

Detailed Biodata



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Subjects taught:	Human Anatomy and Physiology, Basic and Clinical Pharmacology, Community Pharmacy and Toxicology; Molecular Biology and Biotechnology; Pathology
Areas of Specialization	Cardiovascular pharmacology, Neuropathic Pain, Stress adaptation,
Academic Qualifications	M. Pharm., PhD (Pharmacology)
Experience	17 years
Published Work	140 research and review articles
Total Impact factor:	~ 325
Total citations:	3574
H index:	33
i10-index	83

PhD Guided: 02

Books: 04

1. **Amteshwar Singh Jaggi**, Anjana Bali and Nirmal Singh. Viva Voce in Experimental Pharmacology. Year 2014, CBS Publishers, New Delhi.
2. **Amteshwar Singh Jaggi**, Varun Parkash and Nirmal Singh. Advanced glycation inhibitory potential of certain antidiabetic drugs. Year 2014, Lambert Academic Publishing.
3. Puneet Randhawa and **Amteshwar Singh Jaggi**: Fundamental Aspects of Experimental cardiology. Year: 2014, Scholar Press,
4. Anjana Bali and **Amteshwar Singh Jaggi**: Fundamental Aspects of Experimental Stress. Year: 2014, Scholar Press.

Research Projects:

- UGC funded Minor Research Project as Principal Investigator on” Exploring the Mechanisms in Central Sensitization in Chronic-Constriction-Induced Neuropathic Pain in Rats” (2011)
- UGC funded Major Research Project as co-investigator on” Exploring Neuroprotective Mechanisms of Ischemic Postconditioning in Mice” worth 8 lakhs (2011)
- DST funded Major Research Project as Principal-investigator on “Exploring the molecular mechanisms of remote preconditioning-induced cardioprotection in ischemia-reperfusion-induced injury in rats” worth 44 lakhs (2014)

List of Publications

1. Kaur G, Singh N, Jaggi AS. Mast cells in neuropathic pain: an increasing spectrum of their involvement in pathophysiology. *Rev Neurosci*. 2017 Oct 26;28(7):759-766.
2. **Jaggi AS**, Kaur G, Bali A, Singh N. Pharmacological investigations on mast cell stabilizer and histamine receptor antagonists in vincristine-induced neuropathic pain. *Naunyn Schmiedebergs Arch Pharmacol*. 2017 Sep 15. doi: 10.1007/s00210-017-1426-8.
3. Aggarwal S, Randhawa PK, Singh N, **Jaggi AS**. Role of ATP-Sensitive Potassium Channels in Remote Ischemic Preconditioning Induced Tissue Protection. *J Cardiovasc Pharmacol Ther*. 2017 Sep;22(5):467-475. doi: 10.1177/1074248416687873.
4. Khangura RK, Bali A, Kaur G, Singh N, **Jaggi AS**. Neuropathic pain attenuating effects of perampanel in an experimental model of chronic constriction injury in rats. *Biomed Pharmacother*. 2017 Oct;94:557-563.
5. Randhawa PK, **Jaggi AS**. Investigating the involvement of glycogen synthase kinase-3 β and gap junction signaling in TRPV1 and remote hind preconditioning-induced cardioprotection. *Eur J Pharmacol*. 2017 Nov 5;814:9-17.
6. Randhawa PK, **Jaggi AS**. Exploring the putative role of TRPV1 -dependent CGRP release in remote hind preconditioning-induced cardioprotection. *Cardiovasc Ther*. 2017 Jun 9. doi: 10.1111/1755-5922.12276.
7. Bali A, **Jaggi AS**. Anti-stress effects of a GSK-3 β inhibitor, AR-A014418, in immobilization stress of variable duration in mice. *J Basic Clin Physiol Pharmacol*. 2017 Jun 7. pii: /j/jbcpp.ahead-of-print/jbcpp-2016-0157/jbcpp-2016-0157.xml.
8. Singh L, Randhawa PK, Singh N, **Jaggi AS**. Redox signaling in remote ischemic preconditioning-induced cardioprotection: Evidences and mechanisms. *Eur J Pharmacol*. 2017 May 17. pii: S0014-2999(17)30351-5. d
9. Randhawa PK, **Jaggi AS**. Investigating the involvement of TRPV1 ion channels in remote hind limb preconditioning-induced cardioprotection in rats. *Naunyn Schmiedebergs Arch Pharmacol*. 2017 Feb;390(2):117-126.

