

## Hamendra Singh Parmar, Ph.D.



- 1. Name and full correspondence address:** Dr. Hamendra Singh Parmar, Senior Assistant Professor (Stage-III), School of Biotechnology, Devi Ahilya University, Takshashila Campus, Khandwa Road, Indore-452001, M.P., India.
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- 3. Institution:** School of Biotechnology, Devi Ahilya University, Indore.
- 4. Date of birth:** 14.11.1977
- 5. Gender:** Male
- 6. Category:** General

### Research Areas

My research areas revolve around the metabolism as a central focus and mainly cover molecular understanding, as well as therapeutic development of various diseases including cancer, inflammation, neurodegeneration and diabetes. We are addressing many important questions relate mitochondria, metabolism and above mentioned pathological conditions and also looking to the plausible solutions to treat these diseases efficiently.

### Ongoing funded research projects

1. India-Belarus joint research project funded by Department of Science and Technology, New Delhi entitled "Effect of mitochondrial targeted peptides and modulators of mitochondrial activity on tumor cells in vitro and in vivo systems" (2019-2021).
2. Research project funded from M.P. Council of Science & Technology, Bhopal entitled "Role of Inflammation in the progression of diabetes mellitus: evaluation of antidiabetic potential of anti-inflammatory drugs" (2018-2020).

**Professional recognition/ Awards/ Prize/ Certificate/ Fellowship received**

S. N.	Name of Award	Awarding agency	Year
1.	Young Scientist Award-India-International Science Festival-Biology (Young Scientist Conference-2019, Nov 5-8)-First	DST and associated sponsored of Govt of India.	2019
2.	Certificate of appreciation for research from Devi Ahilya University, Indore (26.01.2017)-based on h-index and citations	Devi Ahilya University, Indore.	2017
3.	<b>International Postdoctoral Research Fellowship</b> (2 Years)	Institute of Biology, Faculty of Medicine at Pilsen, Charles University, Prague, Czech Republic	March 2015-March 2017
4.	UGC-Major research Project (Could not availed)	UGC	2014
5.	Best Science Research Award from Madhya Pradesh Council of Science and Technology (M.P.C.S.T.), Bhopal.	MPCOST	2009
6.	Project associate under UGC funded major research Project	UGC	2006-2009
6.	CSIR-UGC-NET-LS	CSIR-UGC	2005
7.	GATE	Indian Institute of Science and Indian institute of technology, jointly	2004

**Research Publications (All International)**

Key words for [www.pubmed.com](http://www.pubmed.com): Parmar HS

(<https://www.ncbi.nlm.nih.gov/pubmed/?term=Parmar+HS>)

<http://www.scopus.com/authid/detail.url?authorId=14631129700>

**Cumulative impact factor: 81.0** (source-website of respective journals as per Thomson Reuters)

**Total citations: 1071**

**h-index: 17**

**i10 index-20**

(Source:<http://scholar.google.co.in/citations?hl=en&user=uZT56sgAAAAJ>)

