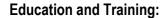


Assistant Professor.

Department of Animal Sciences

Central University of Punjab E-mail: <u>jtprksh.sharma@gmail.com</u>

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2008 - 2014	Post-Doctoral Fellow, INSERM U837, Lille, Cedex, France.
2002 - 2007	Ph.D. in Biotechnology (Neuroscience), Guru Nanak Dev University, Amritsar,
	India.
2000 - 2002	M.Sc. in Zoology, Guru Nanak Dev University, Amritsar, India.
1998 - 2000	B.Sc. in Med. Sciences, Himachal Pradesh University, Shimla, India

Research/Teaching Experience:

2015 - Cont. Assistant Professor, Centre for Animal Sciences Central university of Punjab, Bathinda

2014 – 2015 Assistant Professor, Department of Biotechnology, DAV University Jalandhar, Punjab India.

2008 – 2014 "Development and Plasticity of the Neuroendocrine Brain" worked on this research topic as a postdoctoral Fellow in INSERM France.

2002 – 2007: "Neuronal Plasticity in Adult Brain: Study of Molecular Marker of Synaptic Remodeling in Hypothalamic GnRH- Astroglial cells" as a topic for Ph.D. thesis at Department of Biotechnology, Guru Nanak Dev University, Amritsar, India.

Personal Detail:

• Male; Married; Born 1st Sept, 1979.

Qualification:

• PhD in Biotechnology (Neurochemistry and Neuroendocrinology)

Publications:

• 25 Scientific papers published/accepted in internationally recognized journal.

Teaching/Research experience

• **11** years

Conferences/Symposia:

• 9 invited and Oral talk, 16 conferences attended, 5 workshops attended.

G-scholar index

Citations 1072
 h-index 18
 i10-index 19

Link: https://scholar.google.co.in/citations?user=jB2tl-MAAAAJ&hl=en



Publications:

- **1.** Kumar B, Dwivedi AR, S Prashar V, Gupta SK, Krishnamurthy S, **Parkash J**[#], Kumar V[#] 2019: Dipropargyl Substituted Diphenylpyrimidines as Dual Inhibitors of Monoamine Oxidase and Acetylcholinesterase. European Journal of Medicinal Chemistry. 177 (2019) 221e234 (**Impact factor: 4.8**).
- 2. Kumar B, Dwivedi AR, Sarkar B, Gupta SK, Krishnamurthy S, Mantha AK, Parkash J, Kumar V: 2018: 4,6-Diphenylpyrimidine Derivatives as Dual Inhibitors of Monoamine Oxidase and Acetylcholinesterase for the Treatment of Alzheimer's Disease. ACS Chem Neurosci. 2019, 10, 252–265 10.1021/acschemneuro.8b00220 (Impact factor: 4.21).
- **3.** Parkash J, Anne Sarah L, Gallet, Balland E, Pralong F, Pasterkamp J, Prevot J, and Giacobini P, **2015**: Semaphorin 7A regulates neuro-glial plasticity of the adult hypothalamic median eminence. *Nature Communications* 6: 6385. 12; 7: 10055 (Impact factor: 12.35).
- **4.** Jongbloets BC, Lemstra S, Schellino R, Broekhoven MH, **Parkash J**, Hellemons AJ, Mao T, Giacobini P, van Praag H, De Marchis S, Ramakers GMJ and Pasterkamp RJ (**2017**) Stage-specific functions of Semaphorin7A during adult hippocampal neurogenesis rely on distinct receptors. *Nature Communications* 10,8, 14666 (**Impact factor: 12.35**).
- **5.** Messina A, Langlet F, Chachlaki K, Roa J, Rasika S, Jouy N, Gallet S, Gaytan F, **Parkash J**, Sempere MN, Giacobini P, Prevot V (**2016**) MicroRNAs regulate production of hypothalamic GnRH before puberty. **Nature Neuroscience** 19(6):835-844 (**Impact factor 19.91**).
- **6.** Cimino I, Casoni F, Messina A, **Parkash J,** Soazik P Jamin, Sophie Catteau-Jonard, Francis C, Baroncini M, Dewailly D, Pigny P, Prescott M, Campbell R, Herbison A, Prévot V, and Giacobini P (**2016**): Novel Role for Anti-Müllerian Hormone in the Regulation of GnRH Neuron Excitability and Hormone Secretion. *Nature Communications* 12; 7: 10055. (**Impact factor: 12.35**)
- 7. Giacobini P*, Parkash J*, Campagne C*, Hanchate Nk, Mazure D, Prevot V (2014): Brain Endothelial Cells Control Fertility through Ovarian-Setroid-Dependent Release of Semaphorin 3A. Plos Biology 12 (3), e1001808 (Impact factor: 8.38).
- **8.** Bellefontaine N, chachlaki N, **Parkash J**, Vanacker C, Colledge W, Tassigny X, Bouret S, and Prevot V (**2014**): Leptin facilitates reproduction through neuronal nitric oxide signaling in the hypothalamic preoptic region in mice. **Journal of Clinical investigation (Impact factor: 13.25)** doi:10.1172/JCI65928
- 9. Collden G, Balland E, Parkash J, Caron E, Prevot V, Bouret SG (2014): Neonatal Overnutrition Causes Early Alterations in the Central Response to Peripheral Ghrelin Molecular Metabolism 24; 4(1):15-24. (Impact factor: 6.72).
- **10. Parkash J**, Cimino I, Ferraris N, Casoni F, Wray S, Cappy H, Prevot V, and Giacobini P (**2012**): Suppression of β1- integrin in gonadotropin-releasing hormone cells distrupts migration and axonal extension resulting in severe reproductive alterations. **Journal of Neuroscience (Impact factor: 7.13)** 32(47): 16992-17002.