10. Aulakh AS, Randhawa PK, Singh N, **Jaggi AS**. Neurogenic pathways in remote ischemic preconditioning induced cardioprotection: Evidences and possible mechanisms. *Korean J Physiol Pharmacol*. 2017 Mar;21(2):145-152.
11. Kaur I, Kumar A, **Jaggi AS**, Singh N. Evidence for the role of histaminergic pathways in neuroprotective mechanism of ischemic postconditioning in mice. *Fundam Clin Pharmacol*. 2017 Feb 7. doi: 10.1111/fcp.12275. [Epub ahead of print]
12. Khangura RK, Bali A, **Jaggi AS**, Singh N. Histone acetylation and histone deacetylation in neuropathic pain: An unresolved puzzle? *Eur J Pharmacol*. 2017 Jan 15;795:36-42.
13. Randhawa PK, **Jaggi AS**. TRPV1 channels in cardiovascular system: A double edged sword? *Int J Cardiol*. 2017 Feb 1;228:103-113.
14. Neha, **Jaggi AS**, Singh N. Silymarin and Its Role in Chronic Diseases. *Adv Exp Med Biol*. 2016;929:25-44.
15. Singh A, Randhawa PK, Bali A, Singh N, **Jaggi AS**. Exploring the Role of TRPV and CGRP in Adenosine Preconditioning and Remote Hind Limb Preconditioning-Induced Cardioprotection in Rats. *Cardiovasc Drugs Ther*. 2017 Feb 14. doi: 10.1007/s10557-017-6716-3.
16. Randhawa PK, **Jaggi AS**. Unraveling the role of adenosine in remote ischemic preconditioning-induced cardioprotection. *Life Sci*. 2016 Jun 15;155:140-6.
17. Randhawa PK, **Jaggi AS**. Opioids in Remote Ischemic Preconditioning-Induced Cardioprotection. *J Cardiovasc Pharmacol Ther*. 2016 Jul 26. pii: 1074248416660621. [Epub ahead of print]
18. Bali A, **Jaggi AS**. Investigations on GSK-3 β /NF-kB signaling in stress and stress adaptive behavior in electric foot shock subjected mice. *Behav Brain Res*. 2016 Apr 1;302:1-10. doi: 10.1016/j.bbr.2016.01.014
19. Randhawa PK, **Jaggi AS**. Gadolinium and ruthenium red attenuate remote hind limb preconditioning-induced cardioprotection: possible role of TRP and especially TRPV channels. *Naunyn Schmiedebergs Arch Pharmacol*. 2016 Apr 27. [Epub ahead of print]
20. Shah R, Singh J, Singh D, **Jaggi AS**, Singh N. Sulfatase inhibitors for recidivist breast cancer treatment: A chemical review. *Eur J Med Chem*. 2016 May

23;114:170-90.

