglected Tropical Diseases*, *Scientific Reports*, *BMC Evolutionary Biology*, *BMC Genomics*, *G3: Genes, Genomes, Genetics*, *Current Medicinal Chemistry*, *Journal of Proteomics*, *Toxins*, *Toxicon*, *FEBS Letters*, *Biochemie*, *Molecules*, *Theoretical Ecology*, *Journal of Molecular Evolution*, *PLOS ONE*, *Comparative Biochemistry and Physiology Part C*, *MDPI Insects*, *Current Science*, and *Herpetological Journal*.

International & National Grant Reviewer

European Research Council (ERC), National Science Foundation (NSF, USA), Wellcome Trust (UK), Natural Environment Research Council (NERC, UK), Wellcome Trust/DBT India Alliance (UK-India), Australian Research Council (ARC Discovery Projects), Science Foundation Ireland, Department of Biotechnology (DBT, India), Department of Science and Technology (DST, India), Science and Engineering Research Board (SERB, India), and Rufford Small Grants Foundation.

Research & venture funding

INR 41.28 crore academic grants (PI / Co-PI) · INR 25.5 crore venture funding

Combined funding: INR 66.78 crore+. Academic funding: USD 4.81M / GBP 3.57M.

VC & venture funding · Venomics AI

01 | INR 25.5 Cr

Venomics AI Pvt. Ltd., India
AI-Accelerated Biodiscovery from Venoms

Startup incubation & seed funding · Founder & Director
1 October 2026 - Present · Two years

Academic & industry research awards

02 | INR 25,00,000

Anthropic for Science Grant (First in India)
Anthropic, USA

01.06.2026 - 2028 (2 yrs) · Principal Investigator
Extramural

03-05 | INR 14,00,000

35th General Assembly of the International Union of Biological Sciences (IUBS) - Theme: Biodiversity Forever Despite the Anthropocene
DBT-CTEP (INR 6L), Indian Institute of Science (INR 5L) & Anusandhan National Research Foundation / ANRF (INR 3L)

Feb - Apr 2026 · Organizer / PI
Conference

06 | INR 8,00,00,000

ICMR Intermediate Grant: Discovery and expression of recombinant camelid antibodies against 'Big Four' Indian snakes for snakebite diagnosis and treatment
Indian Council of Medical Research (ICMR), Govt. of India (with Dr. Bhushan Toley)

01.11.2025 - 01.11.2029 (4 yrs) · Principal Investigator
Extramural

07 | INR 5,00,000

REDB Research Grant
Indian Institute of Science (IISc), Bangalore

2025 (0.3 yrs) · Principal Investigator
Extramural

08 | INR 1,20,00,000

Preclinical Analyses of Medically Important Snake Venoms from Northeast India and Evaluation of Phytosolutions as Auxiliary Therapies for Snakebite Envenomation
The Hamish Ogston Foundation, UK

3 Years · Principal Investigator
International

09 | INR 78,00,000

Detection of Biting Snake Species from Clinical Samples (Development of Snakebite Diagnostics)
The Hamish Ogston Foundation, UK

01.02.2022 - 31.01.2023 (Completed) · Principal Investigator
International

10 | INR 25,00,000

Production of India's First Regional Antivenom
Bharat Serums and Vaccines Ltd., India

06.05.2022 - 2025 (3 yrs, Completed) · Principal Investigator
Industry

11 | INR 9,07,029

Cross-Neutralisation Potential of PANF African 14 Antivenoms
Premium Serums & Vaccines Pvt. Ltd., India

01.12.2021 - 01.12.2022 (Completed) · Principal Investigator
Industry

12 | INR 15,53,420

Venomics and Antivenomics of Medically Important African Snakes
VINS Bioproducts Ltd., India

01.11.2021 - 01.11.2022 (Completed) · Principal Investigator
Industry

13 | INR 10,00,00,000

VISHAM: Venom Institute for Snakebite Health and Advanced Medicine (The Indian Venom Research Unit)
Department of IT, BT and S&T, Government of Karnataka, India

