

Curriculum Vitae

Personal Details

ARPITAKONAR

Designation: Assistant Professor

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Nationality: Indian



Area of Research: Neurogenomics; Neuropsychiatry; Therapeutics

Positions

- DST-Inspire Faculty, CSIR-IGIB, New Delhi, India
- Executive committee member of Indian academy of Neuroscience, Delhi chapter, India
- Visiting Scientist at Biomedical Research Institute, AIST, Tsukuba, Japan
- Visiting Scientist at Department of Biological Sciences, Konkuk University, Seoul, South Korea
- Visiting Faculty at Center for Genomics, Jiwaji University, Gwalior, India
- Mentor of Indian Academy of Sciences Summer Research fellows

Research Contributions

Dr. Arpita Konar pursued PhD at Banaras Hindu University in the area of neurobiology and delineated the molecular mechanism of memory loss, a cardinal feature of neurodegenerative disorders and aging. After earning her Doctorate, Dr. Konar has been pursuing her independent research goals as DST Inspire Faculty in CSIR-IGIB, New Delhi followed by Assistant Professor at Institute of Health Sciences, Presidency University, Kolkata. Her recent findings reveal that long lasting epigenetic programming of thyroid hormone signalling in brain could underlie early life stress induced abnormal aggressive phenotype and its inheritance. Besides her mainstream research, she has also contributed extensively in the field of therapeutics of neurodegenerative disorders in collaboration with national and international research groups. Besides active research work, she has also been engaged in science outreach programs mainly in CSIR Open days and CSIR-Jigyasa Student-Scientist Connect Program. During the COVID-19 pandemic when laboratory training was compromised, she along with other scientists in IGIB developed Digital technology to offer the essential hands-on learning experience of a laboratory to school and college students.

Corresponding author

1. Rawat RS, Bhambri A, Pal M, Roy A, Jain S, Pillai B, **Konar A*** (2022) Rawat RS, Bhambri A, Pal M, Roy A, Jain S, Pillai B, Konar A. Early life stressful experiences escalate aggressive behavior in adulthood via changes in transthyretin expression and function. *Elife*.11:e77968. doi: 10.7554/eLife.77968. **(IF-8.71)**
2. **Konar A***, Rastogi M, Bhambri A (2019) Brain region specific methylation and Sirt1 binding changes in MAOA promoter is associated with sexual dimorphism in early life stress induced aggressive behavior. *Neurochem Int*.129:104510. **(IF-4.297)**
3. Goyal K, **Konar A***, Kumar BSH, Koul V (2018) Lactoferrin-conjugated pH and redox-sensitive polymersomes based on PEG-S-S-PLA-PCL-OH boost delivery of bacosides to the brain. *Nanoscale*. 10:17781-17798. **(IF-8.307)**
4. Singh P, Sivanandam TM, **Konar A***, Thakur MK (2021) Role of nutraceuticals in cognition during aging and related disorders. *Neurochem Int*.143:104928. **(IF-4.297)**

