DEPARTMENT OF ZOOLOGY

M.D. UNIVERSITY, ROHTAK

Name of the Faculty Member: **Dr. Ranjana Jaiwal**

Designation: **Associate Professor**

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1. Educational qualifications

Degree	Year of passing	University/Institute
Ph.D.	1990	Banaras Hindu University, Varanasi
M.Phil.	1986	CCS University, Meerut
M.Sc.	1985	CCS University, Meerut
B.Sc.	1983	Agra University, Agra

Field of specialization: Molecular Endocrinology & Molecular Biology

2. Career Profile

Designation	Institution	Duration
Associate Professor (Regular)	Deptt. of Zoology, M.D. University, Rohtak	Jan. 15, 2021 to till date
Asstt. Professor (Regular)	Deptt. of Zoology, M.D. University, Rohtak	2009 to Jan. 15, 2021
Lecturer (Guest Faculty)	Advanced centre for Biotechnology, M. D. University, Rohtak	2007 to 2009
DST-Women scientist	Advanced centre for Biotechnology, M. D. University, Rohtak	2004 to 2007
Lecturer (Temporary)	AIJHM College, Rohtak	1997 to 1999
Post Doctorate 1. CSIR-RA 2. Women Scientist, DST, New Delhi	Department of Biosciences, M.D. University, Rohtak Advanced centre for Biotechnology, M.D. University, Rohtak	1992 to 1997 2004 to 2007

3. Research advisory

No. of students supervised for Ph. D = 7

Awarded : 3

Registered : 4

No. of students supervised for P.G (*Dissertation*) = more than **50**

4. Research Projects undertaken

S.No.	Title of project	Duration	Funding agency
1.	Neuroendocrine regulation of seasonal reproduction in female Indian palm squirrel (*Funambulus pennanti*)	5-years	CSIR, New Delhi
2.	Evaluvation of transgenic mungbean plants for resistance to bruchids	3-years	DST, New Delhi
3.	Low-cost production of Insulin for diabetic patients	3-years	UGC, New Delhi
4.	Identification of novel vital genes of a world pest, whitefly for their control via RNAi approach	1-years	RK Foundation, MDU, Rohtak

5. Research Publications:

Research Papers published = more than **40**

S. No.	Author(s)	Title	Name of Journal	Volume /ISBN No.	Page	Year
1.	Kumar A, **Jaiwal R**, Sreevathsa R, Chaudhary D, Jaiwal PK	Transgenic cowpea plants expressing *Bacillus thuringiensis* Cry2Aa insecticidal protein imparts resistance to *Maruca vitrata* legume pod borer.	Plant Cell Reports IF = 4.5	40 https://doi.org/10.1007/s00299-020-02657-2	583-594	2021
2.	Kumar A, Sainger M, **Jaiwal R**, Chaudhary D, Jaiwal PK	Tissue culture- and selection-independent *Agrobacterium tumefaciens*-mediated transformation of a recalcitrant grain legume, cowpea (*Vigna unguiculata* L. Walp)	Molecular Biotech. IF = 2.5	https://doi.org/10.1007/s12033-021-00333-8	-	2021
3.	Suhag A, Yadav H, Chaudhary D, Subramanian S, **Jaiwal R**, Jaiwal PK	Biotechnological interventions for the sustainable management of a global pest, whitefly (*Bemisia tabaci*).	Insect Science IF = 2.791	Published online ISSN:1744-7917	https://doi.org/10.1111/1744-7917.12853	2020
4.	Sonali Verma, Jyoti Yadav, Darshna Chaudhary, Pawan K Jaiwal, **Ranjana Jaiwal**	Insecticidal Activities of Some Botanicals on the Three Species of Callosobruchus"	Indian Journal of Agricultural Research, IF = 0.31	54; ISSN: 0976-058X	A-5376 (1-7)	2020