- **11.** Hanchate NK*, **Parkash J***, Bellefontaine N, Mazur D, Colledge WH, Tassigny X, Prevot V (**2012**): Kisspeptin-GPR54 signaling in mouse NO-synthesizing neurons participates in the hypothalamic control of ovulation. **Journal of Neuroscience** (**Impact factor: 7.13**) 32(3): 932-945.
- **12. Hanchate NK**, Giacobini P, Pierre Lhuillier, **Parkash J**, Cécile Espy, Fouveaut C, Leroy C, Baron S, Campagne C, Collier F, Garcia-Pineiro A, Dewailly D, Cortet-Rudelli C, Gersak K, Pugeat M, Young J, Hardelin JP, Prevot V and Dodé C (**2012**): SEMA3A, a Gene Involved in Axonal Pathfinding, Is Mutated in Patients with Kallmann Syndrome. **PLoS Genetics (Impact factor: 9.13)** 8(8):e1002896.
- **13.** Kumar S, **Parkash J**, Kumar H and Kaur G **2012**: Enzymatic removal of polysialic acid from neural cell adhesion molecule interrupts gonadotropin releasing hormone (GnRH) neuron-glia remodeling. **Molecular and Cellular Endocrinology (Impact factor: 4.09)** 348(1): 95-103.
- **14.** Briz V, **Parkash J**, Sánchez-Redondo S, Prevot V, Suñol C (**2012**): Allopregnanolone Prevents Dieldrin-induced NMDA Receptor Internalization and Neurotoxicity in Cortical Neurons by Preserving GABA_a Receptor Functionality. **Endocrinology** (**Impact factor: 4.75**) 153(2): 847-60.
- **15. Parkash J**, Tassigny X, Bellefontaine N, Campagne C, Mazure D, Scherrer VB, and Prevot V (**2010**): Phosphorylation of N-methyl-D-aspartic acid receptor-associated neuronal nitric oxide synthase depends on estrogens and modulates hypothalamic nitric oxide production during the ovarian cycle. **Endocrinology (Impact factor: 4.75)** 151: **2723 2735**.
- **16. Parkash J** and Kaur G **2010**: Steroid Hormones Regulate Post-Translational Modification of Neural Cell Adhesion Molecule: Implication For The Neuroendocrine Control of GnRH. **Journal of Neurological Sciences (Impact factor: 0.13)** 27(2): 197-213.
- 17. Vij A, Randhawa R, Parkash J and Changotra H (2016): Investigating regulatory signatures of human autophagy related gene 5 (ATG5) through functional in silico analysis. Meta gene 9:237-48. (Impact factor: 1.2).
- **18.** Kumar S*, **Parkash J***, Kumar H and Kaur G (**2009**): Interactive effect of excitotoxic injury and dietary restriction on neurogenesis and neurotrophic factors in adult male rat brain. **Neuroscience Research (Impact factor: 2.376)** 65(4): 367-374.
- **19.** Parkash J and Kaur (**2007**): Potential of PSA-NCAM in neuron-glial plasticity in the adult hypothalamus: Role of noradrenergic and GABAergic neurotransmitters. **Brain Research Bulletin** (**Impact factor: 2.77**) 74(5): 317-328.
- **20. Parkash J** and Kaur (**2007**): Transcriptional Regulation of PSA-NCAM Mediated Neuron-glial Plasticity in the Adult Hypothalamus. **Neuron Glia Biology (Impact factor: 1.3**) 3: 299-307.
- **21.** Parkash J and Kaur (**2005**): Neuronal-Glial Plasticity in the GnRH Release in Adult Female Rats: Role of Polysialylated Form of Neural Cell Adhesion Molecule. **Journal of Endocrinology (Impact factor: 4.05**) 186: 397-409.