01.07.2021 - 01.04.2026 (5 yrs) · Principal Investigator
Extramural

14 | INR 10,65,00,000

Novel Platforms to Develop Polyspecifically-Effective, Safe, Affordable and Thermostable Monoclonal Camelid VHH Nanobodies to Treat Snake Venom-Induced Necrosis in India and Sub-Saharan Africa
Wellcome Trust, UK (with LSTM UK, IAVI USA, K-SRIC Kenya, Univ. of Bristol UK)

01.08.2021 - 31.03.2026 (Completed) · Co-Investigator
International · £913,750

15 | INR 2,59,00,000

Progressing Existing Snake Venom Toxin-Specific Antibodies into Humanised, Thermostable Monoclonal Therapies for Preclinical Manufacture and Clinical Trials in Africa and India (SRPNTS Continuation)
Wellcome Trust, UK (with RA Harrison & D Sok, IAVI USA)

16.07.2021 - 18.07.2025 (Completed) · Co-Investigator
International · £224,178.90

16 | INR 1,42,11,219

Antibody Discovery and Development Against Non-Immunogenic Snake Venom Toxins
Wellcome Trust, UK (with Joseph Jardine, IAVI USA)

01.07.2021 - 31.12.2024 (Completed) · Co-Investigator
International · $190,576

17 | INR 1,74,60,488

Capacity Development Grant
Foreign, Commonwealth and Development Office (FCDO), UK

01.04.2021 - 30.03.2023 (Completed) · Co-Investigator
International · £174,150

18 | INR 3,60,00,000

Wellcome Trust / DBT India Alliance Intermediate Fellowship
DBT/Wellcome Trust India Alliance, UK-India

01.09.2020 - 31.08.2025 (5 yrs) · Principal Investigator
Extramural

19 | INR 46,70,700

Fangs in the Ghats: Venomics and Antivenomics of Pit Vipers from the Indian Western Ghats
The Hamish Ogston Foundation & Global Snakebite Initiative, UK-Global

15.09.2020 - 31.12.2021 (Completed) · Principal Investigator
International

20 | INR 10,00,000

Establishing Quality Analyses Protocols for Indian and African Snake Venoms
VINS Bioproducts Ltd., India

01.07.2020 - Apr 2021 (Completed) · Principal Investigator
Industry

21 | INR 20,00,000

Formulation and Preclinical Evaluation of the Second-Generation Indian Antivenom
Serum Institute of India Pvt. Ltd. (SIIPL)

10.04.2019 - 31.12.2021 (Completed) · Principal Investigator
Industry

22 | INR 3,00,000

Biological Science Interdisciplinary Proposal
DBT-IISc Internal Funding, Indian Institute of Science (with Dr. Chetan Thakur)

10.04.2019 (1 yr) · Principal Investigator
Intramural

23 | INR 50,00,000

Neutralising Efficacies of Conventional Indian Antivenoms
Madras Crocodile Bank Trust & Centre for Herpetology / USV Pvt. Ltd., India

26.02.2018 - 31.05.2019 (Completed) · Principal Investigator
Industry

24 | INR 4,50,00,000

Scientific Research Partnership for Neglected Tropical Snakebite (SRPNTS)
Department for International Development (DFID), UK (with LSTM, IAVI, IPR Kenya, BUK Nigeria)

01.08.2018 - 31.03.2021 (Completed) · Co-Investigator
International · £408,257 (INR 4.09-4.50 Cr)

25 | INR 35,00,000

Ramanujan Fellowship
Science and Engineering Research Board (SERB), Govt. of India

01.04.2018 (Not taken) · Principal Investigator
Extramural

26 | INR 1,00,00,000

IISc Faculty Startup Grant
Indian Institute of Science (IISc), Bangalore

21.09.2017 (1 yr) · Principal Investigator
Intramural

27 | INR 35,00,000

INSPIRE Faculty Award
Department of Science and Technology (DST), Govt. of India

10.08.2017 - 31.03.2021 · Principal Investigator
Extramural

28 | INR 3,35,00,000

Discovery Early Career Researcher Award (DECRA) & Marie Skłodowska-Curie Individual Fellowship
Australian Research Council (INR 1.93 Cr, Relinquished) & European Commission (INR 1.42 Cr, Completed)