21. Aggarwal S, Randhawa PK, Singh N, **Jaggi AS**. Preconditioning at a distance: Involvement of endothelial vasoactive substances in cardioprotection against ischemia-reperfusion injury. *Life Sci*. 2016 Mar 12. pii: S0024-3205(16)30172-2.
22. Singh B, Randhawa PK, Singh N, **Jaggi AS**. Investigations on the role of leukotrienes in remote hind limb preconditioning-induced cardioprotection in rats. *Life Sci*. 2016 Apr 5. pii: S0024-3205(16)30225-9.
23. Verma M, Bali A, Singh N, **Jaggi AS**. Investigating the role of nisoldipine in foot-shock-induced post-traumatic stress disorder in mice. *Fundam Clin Pharmacol*. 2016 Apr;30(2):128-36.
24. Bali A, **Jaggi AS**. Angiotensin II-triggered kinase signaling cascade in the central nervous system. *Rev Neurosci*. 2015 Nov 17. pii: /j/revneuro.ahead-of-print/revneuro-2015-0041/revneuro-2015-0041.xml. doi:
25. Sharma R, Randhawa PK, Singh N, **Jaggi AS**. Possible role of thromboxane A2 in remote hind limb preconditioning-induced cardioprotection. *Naunyn Schmiedebergs Arch Pharmacol*. 2015 Nov 3. [Epub ahead of print]
26. Sharma R, Randhawa PK, Singh N, **Jaggi AS**. Bradykinin in ischemic conditioning-induced tissue protection: Evidences and possible mechanisms. *Eur J Pharmacol*. 2015 Dec 5;768:58-70. doi: 10.1016/j.ejphar.2015.10.029. Epub 2015 Oct 21. Review.
27. Randhawa PK, **Jaggi AS**. TRPV4 channels: physiological and pathological role in cardiovascular system. *Basic Res Cardiol*. 2015 Nov;110(6):54. doi: 10.1007/s00395-015-0512-7. Epub 2015 Sep 28.
28. **Jaggi AS**, Kaur A, Bali A, Singh N. Expanding Spectrum of Sodium Potassium Chloride Co-transporters in the Pathophysiology of Diseases. *Curr Neuropharmacol*. 2015;13(3):369-88.
29. Bali A, **Jaggi AS**. Differential role of angiotensin neuropeptides in repeated exposure of immobilization stress of varying duration in mice. *Life Sci*. 2015 Nov 15;141:90-8. doi: 10.1016/j.lfs.2015.09.005. Epub 2015 Sep 18.
30. Chauhan E, Bali A, Singh N, **Jaggi AS**. Cross stress adaptation: Phenomenon of interactions between homotypic and heterotypic stressors. *Life Sci*. 2015 Sep

- 15;137:98-104. doi: 10.1016/j.lfs.2015.07.018. Epub 2015 Jul 22. Review.
31. Bali A, **Jaggi AS**. Electric foot shock stress: a useful tool in neuropsychiatric studies. *Rev Neurosci*. 2015 Dec 1;26(6):655-77. doi: 10.1515/revneuro-2015-0015.
 32. Bali A, **Jaggi AS**. Clinical experimental stress studies: methods and assessment. *Rev Neurosci*. 2015 Oct 1;26(5):555-79. doi: 10.1515/revneuro-2015-0004.
 33. Verma V, Bali A, Singh N, **Jaggi AS**. Implications of sodium hydrogen exchangers in various brain diseases. *J Basic Clin Physiol Pharmacol*. 2015 Sep;26(5):417-26.
 34. Kumar A, Kumar A, **Jaggi AS**, Singh N. Efficacy of Cilostazol a selective phosphodiesterase-3 inhibitor in rat model of Streptozotocin diabetes induced vascular dementia. *Pharmacol Biochem Behav*. 2015 Aug;135:20-30.
 35. Bali A, **Jaggi AS**. An integrative review on role and mechanisms of ghrelin in stress, anxiety and depression. *Curr Drug Targets*. 2015 May 17. [Epub ahead of print]
 36. Bali A, **Jaggi AS**. Investigations in foot shock stress of variable intensity in mice: Adaptation and role of angiotensin II. *Eur J Pharmacol*. 2015 Aug 15;761:86-94. doi: 10.1016/j.ejphar.2015.04.037. Epub 2015 May 1.
 37. Kaur H, Kumar A, **Jaggi AS**, Singh N. Pharmacologic investigations on the role of Sirt-1 in neuroprotective mechanism of postconditioning in mice. *J Surg Res*. 2015 Jul;197(1):191-200.
 38. Vyas B, Singh M, Kaur M, Bahia MS, **Jaggi AS**, Silakari O, Singh B. Aldose reductase inhibitors for diabetic complications: Receptor induced atom-based 3D-QSAR analysis, synthesis and biological evaluation. *J Mol Graph Model*. 2015 Jun;59:59-71.
 39. Bali A, **Jaggi AS**. Electric foot shock stress adaptation: Does it exist or not? *Life Sci*. 2015 Jun 1;130:97-102
 40. Mahi N, Kumar A, **Jaggi AS**, Singh N, Dhawan R. Possible role of pannexin 1/P2x7 purinoceptor in neuroprotective mechanism of ischemic postconditioning in mice. *J Surg Res*. 2015 Jun 1;196(1):190-9.
 41. Chauhan E, Bali A, Singh N, **Jaggi AS**. Pharmacological investigations on cross adaptation in mice subjected to stress immobilization. *Life Sci*. 2015 Apr 15;127:98-105.