Review Articles:

- **22.** Walia A, Mehta P, Guleria P, Chauhan A and **Parkash J** (**2017**): Microbial xylanases and their application in pulp biobleaching: **3Biotech** DOI: 10.1007/s13205-016-0584-6. (**Impact factor: 0.992**).
- **23.** Bellefontaine N, Hanchate NK, **Parkash J,** Campagne C, Seranno S, Tassigny X, Prevot V (**2011**): Nitric oxide as key mediator of neuron-to-neuron and endothelia-to-glia communication involved in neuroendocrine control of reproduction. **Neuroendocrinology (Impact factor: 3.272)** 93: 74-89.
- **24.** Prevot V, Bellefontaine N, Marc Beronni, Arian Shrif, Hanchate NK, **Parkash J**, Celine Campagne and Sandrine de Seranno **2010:** GnRH nerve terminals, tanycytes and neurohaemal junction remodeling in the adult median eminence: functional consequences for reproduction and dynamic role of vascular endothelial cells. **Journal of Neuroendocrinology (Impact factor: 3.39)** 22 (7): 639-649.
- **25.** Prevot V, Hanchate NK, Shrif A, **Parkash J**, Estrella C, Allet C, Campagne C, Sandrine de Seranno, Tassigny X, Beronni M (**2010**): Function-related structural plasticity of the GnRH system A role for neuronal–glial–endothelial interactions Structural plasticity in GnRH system. **Frontier in Neuroendocrinology (Impact factor: 7.037**) 31 (3): 241-258.
 - *Front cover of the journal Frontier of Neuroendocrinology: Schematic representation of endothelial–glial interactions involved in the control of GnRH neurosecretion in the median eminence. Volume 31, 2010.
 - * Contributed equally in above publications # Corresponding author

Research Project/Grant (Ongoing)

S. No.	Title	Agency	Period	Grant/Amount mobilized (Rs. Lakhs)
1.	Neural-glial-endothelial tripartite interactions: Unravel the basic cell cell regulatory Mechanisms involved in the central control of reproduction.	SERB DST	2016-2019	About 44 Lakh
2.	Multi-target paradigm in drug discovery efforts to combat Alzheimer's Disease (As a Co-PI)	CSIR	2019-2022	22 Lakh
3.	Role for Semaphorins and its Receptors in the Control of Sexual Brain Development and Adult Brain Plasticity	UGC	2017-2019	6 Lakh
4.	Developmental origins of the metabolic syndrome: Hormone-dependent programming of the metabolic brain in physiological and pathological conditions		2016-2018	3 Lakh

Book Chapters:

- 1. **Gurcharan Kaur and Jyoti Parkash 2018**: Hormones of hypothalamus and ageing published in the book 'Hormones in Ageing and Longevity' Publisher (springer) pages151-166.
- Jyoti Parkash Arti Sharma and Ankur Jairath 2018: Embryonic stem cell as a Cellular Model for testing the toxicity of engineered nanoparticles. Published in the book 'Nanotoxicology' Publisher CRC Press Taylor and Francis group. Pages 613-634.