### List of research publications

1. **Parmar HS**, Nayak A, Gavel PK, Tripathi V, Jaiswal P, Jha H, Bhagwat S, Sharma S. Cross talk between COVID-19 and breast cancer. *Current Cancer Drug Targets* 2020 (Accepted). (**Impact factor 2.947**).
2. Sangtani R, Ghosh A, Jha HC, **Parmar HS\***, Bala K. Potential of algal metabolites for the development of broad-spectrum antiviral therapeutics: Possible implications in COVID-19 therapy. *Phytotherapy Research* (Accepted) (**Impact factor 4.087**).
2. Gavel PK, Kumar N, **Parmar HS**, Das AK. Evaluation of a Peptide-Based Coassembled Nanofibrous and Thixotropic Hydrogel for Dermal Wound Healing. *ACS Applied Bio Materials* 2020; 3: 3326–3336.
3. Gavel PK, **Parmar HS**, Tripathi V, Kumar N, Biswas A, Das AK. Investigations of Anti-Inflammatory Activity of a Peptide-Based Hydrogel using Rat Air Pouch Model. *ACS Appl Mater Interfaces*. 2019; **11**: 2849-2859 (**Impact factor 8.758**).
4. Kripnerova M, **Parmar HS**, Pesta M, Kohoutova M, Kuncova J, Drbal K, Rajtmajerova M, Hatina J. Urothelial Cancer Stem Cell Heterogeneity. *Adv Exp Med Biol*. 2019; 1139:127-151 (Review-**Impact factor 2.450**).
5. Gavel PK, Dev D, **Parmar HS**, Bhasin S, Das AK. Investigations of Peptide-Based Biocompatible Injectable Shape-Memory Hydrogels: Differential Biological Effects on Bacterial and Human Blood Cells. *ACS Appl Mater Interfaces*. 2018; **10**: 10729-10740. (**Impact factor 8.758**).
6. Hatina J, Kripnerova M, **Parmar HS**, Houdek Z, Dvorak P, Houkova K, Pesta M, Kuncova J, Sopper S, Radova L, Sana J, Slaby O. Insight into sarcoma biology from sarcoma cell line progression series. *Arch. Cancer Res* 2018, 7: 32-33. (**Impact factor 0.6**).
7. Hatina J, **Parmar HS**, Kripnerova M, Hepburn A, Heer R. Urothelial Carcinoma Stem Cells: Current Concepts, Controversies, and Methods. *Methods Mol Biol*. 2018; 1655:121-136 (**Book Chapter**).
8. **Parmar HS**. Insights into the plant insulin, In: *Recent progress in medicinal plants, Metabolic disorders Diabetes Part-II* (Stadium Press LLC, USA.) 2018; 46: 90-106 (**Book Chapter**).
9. **Parmar HS**, Houdek Z, Pešta M, Václava Č, Dvořák P, Hatina J. Protective effect of aspirin against oligomeric A $\beta$ 42 induced mitochondrial alterations and neurotoxicity in differentiated EC P19 neuronal cells. *Curr. Alzheimer Res*. 2017; **14**: 810-819. (**Impact factor 3.384**).
10. **Parmar HS**, Assaiya A, Agrawal R, Tiwari S, Mufti I, Jain N, Manivannan E, Banerjee T, Kumar A. Inhibition of A $\beta$  (1-42) oligomerization, fibrillization and acetyl cholinesterase activity by some anti-inflammatory drugs: An in vitro study. **Anti-**

- Inflammatory & Anti-Allergy Agents in Medicinal Chemistry** 2017; **15**: 191-203.
11. Nijampurkar B, Oureshi F, Jain N, Banerjee T, Kumar A, **Parmar HS**. Anti-inflammatory role of thyroid hormones on rat air pouch model of inflammation. **Inflammation & Allergy-Drug Targets** 2015; **14**:117-24.
12. Das AK, Maity I, **Parmar HS**, McDonald TO, Konda M. Lipase-Catalyzed Dissipative Self-Assembly of a Thixotropic Peptide Bolaamphiphile Hydrogel for Human Umbilical Cord Stem-Cell Proliferation. **Biomacromolecules** 2015; **16**:1157-1168 (\***Impact factor-6.092**).
13. Maity I, **Parmar HS**, Rasale DB, Das AK. Self-programmed nanovesicle to nanofiber transformation of a dipeptide appended bolaamphiphile and its dose dependent cytotoxic behaviour. **Journal of Materials Chemistry B** 2014; **2**: 5272-5279 (\***Impact factor-5.344**).
14. **Parmar HS**, Bhinchar MK, Bhatia M, Chordia N, Raval I, Chauhan DS, Manivannan E, Jatwa R, Kumar A. Study on Gluco-regulatory potential of glimepiride sulphonamide using *in silico*, *in vitro* and *in vivo* approaches. **Current Pharmaceutical Design** 2014; **20**: 5212-5217. (**Impact factor 2.575**).
15. Juneja L, **Parmar HS**. Ovalbumin induced allergic rhinitis and development of prediabetes to rats: possible role of Th2 cytokines. **Inflammation & Allergy-Drug Targets** 2013; **12**:199-205.
16. Tiwari V, **Parmar HS**. Diabetogenic effects of *Parthiniumhysterophorous* induced allergic rhinitis. **Inflammation & Allergy-Drug Targets** 2012; **11**: 492-8.
17. **Parmar HS**, Jain P, Chauhan DS, Bhinchar MK, Munjal V, Yusuf M, Choube K, Tawani A, Tiwari V, Manivannan E, Kumar A. DPP-IV inhibitory potential of naringin: An *in silico*, *in vitro* and *in vivo* study. **Diabetes Research and Clinical Practice** 2012; **97**:105-111. (\***Impact factor 4.234**).
18. Jain M, **Parmar HS**. Evaluation of antioxidative and anti-inflammatory potential of hesperidin and naringin on the rat air pouch model of inflammation. **Inflamm Res.** 2011; **60**: 483-91. (\***Impact factor 3.174**).
19. Sethi A, **Parmar HS**, Kumar A. The effect of aspirin on atherogenic diet-induced diabetes mellitus. **Basic Clin Pharmacol Toxicol.** 2011; **108**: 371-77. (\***Impact factor 2.651**).
20. **Parmar HS**, Dixit Y, Kar A. Fruit and vegetable peels: Paving the way towards the development of new generation therapeutics. **Drug Discoveries & Therapeutics** 2010; **4**: 314-325 (Review).
21. **Parmar HS**, Kar A. Protective role of *Mangifera indica*, *Cucumis melo* and *Citrullus vulgaris* peel extracts in chemically induced hypothyroidism. **Chemico-Biological interactions** 2009a; **177**: 254-258 (\***Impact factor 3.723**).
22. **Parmar HS**, Kar A. Comparative analysis of free radical scavenging potential of several fruit peel extracts by *in vitro* methods. **Drug Discoveries & Therapeutics** 2009b; **3**: 49-55.