42. Bhalla S, Singh N, **Jaggi AS**. Dose-related neuropathic and anti-neuropathic effects of simvastatin in vincristine-induced neuropathic pain in rats. *Food Chem Toxicol*. 2015 Jun;80:32-40.
43. Kaur G, Bali A, Singh N, **Jaggi AS**. Ameliorative potential of *Ocimum sanctum* in chronic constriction injury-induced neuropathic pain in rats. *An Acad Bras Cienc*. 2015 Mar;87(1):417-29.
44. Bali A, Randhawa PK, **Jaggi AS**. Stress and opioids: role of opioids in modulating stress-related behavior and effect of stress on morphine conditioned place preference. *Neurosci Biobehav Rev*. 2015 Apr;51:138-50.
45. Kaur A, Bali A, Singh N, **Jaggi AS**. Investigating the stress attenuating potential of furosemide in immobilization and electric foot-shock stress models in mice. *Naunyn Schmiedebergs Arch Pharmacol*. 2015 May;388(5):497-507.
46. Kumar A, **Jaggi AS**, Singh N. Pharmacology of Src family kinases and therapeutic implications of their modulators. *Fundam Clin Pharmacol*. 2015 Apr;29(2):115-30.
47. Verma V, Singh N, Singh **Jaggi AS**. Pregabalin in neuropathic pain: evidences and possible mechanisms. *Curr Neuropharmacol*. 2014 Jan;12(1):44-56. doi: 10.2174/1570159X1201140117162802.
48. Randhawa PK, **Jaggi AS**. TRPV1 and TRPV4 channels: Potential therapeutic targets for ischemic conditioning-induced cardioprotection. *Eur J Pharmacol*. 2014 Nov 20;746C:180-185. doi: 10.1016/j.ejphar.2014.11.010.
49. Bali A, **Jaggi AS**. Preclinical experimental stress studies: Protocols, assessment and comparison. *Eur J Pharmacol*. 2014 Nov 7;746C:282-292. doi: 10.1016/j.ejphar.2014.10.017. [Epub ahead of print] Review
50. Randhawa PK, Singh K, Singh N, **Jaggi AS**. A review on chemical-induced inflammatory bowel disease models in rodents. *Korean J Physiol Pharmacol*. 2014 Aug;18(4):279-88. doi: 10.4196/kjpp.2014.18.4.279. Epub 2014 Aug 13. Review.
51. Randhawa PK, Bali A, **Jaggi AS**. RIPC for multiorgan salvage in clinical settings: Evolution of concept, evidences and mechanisms. *Eur J Pharmacol*. 2014 Aug 28;746C:317-332. doi: 10.1016/j.ejphar.2014.08.016. [Epub ahead of print] Review.
52. Bali A, Singh N, **Jaggi AS**. Renin-angiotensin system in pain: Existing in a double