2015 - 2017 · Principal Investigator
International

Patents, ventures & translation

Patent Filed · #202541032415

An antigen-binding fragment or antibody against snake venom metalloproteinases, corresponding methods, composition, and kit thereof

Inventors: Senji Laxme RR, **Sunagar K**, Casewell NRC, Jardine J, and Landais E.
Filing Date: 25 July 2025 · **Status:** Filed

Venture · Founder & Director · 2026-Present

Venomics AI Pvt. Ltd.

AI-accelerated biodiscovery from animal venoms. INR 25.5 crore in startup incubation and seed funding.

venomics.ai

Institute · Founder & Director · 2022-Present

VISHAM

Venom Institute for Snakebite Health and Advanced Medicine, Bangalore, India.

Diagnostics · Development project

Venom-detection lateral flow assay (LFA)

Development of a venom-detection lateral flow assay for snakebite diagnosis.

Industry collaboration · Serum Institute of India

Second-generation antivenom

Development of chromatographically purified second-generation antivenom in collaboration with Serum Institute of India.

Industry collaboration · Bharat Serums and Vaccines

Regional antivenom

Development of India’s first regional antivenom with Bharat Serums and Vaccines, targeting the Big Four and neglected snake species in Western India.

Teaching & research mentorship

Graduate courses at IISc · 2018-2025

4.75 / 5.0 — **Evolutionary Genetics (3 Credits · Taught Alone)**
Jan 2023 · Jan 2024 · Jan 2025

4.56 / 5.0 — **Multi-omics Approaches in Biology (BC 207 · 2-3 Credits)**
Feb 2021 · Jan 2022

4.50 / 5.0 — **Evolutionary Biology (EC 204 / DB 209 · 3 Credits)**
Jan 2018, Jan 2019, Jan 2020, Feb 2020, Jan 2022

4.40 / 5.0 — **General Biology (3 Credits)**
Aug 2024 · Sep 2022

4.00 / 5.0 — **Integrative Approaches in Biology (EC 205 · 2 Credits)**
Jan 2019

Training schools & field capacity building

2018-2023 — **Course Coordinator**, DST-SERB Schools in Chemical Ecology (IISc & NCBS; 15-day national residential schools funded at INR 20-25 Lakhs each)

Sep 2022 — **Invited Faculty**, European Venom Network: Introductory Venomics Training School

2017-2023 — **Outreach & Field Workshops**: Snake rescue & snakebite management training for Rajasthan Forest Dept. & Border Security Force (BSF, Bikaner), ICAR-National Research Centre on Camels (Bikaner), Govt. Dungar College (Bikaner), and Karnataka Forest Dept. (Bhadra & Nagarhole Tiger Sanctuaries)

Research supervision & mentorship

Mentored **90+ researchers and trainees** in the lab, including **18 postdoctoral fellows and guest / visiting scientists**, **17 PhD and integrated PhD scholars**, and **55+ research interns and project staff**.