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5. **Konar A**, Kalra RS, Chaudhary A, Nayak A, Guruprasad KP, Satyamoorthy K, Ishida Y, Terao K, Kaul SC, Wadhwa R (2020) Identification of Caffeic Acid Phenethyl Ester (CAPE) as a Potent Neurodifferentiating Natural Compound That Improves Cognitive and Physiological Functions in Animal Models of Neurodegenerative Diseases. *Front Aging Neurosci*.12:561925. **(IF-5.75)**
6. **Konar A**, Gupta R, Shukla R, Maloney B, Khanna V, Wadhwa R, Lahiri DK, Thakur MK (2019) M1 muscarinic receptor is a key target of neuroprotection, neuroregeneration and memory recovery by i-Extract from *Withania somnifera*. *Sci Rep*. 9:13990. **(IF-4.996)**
7. **Konar A**, Kumar A, Maloney B, Lahiri DK and Thakur MK (2018) A serine protease KLK8 emerges as a regulator of regulators in memory: Microtubule protein dependent neuronal morphology and PKA-CREB signaling. *Sci Rep*. 8:9928.**(IF-4.996)**
8. **Konar A**, Singh P and Thakur MK (2016) Age-associated Cognitive Decline: Insights into Molecular Switches and Recovery Avenues. *Aging Dis*. 7:121-129.**(IF-9.968)**
9. **Konar A**, Gautam A and Thakur MK (2015) *Bacopa monniera* (CDRI-08) upregulates the expression of neuronal and glial plasticity markers in the brain of scopolamine-induced amnesic mice. *Evid Based Complement Alternat Med*. 2015:837012. **(IF-2.629)**
10. **Konar A**, Shah N, Singh R, Saxena N, Kaul SC, Wadhwa R and Thakur MK (2011) Protective role of ashwagandha leaf extract and its component withanone on scopolamine-induced changes in the brain and brain-derived cells. *PLoS One*. 6(11):e27265.**(IF-3.752)**
11. **Konar A** and Thakur MK (2014) Neuropsin expression correlates with dendritic marker MAP2c in different regions of aging mouse brain. *Mol Neurobiol*. 51(3):1130-8.**(IF- 5.576)**
12. **Konar A** and Thakur MK (2015) Neuropsin is associated with MAP2c dependent dendritic morphology in aging brain. *Ther Tar Neurol Dis*. 2(1) doi: 10.14800/ttnd.503.

Co-author

13. Kathpalia P, **Konar A**, Pillai B (2021) Home laboratory: interactive science from the kitchen. *Nature*. 596:486. **(IF-69.5)**
14. Kumar A, **Konar A**, Garg S, Kaul SC, Wadhwa R (2021) Experimental evidence and mechanism of action of some popular neuro-nutraceutical herbs. *Neurochem Int*. 149:105124. **(IF-4.297)**
15. Lahiri DK, **Konar A**, Thakur MK, Maloney B (2017) A cardinal sin when researching neuropsin/KLK8: Thou shalt validate antibodies. *Alzheimers Dement*. 9:1068-1069. **(IF-21.566)**
16. Wadhwa R, **Konar A** and Kaul SC (2016) Nootropic potential of Ashwagandha leaves: Beyond traditional root extracts. *Neurochem Int*. 95:109-118. **(IF-4.297)**
17. Singh P, **Konar A**, Kumar A, Srivas S and Thakur MK (2015) Hippocampal chromatin modifying enzymes are pivotal for scopolamine- induced synaptic plasticity gene expression changes and memory impairment. *J Neurochem*. 134(4):642-651. **(IF-5.546)**
18. Goyal K, **Konar A**, Kumar A, Koul V (2020) Bacosides Encapsulated in Lactoferrin Conjugated PEG-PLA-PCL-OH Based Polymersomes Act as Epigenetic Modulator in Chemically Induced Amnesia. *Neurochem Res*. 45(4):796-808. **(IF-4.414)**

Book Chapters

1. **Konar A***, Thakur MK (2017). Cellular and molecular targets underpinning memory enhancement by Ashwagandha. In: Kaul S, Wadhwa R (eds) *Science of Ashwagandha: Preventive and Therapeutic Potentials*. Springer, Cham pp 305-318. **(*Corresponding author)**
2. Thakur MK, **Konar A**, Kumar D, Singh P and Baghel M. Recovery of age related memory loss: hopes and challenges. *Topics in Biomedical Gerontology Springer* (2016)
3. Thakur MK, **Konar A**. Brain Aging and associated diseases – Text book on geriatric medicine, Indian Academy of Geriatrics. Ed: Pratap Sanchetee. Paras Medical Publisher, Hyderabad, India. Part1 gerontology (2014) chapter 5, pg 32-36,
4. Thakur MK, Sharma HR and **Konar A**. Role of estrogen in memory during ageing and degenerative pathologies: Molecular insights and therapeutic challenges. *Estrogens and cognition. Psychobiological and clinical aspects* Ed: Ignacio González-Burgos Research Trivandrum - Kerala, India. Signpost (2014) chapter 2 page 1-19
5. Thakur MK, **Konar A**, Gautam A. Brain Aging: A Critical Reappraisal. In: Thakur MK and Rattan SIS (eds). *Brain Aging and Therapeutic Interventions*, Springer (2012) pp 1-18.