- life? *J Renin Angiotensin Aldosterone Syst.* 2014 Dec;15(4):329-340.
53. Bhalla S, Singh N, **Jaggi AS**. Statins: Do They Aggravate or Ameliorate Neuropathic Pain? *J Pain.* 2014 Nov;15(11):1069-1080. doi: 10.1016/j.jpain.2014.06.012. Epub 2014 Jul 30. Review.
54. Neha, Sodhi RK, **Jaggi AS**, Singh N. Animal models of dementia and cognitive dysfunction. *Life Sci.* 2014 Jul 30;109(2):73-86. doi: 10.1016/j.lfs.2014.05.017. Epub 2014 Jun 2. Review.
55. Mangat GS, **Jaggi AS**, Singh N. Ameliorative Effect of a Selective Endothelin ETA Receptor Antagonist in Rat Model of L-Methionine-induced Vascular Dementia. *Korean J Physiol Pharmacol.* 2014 Jun;18(3):201-9. doi: 10.4196/kjpp.2014.18.3.201. Epub 2014 Jun 12.
56. Bali A, Randhawa PK, **Jaggi AS**. Interplay between RAS and opioids: opening the Pandora of complexities. *Neuropeptides.* 2014 Aug;48(4):249-56. doi: 10.1016/j.npep.2014.05.002. Epub 2014 May 17.
57. Neha, Kumar A, **Jaggi AS**, Sodhi RK, Singh N. Silymarin ameliorates memory deficits and neuropathological changes in mouse model of high-fat-diet-induced experimental dementia. *Naunyn Schmiedebergs Arch Pharmacol.* 2014 Aug;387(8):777-87. doi: 10.1007/s00210-014-0990-4. Epub 2014 May 28.
58. Singh G, Sharma B, **Jaggi AS**, Singh N. Efficacy of bosentan, a dual ETA and ETB endothelin receptor antagonist, in experimental diabetes induced vascular endothelial dysfunction and associated dementia in rats. *Pharmacol Biochem Behav.* 2014 Sep;124:27-35. doi: 10.1016/j.pbb.2014.05.002. Epub 2014 May 14.
59. Singh VP, Bali A, Singh N, **Jaggi AS**. Advanced Glycation End Products and Diabetic Complications. *Korean J Physiol Pharmacol.* 2014 Feb;18(1):1-14. Epub 2014 Feb 13. Review
60. Bali A, Singh N, **Jaggi AS**. Neuropeptides as Therapeutic Targets to Combat Stress-Associated Behavioral and Neuroendocrinological Effects. *CNS Neurol Disord Drug Targets.* 2014 Mar;13(2):347-68.
61. Bindra CS, **Jaggi AS**, Singh N. Role of P2X7 purinoceptors in neuroprotective mechanism of ischemic postconditioning in mice. *Mol Cell Biochem.* 2014 Feb 4. [Epub ahead of print]

62. Kumar A, **Jaggi AS**, Singh N. Pharmacological investigations on possible role of Src kinases in neuroprotective mechanism of ischemic postconditioning in mice. *Int J Neurosci*. 2014 Feb 6. [Epub ahead of print]
63. Grewal AK, **Jaggi AS**, Rana AC, Singh N. Effect of neurosteroid modulation on global ischaemia-reperfusion-induced cerebral injury in mice. *Korean J Physiol Pharmacol*. 2013 Dec;17(6):485-91. doi: 10.4196/kjpp.2013.17.6.485. Epub 2013 Dec 16.
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65. Verma V, Singh N, **Jaggi AS**. Sodium-hydrogen exchanger inhibitory potential of *Malus domestica*, *Musa paradisiaca*, *Daucus carota*, and *Symphytum officinale*. *J Basic Clin Physiol Pharmacol*. 2013 Nov 2:1-10. doi: 10.1515/jbcpp-2013-0088. [Epub ahead of print]
66. Gupta S, Singh N, **Jaggi AS**. Evaluation of in vitro aldose reductase inhibitory potential of alkaloidal fractions of *Piper nigrum*, *Murraya koenigii*, *Argemone mexicana*, and *Nelumbo nucifera*. *J Basic Clin Physiol Pharmacol*. 2013 Oct 14:1-11. doi: 10.1515/jbcpp-2013-0071. [Epub ahead of print]
67. Muthuraman A, Singh N, **Jaggi AS**, Ramesh M. Drug therapy of neuropathic pain: current developments and future perspectives. *Curr Drug Targets*. 2014 Feb;15(2):210-53.
68. Bali A, **Jaggi AS**. Multifunctional aspects of allopregnanolone in stress and related disorders. *Prog Neuropsychopharmacol Biol Psychiatry*. 2014 Jan 3;48:64-78. doi: 0.1016/j.pnpbp.2013.09.005. Epub 2013 Sep 14.
69. Singh VP, Singh N, **Jaggi AS**. A review on renal toxicity profile of common abusive drugs. *Korean J Physiol Pharmacol*. 2013 Aug;17(4):347-57. doi: 10.4196/kjpp.2013.17.4.347. Epub 2013 Jul 30.
70. Bali A, **Jaggi AS**. Angiotensin as stress mediator: role of its receptor and interrelationships among other stress mediators and receptors. *Pharmacol Res*. 2013 Oct;76:49-57. doi: 10.1016/j.phrs.2013.07.004. Epub 2013 Jul 24.