Plenary, keynote & invited talks

84 engagements · 2014-2026

11-16 Oct 2026	**Invited Speaker**, 9th Venoms to Drugs Conference (V2D2026), Australia.
13-17 Sep 2026	**Invited Speaker**, 23rd World Congress of the International Society on Toxinology (IST), Manaus, Brazil.
05 Aug 2026	**Expert Speaker**, National Action Plan for Prevention and Control of Snakebite Envenoming (NAPSE) Meeting on Venom Collection Centres across India, Government of India.
18 Jul 2026	**Invited Speaker**, Society of Biological Chemists (SBC) Meeting 2026.
06 Jul 2026	**Invited Speaker**, CSIR - National Institute of Oceanography, Ministry of Science and Technology, Govt. of India.
09-13 Jun 2026	**Invited Speaker & Session Chair**, 35th General Assembly of the International Union of Biological Sciences (IUBS) - Neglected Tropical Diseases, IISc, Bangalore.
27 May 2026	**Invited Speaker**, Two-Day National Symposium on Transforming Venom Biology Into Therapeutic Insight: Connecting Molecules, Mechanisms and Medicine, University of Mysore.
25 May 2026	**Invited Speaker**, Snakebite Envenoming Management, Kerala University of Health Sciences (KUHS), School of Public Health (SPH).
17-22 May 2026	**Invited Speaker**, Gordon Research Conference on Venom Evolution, Function and Biomedical Applications, Barcelona, Spain.
26-27 Feb 2026	**Invited Speaker**, Monoclonal Antibody Symposium: Discovery & Early Development of Novel Biologics, THSTI, Faridabad.
24 Feb 2026	**Invited Speaker**, Safdarjung Hospital, New Delhi.
06-09 Dec 2025	**Invited Speaker**, From Cell to Therapeutics - Annual Meeting of the Indian Society of Cell Biology, IIT Kanpur.
05 Dec 2025	**Invited Speaker**, Collaborative Academic Research Excellence (CARE) Conference - Molecules to Medicine: Bioengineering for One Health, IIT Madras.
20-24 May 2025	**Invited Speaker**, Sustainable Healthcare from Biological Resources, BITS Pilani, Goa.
28-30 Apr 2025	**Invited Speaker**, Manipal Research Colloquium 2025, Manipal, Karnataka.
18-19 Apr 2025	**Invited Speaker**, 2-Day Scoping Workshop on Snake Conservation in the Western Ghats, Lonavala, Pune, Maharashtra.
26-27 Feb 2025	**Invited Speaker**, 10th Biennial Indian Peptide Symposium, IISER Pune.
24 Jan 2025	**Invited Speaker**, Regional Stakeholder Meeting on Technology in Healthcare (VIT, National Disease Modelling Consortium & IIT Bombay), VIT Chennai.
15-17 Jan 2025	**Invited Speaker**, NCBS Annual Talks 2025, National Centre for Biological Sciences, Bangalore.
15 Jan 2025	**Invited Participant**, Planning Meeting for Human-Snake Conflict Mitigation, Wildlife Trust of India.
06 Dec 2024	**Invited Speaker**, INTOX: International Conference on Toxinology 2024.
28 Nov 2024	**Invited Speaker**, Integrating Archaeogenetics, Forensics & Multi-omics for Human Health Breakthrough.