Recipient of Travel Grants from

- **1.** The Asian Pacific Society for Neurochemistry (APSN) for 7th Biennial Meeting in July 2006, National University Singapore (NUS), Singapore.
- 2. IBRO-Neuroscience Training School at National University Singapore, Singapore in June 2006.
- 3. The Japan Neuroscience Society (JNS) for the 29th Annual Meeting in July 2006, Kyoto, Japan.
- **4.** The Indian Academy of Neuroscience to attend the XXII annual meeting in Jan 28th-30th 2005, Gwalior. India

Awards/Fellowships

- Junior Research Fellowship/ Senior Research Fellowship in Life Sciences, sponsored by DBT, ICMR, Delhi, Govt. of India, India, awarded on the basis of National Eligibility Test (NET) in Dec. 2001 and June 2002 for pursuing research.
- **Postdoc Fellowship** in Jan. 2008 to Jan. 2010 from IFCPAR/CEFIPRA, JPARc, INSERM France.
- **Postdoc fellowship** from 2010 to 2014 from funding agencies, ANR, FRM and DN2M, JPARc INSERM France
- **Research Award 2015-16:** Central University of Punjab, Bathinda
- Research Award 2016-17: Central University of Punjab, Bathinda
- Indo-France Exchange Programme 2016-2017: MOU has been signed between CUP Bathinda and University of Science and Law Lille France (5 Years contract).

Poster Presentations:

- **1. J. Parkash**, A. Loyens, S. Gallet, E. Balland, F. Pralong, J. Pastercamp, V. Prevot, P. Giacobini 2011 Semaphorin 7A expression in tanycytes is regulated by sex-steroid hormones and controls gonadotropin-releasing hormone-1 (GnRH-1) cell plasticity. *41st Annual Meeting of Neuroscience* (SFN), November 12th-16th 2011, Washington DC, USA.
- 2. H. N. Kumar, J. Parkash, D Mazur, W.H Colleddge, X.D'Angleomont De Tessigny, V, Prevot 2011 Nitric oxide synthesizing neurons: important mediators of Kisspeptin- GnRH neuron

- interactions during the estrous cycle. 41st Annual Meeting of Neuroscience (SFN), November 12th-16th 2011, Washington DC, USA.
- **3.** Andrea Messina*, Langlet Fanny, Chlachaki Konstantina, Roa Juan, Gallet Sarah, **Jyoti Parkash**, Manuel Tena-Sempere, Paolo Giacobini and Vincent Prevot 2015: MicroRNAs flip the switch for the production of hypothalamic GnRH before puberty. 40th Colloque De la societie de neuroendocrinologie international congress from 23rd 25th September, 2015, Lille, France.
- **4.** N. Bellefontaine, **J. Parkash**, S.G. Bouret, V. Prevot 2011 Nitric oxide neurons in the preoptic area of the hypothalamus are a direct target of Leptin: Implications for the reproductive axis. 41st Annual Meeting of Neuroscience (SFN), November 12th-16th 2011, Washington DC, USA.
- N. Bellefontaine, E. Caron, J. Parkash, C. Vanacker, S. G. Bouret, V. Prevot Neuronal nitric oxide synthase activity is necessary for diet-induced obesity. 43rd Annual Meeting of Neuroscience (SFN), November 9th-13th 2013, San Diego, California, USA.
- 6. I. Cimino, F. Casoni, A. Messina, J. Parkash, A. Loyens, S. Jamin, N. Di Clemente, D. Dewailly, V. Prevot, P. Giacobini Extra-ovarian effects of anti-müllerian hormone on the gonadotropin-releasing hormone (gnrh) neurons. 43rd Annual Meeting of Neuroscience (SFN), November 9th-13th 2013, San Diego, California, USA.
- **7. J. Parkash**, A. Loyens, S. Gallet, E. Balland, F. Pralong, J. Pastercamp, V. Prevot, P. Giacobini Sema7A is a Tanycytic-Secreted Guidance Molecule and Regulates GnRH Axon Outgrowth in the Adult Brain. *14th LARC Neuroscience meeting, October 2010, Lille.*
- **8.** P. Giacobini, **J. Parkash**, A. Loyens, S. Gallet, E. Balland, F. Pralong, J. Pastercamp, V. Prevot 2013: Semaphorins 7A signaling in periodical neuro-glial plasticity of the hypothalamic median eminence that underlies reproduction. *43rd Annual Meeting of Neuroscience (SFN), November 9th-13th 2013, San Diego, California, USA.*
- 9. J. Parkash, D'Anglemont De Tassigny X, Bellefontaine N, Campagne C, Mazure D, Buée-Scherrer V and Prévot V 2010 Phosphorylation of NMDAR associated nNOS modulates hypothalamic nitric oxide production: The role of estrogen during ovarian cycle in female rats. 7th international congress of Neuroendocrinology from 7th 11th July, Rouen, France P2-182.
- 10. J. Parkash, D'Anglemont De Tassigny X, Bellefontaine N, Campagne C, Mazure D, Buée-Scherrer V and Prévot V 2010 Phosphorylation of N-methyl-D-aspartic acid receptor-associated neuronal nitric oxide synthase modulates hypothalamic nitric oxide production: The role of estrogen during ovarian cycle in female rats; 36th Colloque De la societie de neuroendocrinologie international congress from 15th 18th September, 2009, Nice, France.