71. Kukkar A, Singh N, **Jaggi AS**. Attenuation of neuropathic pain by sodium butyrate in an experimental model of chronic constriction injury in rats. *J Formos Med Assoc.* 2013 Jul 16. pii: S0929-6646(13)00180-0. doi: 10.1016/j.jfma.2013.05.013. [Epub ahead of print]
72. Bali A, Gupta S, Singh N, **Jaggi AS**. Implicating the role of plasma membrane localized calcium channels and exchangers in stress-induced deleterious effects. *Eur J Pharmacol.* 2013 Aug 15;714(1-3):229-38. doi: 10.1016/j.ejphar.2013.06.010. Epub 2013 Jun 21.
73. Jain V, Pareek A, Paliwal N, Ratan Y, **Jaggi AS**, Singh N. Antinociceptive and antiallodynic effects of *Momordica charantia* L. in tibial and sural nerve transection-induced neuropathic pain in rats. *Nutr Neurosci.* 2014 Feb;17(2):88-96. doi: 10.1179/1476830513Y.0000000069. Epub 2013 Nov 26.
74. Kant R, Bali A, Singh N, **Jaggi AS**. Prolyl 4 hydroxylase: a critical target in the pathophysiology of diseases. *Korean J Physiol Pharmacol.* 2013 Apr;17(2):111-20. doi: 0.4196/kjpp.2013.17.2.111. Epub 2013 Apr 10.
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76. Rehni AK, **Jaggi AS**, Singh N. Opioid withdrawal syndrome: Emerging concepts and novel therapeutic targets. *CNS Neurol Disord Drug Targets.* 2012 Dec 12. [Epub ahead of print]
77. Kaur A, Singh B, **Jaggi AS**. Synthesis and evaluation of novel 2,3,5-triaryl-4H,2,3,3a,5,6,6a-hexahydropyrrolo[3,4-d]isoxazole-4,6-diones for advanced glycation end product formation inhibitory activity. *Bioorg Med Chem Lett.* 2013 Feb 1;23(3):797-801.
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85. Rinwa P, **Jaggi AS**, Singh N. Pharmacological investigation of memory restorative effect of riluzole in mice. *Indian J Pharmacol.* 2012 May;44(3):366-71.
86. Singh AP, Jaggi AS, Singh N. Pharmacological investigations of Punica granatum in glycerol-induced acute renal failure in rats. *Indian J Pharmacol.* 2011 Sep;43(5):551-6.
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- immobilization subjected mice. *Physiol Behav.* 2012 Mar 20;105(5):1148-55. Epub 2011 Dec 22.
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 94. Muthuraman A, Singh N, **Jaggi AS**. Protective effect of *Acorus calamus* L. in rat model of vincristine induced painful neuropathy: an evidence of anti-inflammatory and anti-oxidative activity. *Food Chem Toxicol.* 2011 Oct;49(10):2557-63.
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- therapeutic implications. *Vascul Pharmacol.* 2010 Sep-Oct;53(3-4):77-87.
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