Invited Talks

1. Konar A. Role of Interferon in peripubertal stress induced aggressive behaviour in 44th Annual Meeting of Japan Neuroscience Society, Kobe, Japan, July 28-31, 2021
2. Konar A. In Search of Molecular Culprits: From Early life Trauma to Maladaptive Aggressive Behaviour in 43rd Annual Meeting of Japan Neuroscience Society, Kobe, Japan, July 29-Aug1, 2020
3. Konar A. Early life trauma and violent behavior: Is there a molecular link? in National Conference on Aspects of gene and cell regulation, Institute of Mathematical Sciences, Chennai, Jan 6-7, 2020
4. Konar A. In search of therapeutics for memory loss: From molecular mechanisms to drug delivery systems in 19th Biennial Conference of the Association of Gerontology (India) & Multi-Disciplinary Workshops on Emerging Scenario of Population Ageing, AIIMS, New Delhi, Aug 17-18, 2019

5. Konar A. Born Insane or Turn Insane: Finding the roots in XXXVI Annual meet of Indian academy of Neurosciences and international conference on translational neurosciences and its application in protection of mental health, Banaras Hindu University, Varanasi, Oct 29-31, 2018
6. Konar A, Rastogi M and Bhambri A. Transcriptome signatures of early life trauma induced pathological aggression: Biological insights into criminal behavior in XXXV Annual meet of Indian academy of Neurosciences and international conference on translational neurosciences and its application in protection of mental health, Ravenshaw University, Cuttack, Oct 29-31, 2017
7. Konar A. Some scars never fade: Early life trauma, epigenetic marks and mental health in IBRO/APRC School of Neuroscience held in DBT-BHU ISLS, Varanasi during April 1-16, 2017
8. Konar A. Remember Ashwagandha to forget memory loss in CSIR-AIST Indo-Japan United Symposium on Innovative and Industrial Sciences “Medical Microbial & Environmental Engineering Technologies” held on 24th October 2016 at CSIR Science Centre, New Delhi
9. Konar A. The emerging field of neuroepigenetics: When society interferes with the reactive genome in International Brain Research Organization (IBRO) - Asia-Pacific Regional Committee (APRC) School of Neuroscience held in DBT-BHU Interdisciplinary School of Life Sciences, Sept 5-20 , 2015

Academic Achievements/Awards/Fellowships

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- International Brain Research Organization (IBRO) Exchange Fellowship Award, 2022
 - Travel Award for 45th Annual Meeting of the Japan Neuroscience Society, Okinawa, Japan (2022)
 - Travel Award for 44th Annual Meeting of JNS, Kobe, Japan (2021)
 - Travel Award for 43rd Annual Meeting of JNS, Kobe, Japan (2020)
 - DST INSPIRE Faculty Award (2015)
 - Gold medal winner in Oral Presentation Contest, DAILAB (DBT-AIST International Laboratory of Biomedicine), Tsukuba, Japan (2015)
 - Selected for Advanced Training in Biotechnology, AIST, Japan (2015)
 - Travel award for 6th International Society for Neurochemistry conference, Tokyo, Japan (2014)

Editor/Reviewer of Journals

Guest Editor- Frontiers in Aging Neuroscience
 Reviewing Editor- Frontiers in Behavioural Neuroscience
 Reviewer- Current Alzheimer's Research
 Reviewer - Scientific Reports

Conferences/workshop organized

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- Organized IBRO-APRC Associate School on Regulatory RNAs in the Brain: Development to Disease at IGIB(2021)
 - Resource person for CSIR-JIGYASA outreach programs

Membership of Scientific Societies

- International Brain Research Organization (IBRO)
- International Society of Neurochemistry (ISN)
- Japan Neuroscience Society (JNS)
- Indian Academy of Neuroscience (IAN)
- Society for Neurochemistry, India (SNCI)