- 11. V. Briz · M. Galofré, J. Parkash, V. Prevot, C. Suñol 2010: Estradiol counteracts NMDAR internalization induced by long-term exposure to dieldrin in cortical neurons. XII International Congress of Toxicology 19th -23th July 2010, Barcelona-Spain. Toxicology Letters. Volume 196, Supplement, Pages S1-S352 (17 July 2010)
- **12. J. Parkash** and Kaur G Potential of PSA-NCAM to Mediate Neuronal-glial interaction in GnRH Neurosecretion: Role of GABAergic and noradrenergic neurotransmitters; 29th Annual Japan Neuroscience Society (JNS) Kyoto from 19th 21st July (Neuroscience Research, 2006).
- **13. J. Parkash** and Kaur G Activity dependent neuronal-glial remodeling in the ME of adult rat hypothalamus: Role of GABAergic and noradrenergic neurotransmitters; 7th Biennial Asian Pacific Society for Neurochemistry (APSN 2006) Singapore from 2nd 5th July (<u>Journal of Neurochemistry</u> 98 (1): 71, 2006).
- **14. J. Parkash**, A. Loyens, S. Gallet, E. Balland, F. Pralong, J. Pastercamp, V. Prevot, P. Giacobini Sema7A is a tanycytic-Secreted Guidance Cue Regulates GnRH Axon Plasticity in adult Brain. 30th Annual meeting of Indian Academy of Neurosciences. 27th-30th Oct. 2012 Amritsar India.
- 15. Sushil Kumar, Jyoti Parkash, Dinesh Lakhanpal and Gurcharan Kaur: Interactive effect of excitotoxicity injury and dietary restriction on neurogenesis and neurotrophic factors in adult male rat brain; International symposium on "Molecular Aspects of Brain Aging and Neurological Disorders" at Department of Biotechnology, Guru Nanak Dev University Amritsar from 28th 29th November, 2008.
- 16. J. Parkash and Gurcharan Kaur: Neuronal glial interactions are involved in the control of GnRH neurosecretion in the hypothalamus of adult cycling female rats; XXIV Annual conference of Indian Academy of Neuroscience, ITRC Lucknow from 17th 20th December (Annals of Neuroscience; 97 (13), 2006).

Oral/ Invited speaker in National and International Conferences:

- Emerging roles of semaphorins in synaptic plasticity: Homeostasis and diseases. Invited lecture delivered at IBRO-APRC Associate School on Lifelong Maintenance of Brain Health: Bridging the Gaps amongst the Young, the Old and those in Between. Universiti Teknologi MARA UiTM, Bandar Puncak Alam, Selangor Malaysia.
- 2. Nitric oxide mediated plasticity in the metabolic brain. Invited lecture delivered at IBRO-APRC Associate School on Lifelong Maintenance of Brain Health: Bridging the Gaps amongst the Young, the Old and those in Between. Universiti Teknologi MARA UiTM, Bandar Puncak Alam, Selangor Malaysia.
- 3. Invited Resource person in a teacher training workshop on 'Olympiads' Organised by Central