17-20 Oct 2024	**Invited Speaker**, IMMUNOCON-2024, Indian Institute of Science, Bangalore.
26-28 Sep 2024	**Invited Speaker**, Eco Confluence 2024, Padmashree Institute of Management and Sciences, Bangalore.
08-10 Sep 2024	**Invited Speaker**, First National Conference on Recent Advances and Challenges in Hyperimmune Sera Production, Central Research Institute (CRI), Kasauli.
Aug 2024	**Keynote Talk**, Gordon Research Conference on Venom Evolution, Function and Biomedical Applications, USA.
20 May 2024	**Invited Speaker**, 22nd World Congress of the International Society on Toxinology (IST).
23 Mar 2024	**Invited Speaker**, State-Level CME 2024: Deep Insight from Neglected Tropical to Notifiable Disease (Snakebite).
12 Feb 2024	**Invited Speaker**, International Centre for Theoretical Sciences (ICTS), Tata Institute of Fundamental Research (TIFR), Bangalore.
09 Feb 2024	**Invited Speaker**, Two-Day Symposium on “From Venom Pharmacology to Drug Discovery: National and International Perspective (SnakeSymp-2024)”.
28 Nov 2023	**Invited Speaker**, Scientific Research Partnership for the Development of Anti-Necrosis Therapeutics for Snakebite (SRPNTS-NT).
20 Nov 2023	**Invited Speaker**, 15th Annual Meeting of Proteomics Society of India - International Conference on Integrated Proteomics.
Jul 2023	**Symposium Chair**, International Society for Chemical Ecology Annual Meeting.
08 Jul 2023	**Invited Speaker**, 4th SERB School in Chemical Ecology.
01 Mar 2023	**Invited Speaker**, Institute of Bioinformatics and Biotechnology, Savitribai Phule Pune University.
28 Feb 2023	**Invited Speaker**, GITAM University, Karnataka.
16 Feb 2023	**Invited Speaker**, Government Dungar College, Bikaner, Rajasthan.
14 Dec 2022	**Invited Speaker**, INSA 88th Anniversary General Meeting, CSIR - National Institute of Oceanography, Goa.
27 Oct 2022	**Invited Speaker**, National-Level CME on Toxicology and Pharmacology of Snake Venom, Sri Devaraj Urs Academy of Higher Education and Research, Kolar.
16-21 Oct 2022	**Invited Speaker**, 21st World Congress of the International Society on Toxinology (IST), Abu Dhabi, UAE.
Aug 2022	**Invited Speaker**, Gordon Research Conference on Venom Evolution, Function and Biomedical Applications, USA.
26-28 May 2022	**Invited Speaker**, Annual Snakebite Conference of the Indian Society for Toxinology and Snakebite Mitigation (ISTSM), AIMS, Kochi.
05 Mar 2022	**Invited Speaker**, National CME on Snake Envenomation, Department of Medicine, KIMS Bhubaneswar.
Dec 2021	**Invited Speaker**, Central University of Punjab & Molecular Phylogenetics Workshop, CES, IISc Bangalore.
Nov 2021	**Invited Speaker & Session Chair**, International Society for Toxinology (IST) Asia-Pacific Conference & Webinar Series, Cairns, Australia.

13-14 Mar 2021	**Invited Speaker**, National Symposium on “Recent Trends in Biology”, Savitribai Phule Pune University.
19 Sep 2020	**Invited Speaker**, Karnataka Forest Department & Humane Society International Webinar on International Snakebite Awareness Day.
2020	**Plenary Speaker**, Two-Day National Symposium on Challenges in Snakebite Management, University of Mysore & Annual Snakebite Conference, AIMS Kochi.
2019	**Invited Speaker**, The Linnean Society of London (24 Jun 2019) · 3rd DST-SERB School on Chemical Ecology, NCBS (22 & 31 Jul 2019) · Advanced Molecular Phylogenetics Workshop, IISc (04 Oct 2019).
2018	**Plenary & Invited Speaker**, Maharashtra State Sarp Mitra Sammelan & Sarp Vignyan Parishad (Plenary, 27 Jan 2018) · 2nd DST-SERB School on Chemical Ecology, IISc (Jul 2018) · Mysore University Biochemical Society Inauguration (17 Sep 2018) · NGBT Conference, Jaipur (30 Sep 2018) · DBT Brainstorming Meeting on Recombinant Antibodies for Snakebite, CIIDRET (14 Dec 2018).
2014-2017	**Invited Talks (2014-2017)**: IISER Mohali (May 2017) · IISER Thiruvananthapuram (May 2017) · IISER Pune, CCMB Hyderabad, LaCONES Hyderabad, IISc Bangalore, NCBS Bangalore, and SMBE Gold Coast Australia (2016) · 18th IST World Congress & Oxford Sheldonian Theatre Debate, University of Oxford, UK (Sep 2015) · 14th FAOBMB Congress, Hyderabad (Nov 2015) · NESCent Toxinology Meeting, Durham, USA, University of Haifa & Hebrew University of Jerusalem (2014).

Publications

103 published / accepted works · 74 journal articles and reviews · 29 book chapters

6,561 citations · h-index 40 · i10-index 74 · 8 journal covers
* Equal contribution; @ Corresponding author.