23. **Parmar HS**, Kar A. Possible amelioration of atherogenic diet induced dyslipidemia, hypothyroidism and hyperglycemia by the peel extracts of *Mangifera indica*, *Cucumis melo* and *Citrullus vulgaris* fruits in rats. **Biofactors** 2008a; **33**: 13-24 (\***Impact factor 4.734**).
24. **Parmar HS**, Kar A. Medicinal values of fruit peels from *Citrus sinensis*, *Punicagranatum*, and *Musa paradisiaca* with respect to alterations in tissue lipid peroxidation and serum concentration of glucose, insulin, and thyroid hormones. **Journal of Medicinal Food** 2008b; **11**: 376-381. (\***Impact factor 1.981**).
25. **Parmar HS**, Kar A. Antiperoxidative, antithyroidal, antihyperglycemic and cardioprotective role of *Citrus sinensis* peel extract in male mice. **Phytotherapy Research** 2008c; **22**: 791-795. (\***Impact factor 4.087**).
26. **Parmar HS**, Kar A. Antidiabetic potential of *Citrus sinensis* and *Punicagranatum* peel extracts in alloxan treated male mice. **Biofactors** 2007a; **31**:17-24 (\***Impact factor 4.734**).
27. **Parmar HS**, Kar A. Atherogenic diet induced diabetes mellitus: involvement of thyroid hormones. **European Journal of Pharmacology** 2007b; **570**: 244-248. (\***Impact factor 3.266**).
28. **Parmar HS**, Kar A. Protective role of *Citrus sinensis*, *Punicagranatum* and *Musa paradisiaca* peels against diet-induced atherosclerosis and thyroid dysfunctions in rats. **Nutrition Research** 2007c; **27**: 710-718. (\***Impact factor 3.260**).
29. Jatwa R, **Parmar HS**, Panda S, Kar A. Amelioration of corticosteroid-induced type 2 diabetes mellitus by rosiglitazone is possibly mediated through stimulation of thyroid function and inhibition of tissue lipid peroxidation in mice. **Basic & Clinical Pharmacology & Toxicology** 2007; **101**: 177-180. (\***Impact factor 2.651**).
30. **Parmar HS**, Panda S, Jatwa R, Kar A. Cardio-protective role of *Terminalia arjuna* bark extract is possibly mediated through alterations in thyroid hormones. **Pharmazie** 2006; **61**:793-795.
31. **Parmar HS**, Kar A. Study of Some Fruit Peel Extracts On Various Metabolic Disorders (ISBN-13: 978-3659932380). Lap Lambert Academic Publishing, Germany 2016 (**Book**).
32. **Parmar HS, Jain H**. Diet induced metabolic defects and protective role of thyroid hormones (ISBN: 978-3-659-51264-3). Lap Lambert Academic Publishing, Germany 2014 (**Book**).