- University of Punjav Bathinda, TIFR and Society for Sciences and Technology from 27th April to 28th April 2019.
- 4. Emerging role of semaphorins in neural-glial-endothelial plasticity in the adult hypothalamic median eminence. Invited lecture delivered at Development and Plasticity of the Neuroendocrine Brain Neurobese Interantional Associated Laboratory U1172. JPARC INSERM France 8th June 2016.
- 5. Leptin dependent neuronal NO signaling facilitates reproduction in adult hypothalamic region of the brain. Invited lecture delivered at Development and Plasticity of the Neuroendocrine Brain Neurobese Interantional Associated Laboratory U1172. JPARC INSERM France 15th June 2016.
- **6.** Invited resource person to train Bachelor, Master and Ph.D. students of Dr. Vincent Prevot lab at U1172, from 3rd June 2016 to 8th July 2016, JPARC INSERM France.
- 7. Delivered an oral talk entitled "Semaphorins regulate neuro-glia plasticity in the adult hypothlamic median eminence conference organised by DAV university, Emerging trends of Host-Microbe interactions on 17-18th April 2015.
- **8.** Invited as a Resource person in a workshop (organised by Doaba College, Jalandhar) under DBT Star College Scheme Support (Ministry of Science & Technology) entitled 'Fundamentals of animal tissue culture and its applications' held on 18th March 2015.
- 9. Won Best Presentation Award in International symposium on "Molecular Aspects of Brain Aging and Neurological Disorders" in November 2008 held at Department of Biotechnology, Guru Nanak Dev University, Amritsar, India.

Refresher Course/Orientation Programmes:

- **1.** Attended Orientation programme of 28 days organised by HRDC Panjab University Chandigarh from 25th June 2017 to 21st July 2017.
- **2.** Attended Refresher course organised by Central University of Punjab Bathinda from 1st Feb to 15th Fab. 2016 sponsored by Science academies of India.
- 3. Attended a PMMMNMTT (MHRD sponsored) National workshop on "Curriculum Design and Development" organized by Centre for Curriculum Research, Policy and Educational Development at School of Education, Central University of Punjab, Bathinda from 28th January to 6th February, 2019.
- **4.** Attended Refresher course on Plant Taxonomy, Phytogeography and Ecology organised by Central University of Punjab Bathinda from 5th March to 20th March. 2019 sponsored by Science academies of India.

Conferences Organized:

1. **Dr. Jyoti Parkash** was a Member of Organizing, Scientific and Cultural committees in National Organized conference by DAV university "Emerging Trends in Host Microbe Interactions" held on April 17th-18th, 2015.

Association with Professional Societies

- 1. **Dr. Jyoti Parkash** is Editorial Board Member for International Journal of Biology, Pharmaceutical and Allied Sciences (IJBPAS)
- 2. Dr. Jyoti Parkash is Editorial Board Member for the Journal of Virology and Biotechnology.

Member of following Societies:

- 1. Society for Neuroscience (SFN).
- 2. Asian Pacific Society for Neurochemistry (APSN)
- 3. Japan Neuroscience Society (JNS)
- 4. Indian Academy of Neuroscience

Workshops:

- 1. Attended Orientation Course of 28 days at Panjab University Chandigarh, Punjab (28th June to 25th July 2017).
- 2. Attended Refresher course of 15 days on Environmental Biology at Central University of Punjab, Bathinda (1st Feb. to 15th Feb. 2016).
- **3.** Attended National Workshop on the Art and Science of Scholarly Communication: Writing Better Research Papers organized by DAV University on 14th March 2015.
- **4.** Attended IBRO-Neuroscience Training School at National University Singapore, Singapore in June 2006.
- **5.** Attended national workshop on "Tools for Bio-informatics Sub-center, Department of Biotechnology, Guru Nanak Dev University, Amritsar from 3rd 4th March, 2005.

References:

1) Dr. Gurcharan Kaur (Professor)

Neurochemistry and Neuroendocrology Lab Department of Biotechnology Guru Nanak Dev University Amritsar- 143 005, Punjab

India

2) Dr. Vincent PREVOT (Director)

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Tel:

3) Dr. Paolo Giacobini (Sen. Scientist)

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