2026

103 **Venom Detectives: Sandwich ELISA-based snakebite detection and diagnosis**
Lavanya V*, Rudresha GV*, Samanta A, Krishnan S, Khochare S, and **Sunagar K@**

Frontiers in Toxinology (In Press) · In Press

102 **Development and Efficacy of Region-Specific Antivenoms in High Snakebite-Burden Indian States**
Samanta A, Vanga L, Thakur S, Pathan M, Khochare S, Murzello K, and **Sunagar K@**

Indian Journal of Medical Research · Research article

101 **Leaf to life: Harnessing medicinal plants as inhibitors of Russell's viper venom**
Navanita S, Rudresha GV, Samanta A, Nayak M, Selvaraj H, Raman R, and **Sunagar K@**

Toxicon 282, 109242 · Research article

100 **Oligoclonal nanobody-based recombinant antivenom protects mice challenged with venom from cobras and king cobras from India**
Samanta A, Rudresha GV, Ahmadi S, Thumtecho S, Boyens-Thiele L, Ebersole TW, Burlet NJ, Dahl CH, Lalremsanga HT, Buell AK, Ljungars A@, Laustsen AH@, and **Sunagar K@**

Science Translational Medicine 18(866), eaed4290 · Journal cover · Research article

099 **CAPtivating toxins: Molecular evolution of CAP proteins (cysteine-rich secretory proteins, antigen 5, and pathogenesis-related 1) in the chemical arsenals of diverse venomous animals**
Mancuso M, Suranse V, Seneci L, Senoner T, Koludarov I, **Sunagar K**, and Fry BG

Toxicon 109199 · Research article

098 **Comparative venomics and preclinical evaluation of antivenoms against Nigeria's "Big Three" snakes: Naja nigricollis, Bitis arietans, and Echis ocellatus**
Itang SI, Navanita S, Samanta A, Kumar M, and **Sunagar K@**

Toxicon · Research article

097 **Spectacular saga: Phylogenetics and phylogeography of the Indian spectacled cobra (Naja naja Linnaeus, 1758)**
Kanunjna PD, Gond PG, Unawane A, and **Sunagar K@**

Molecular Phylogenetics and Evolution · Research article

096 **Preliminary Insights into Geographic Variation in Venom Profiles and Functional Activities of Nigerian Snakes, Bitis arietans and Naja nigricollis**
Adeyi AO, Emmanuel OS, Itang SI, Ajisebiola BS, Kumar M, Rudresha GV, Gond PG, Crasset T, Redureau D, Gobbi AF, **Sunagar K**, and Quinton L

Toxins 18(5), 221 · Research article

095 **Aquatic assassins: Proteo-transcriptomic and functional profiling of giant water bug and water scorpion venoms**
Devi MR, Kumar M, Rudresha GV, Nayak M, Rajashekar Y, Brockmann A, and **Sunagar K@**

Toxicon · Research article

094 **The role of m6A RNA methylation in the maintenance of X-chromosome inactivation and X to autosome dosage compensation in early embryonic lineages**
Naik HC, Baro R, Sarkar A, Nayak M, **Sunagar K**, and Gayen S

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093 **Hiss and tell: What influences venom yields of India's big four snakes?**
Gond PG, Kumar M, Unawane A, and **Sunagar K@**

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092 **Deadly innovations: Molecular phylogenetics and evolution of phospholipases A2 toxins in viperid snake venoms**
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091 **Dissecting Daboia: Investigating synergistic effects of Russell's viper venom toxins**
Rudresha GV*, Bhatia S*, Samanta A, Naik M, and **Sunagar K@**

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090 **Explaining Echis: Proteotranscriptomic profiling of Echis carinatus carinatus venom**
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088 **Clinical challenges, controversies, and regional strategies in snakebite care in India**
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084 **From birth to bite: the evolutionary ecology of India's medically most important snake venoms**
Senji Laxme RR, Khochare S, Bhatia S, Martin G, and **Sunagar K@**