**Publications in conference/ Seminar/ Symposium (All International)**

1. Hatina J, Kripnerova M, **Parmar HS**, Houdek Z, Dvorak P, Houkova K, Pesta M, Kuncova J, Sopper S, Radova L, Sana J, Slaby O. Insight into sarcoma biology from sarcoma cell line progression series. 2<sup>nd</sup> International Conference on Cancer Science & Pediatrics, Feb 19-20, 2019, Prague, Czech Republic.

2. Kripnerová M., **Parmar H.S.**, Leba M., Kuncova J, Šána J, Slabý O, Hatina J. Identification of candidate genes responsible for soft tissue sarcoma progression using a progression series of murine fibrosarcoma cell lines, In Biological Days with the subtitle" Biomedical Present: From basic Research to Clinical Application. Congress Center o the Slovak Academy of Sciences in Smolenice, Slovakia (23-25, October, 2017).

3. Kripnerová M., **Parmar H.S.**, Pešta M., Kuncová J., Hatina J. A new cell culture models of urothelial carcinoma links mitochondrial physiology to multidrug resistance, In: 12<sup>th</sup> International Congress of Cell Biology, Prague Congress Centre, Czech Republic (July 21-25, 2016).

4. **Parmar HS**, Kar A. (2006). Assessment of antiperoxidative activity in some fruit peel extracts: an in vitro and in vivo study, In: International Conference on Toxicology, Toxicoproteomics and Occupational Health (ICTTOH) & 26<sup>th</sup> annual meeting of Society of Toxicolgy (STOX) India, October 9-11, Jiwaji University, Gwalior, MP, India.

Academic Qualification (Diploma/ Degree)					
S.N.	Degree	Year	Subject	University/ Institution	% of marks
1.	Two year diploma in Pharmacy	1998	Pharmaceutical sciences	B.N. College, Udaipur, Rajasthan University, Jaipur	60.4
2.	B.Sc.	2000	Botany, Chemistry, Zoology	Govt. P.G. College, Jhalawar, M.D.S. University, Ajmer	60.0
3.	M.Sc.	2002	Life Science	School of Life Sciences, Devi Ahilya University, Indore	72.20
4.	Ph.D.	2009	Life Science	School of Life Sciences, Devi Ahilya University, Indore	NA

#### Technical skills

- ❑ Drug discovery and disease biology.
- ❑ Co-culture of human cell lines and intercellular signaling studies.
- ❑ Molecular biology-gene expression analysis, Microarray analysis, real time PCR, molecular signaling, fluorescence microscopy, time-lapse imaging.
- ❑ Acquaintance with genomics, transcriptomics and proteomics studies.
- ❑ *In vivo* biology using animal models of various diseases including diabetes (Type 1 &2), diet induced metabolic syndrome, cardiovascular problem, acute (Paw edema and rat air pouch) and chronic inflammation (DSS and TNBS induced colitis), allergic rhinitis (Parthenium and ovalbumin induced), TMT induced neurodegeneration, hyperthyroidism (L-T4 induced), hypothyroidism (PTU induced), Skin wound (skin punch biopsy) etc.

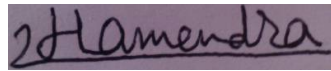
- ❑ *In vitro* biology-Human cancer cell lines of cervical, bladder, breast, pancreatic and neuroblastoma, neuronal cell differentiation of cancer stem cells and study on neurodegeneration in Alzheimer's disease.
- ❑ Acquaintance with *in silico* biology.

## Languages

Mother tongue- **Hindi**

Writing and communication with fluency- **English**

Acquaintance with-**French**



(Dr. Hamendra Singh Parmar)