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083 **Harnessing the Cross-Neutralisation Potential of Existing Antivenoms for Mitigating the Outcomes of Snakebite in Sub-Saharan Africa**
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076 **The Middle Eastern cousin: Comparative venomics of Daboia palaestinae and Daboia russelii**
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068 **Evolution bites: Timeworn inefficacious snakebite therapy in the era of recombinant vaccines**
Kaur N, Iyer A, and **Sunagar K@**

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Senji Laxme RR*, Attarde S*, Khochare S*, Suranse V, Martin G, Casewell NRC, Whitaker R, and **Sunagar K@**

PLOS Neglected Tropical Diseases · Journal cover · Research article

066 **The Curious Case of the "Neurotoxic Skink": Scientific Literature Points to the Absence of Venom in Scincidae**
Sunagar K@ and Abraham SV

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065 **A wolf in another wolf's clothing: Post-genomic regulation dictates venom profiles of medically-important cryptic kraits in India**
Sunagar K*@, Khochare S*, Senji Laxme RR, Attarde S, Dam P, Suranse V, Khaire A, Martin G, and Captain A

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063 **Causes and consequences of medically-important snake venom variation**
Casewell NRC*, Jackson TNW*, Laustsen A*, and **Sunagar K***

Trends in Pharmacological Sciences · Review

062 **Editorial: Diversity and Evolution of Animal Venoms: Neglected Targets, Ecological Interactions, Future Perspectives**
Modica MV, **Sunagar K**, Holford M, and Dutertre S

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061 **The POU domain transcription factor NvPOU4/Brain3 is required for the terminal differentiation of neural cells in Nematostella vectensis**
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060 **Beyond the 'big four': Venom profiling of the medically important yet neglected Indian snakes reveals disturbing antivenom deficiencies**
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049 **Evolution of an ancient venom: recognition of a novel family of cnidarian toxins and the common evolutionary origin of sodium and potassium neurotoxins in sea anemone**
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048 **Seeing the woods for the trees: understanding venom evolution as a guide for biodiscovery**
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046 **Signs, Symptoms, and Treatment of Envenomation**
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045 **Antivenom Research and Development**
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044 **Ineffective Traditional and Modern Techniques for the Treatment of Snakebite**
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036 **Factor Va Proteins**
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020 **Identifying species, sex and individual tigers and leopards in the Malenad-Mysore Tiger Landscape, Western Ghats, India**
Mondol S, Kumar NS, Gopalaswamy A, **Sunagar K**, Karanth KU, and Ramakrishnan U

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019 **IMPACT_S: Integrated Multiprogram Platform to Analyze and Combine Tests of Selection**
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018 **Diversification of a single ancestral gene into a successful toxin superfamily in highly venomous Australian funnel-web spiders**
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Undheim E, **Sunagar K**, Hamilton BR, Brust A, Jones A, Morales JR, Winnen B, Vetter I, Lewis RJ, Venter D, Alewood P, Fry BG, and King GF

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Sunagar K*, Undheim EAB*, Chan AHC, Jackson TNW, Koludarov I, Muñoz-Gómez SA, Antunes A, and Fry BG

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Sunagar K, Jackson TNW, Undheim EAB, Ali S, Antunes A, and Fry BG

Toxins 5(11), 2172-2208 · Research article

008 **Atractaspis aterrima toxins: The first insight into the molecular evolution of venom in side-stabbers**
Terrat Y, **Sunagar K**, Fry BG, Jackson TNW, Scheib H, Fourmy R, Verdenaud M, Blanchet G, Antunes A, and Ducancel F

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Low D*, **Sunagar K***, Undheim E*, Ali SA*, Alagon AC, Ruder T, Jackson T, Kurniawan N, Gonzalez SP, King GF, Antunes A, and Fry BG

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Fry BG, Undheim E, (11 authors), and **Sunagar K**

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005 **Differential evolution and neofunctionalization of snake venom metalloprotease domains**
Brust A*, **Sunagar K***, Vetter I*, Yang D*, Undheim E, Casewell N, Ruder T, Jackson T, Koludarov I, Alewood P, Hodgson WC, Lewis R, King GF, Antunes A, and Fry BG

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