5.	Anil Kumar, Manish Sainger, **Ranjana Jaiwal**, Pawan K. Jaiwal and Darshna Chaudhary	An Efficient and Reproducible in vitro Multiple Shoots and Plant Regeneration System for a Recalcitrant Large-seeded Legume, Cowpea [*Vigna unguiculata* (L.) Walp]	Annals of Agri Bio Research IF = 0.08	09719660	MS No. 2021/27	2020
6.	Kumar P, Kamboj M**, Jaiwal Ranjana**, and Pundir CS	Fabrication of an improved amperometric creatinine biosensor based on enzymes nanoparticles bound to Au electrode.	Biomarkers IF= 2.070	24; ISSN: 1354-750X	739-749	2019
7.	Sindhu, M., Kumar, A., Yadav, H., Chaudhary, D., **Jaiwal, R.,** & Jaiwal, P. K.	Current advances and future directions in genetic enhancement of a climate resilient food legume crop, cowpea (Vigna unguiculata L. Walp)	Plant Cell, Tissue and Organ Culture (PCTOC) IF = 2.4	ISSN: 0167-6857	1-25	2019
8.	Yadav J, Verma S, Chaudhary D, Jaiwal PK and **Jaiwal Ranjana**	Tuberculosis: Current status, diagnosis, treatment and development of novel vaccines.	Current pharmaceutical Biotechnology IF= 2.097	20; ISSN: 1389-2010	446-458	2019
9.	Pundir, CS, Kumar P and **Jaiwal Ranjana**	Biosensing methods for determination of creatinine: A review.	Biosensors and Bioelectronics IF=10.257	126; ISSN: 0956-5663,	707-724	2019
10.	Saini P, Bhoria S and **Jaiwal R**	In vitro plant regeneration from hypocotyls explants of cucumber cv Poinsett 76.	Annals of Biology IF = 0.07	35; ISSN: 0971-9660	285-289	2019
11.	Bhardwaj V, Kumar P, Verma S and **Jaiwal R**.	Effect of ultraviolet radiation and some botanicals on development of Callosobruchus	Annals of Entomology -	37; ISSN: 0970-3721	29-37	2019
12.	Kumar P, Narwal Vinay **Jaiwal Ranjana** and Pundir CS	Construction and application of sarcosine biosensor based on SOxNPs/AuE for determination of prostate cancer.	Biosensors and Bioelectronics IF=10.257	122; ISSN: 0956-5663	140-146	2018
13.	Sindhu M, Kumar A, Sainger M, **Jaiwal Ranjana** and Chaudhary D	In vitro plant regeneration of Cowpea (Vigna unguiculata (L.) Walp) via direct shoot organogenesis from primary leaf explants.	Annals of Biology IF = 0.07	34, ISSN: 0970-0153	249-254	2018

14.	Verma S, Malik M, Kumar P, Choudhary D, Jaiwal PK and **Jaiwal Ranjana**	Susceptibility of four Indian grain legumes to three species of stored pest, bruchid (Callosobruchus) and effect of temperature on bruchids	International Journal of Entomology Research RJIF = 5.24	3; ISSN: 2455-4758	5-10	2018
15.	Sainger M, Jaiwal A, Sainger P A, Chaudhary D, **Jaiwal R** and Jaiwal PK,	Advances in genetic improvement of Camelina sativa for biofuel and industrial bioproducts	Renewable and Sustainable Energy Reviews **IF: 8.051**	68/1364-0321	623-637	2017
16.	Birla, D., Malik, K., Sainger, M., Chaudhary, D., **Jaiwal, R** and Jaiwal, P. K.	Progress and challanges in improving nutritional quality of rice.	Critical Rev. Food and Nutri. **IF: 6.077**	57/1040-8398	2455-2481	2015
17.	Sainger M, Chaudhary D., Dahiya S, **Jaiwal R**, and Jaiwal PK	Development of an efficient in vitro plant regeneration system amenable to *Agrobacterium* -mediated transformation of a recalcitrant grain legume blackgram (*Vigna mungo* L. Hepper)	Physiology and Molecular Biology of Plants **IF: 1.35**	21/0971-5894	505-517	2015
18.	Kumar P., Jaiwal, A. and **Jaiwal, Ranjana**	Micro RNAs: Their role in post-transcriptional regulation and expression of gene. Proc. Natl. Seminar on "Innovative Researches in Life Science	Proc. Natl. Sem. on "Innovative Researches in Life Science"	978-81-920945-5-7	110-114	2015
19.	Jaiwal, A., Kumar P. and **Jaiwal, Ranjana**	Application of RNA Interference (RNAi) in Insect Pest Control	Proc. Natl. Sem. On "Innovative Researches in Life Science"	978-81-920945-5-7	15-20	2015
20.	Chaudhary, D., Sainger, M., Kumar, A., Yadav, H., Sindhu, M. and **Jaiwal Ranjana**	Transient gus assay to optimize *Agrobacterium* mediated genetic transformation of cowpea (*Vigna unguiculata* l.walp)	Proc. Natl. Sem. on" Innovative Researches in Life Science"	978-81-920945-5-7	26-30	2015
21.	Dhayal, D., Parasher, H., Sharma, A., Kumar, P., Adak, T. and **Jaiwal R.**	Diversity of Culturable Midgut Bacteria of Indian Malarial vector *Anopheles Stephensi*	J. Internatl. Acad. Res. Multidiscip. **IF: 1.625**	2/2320-5083	305-311	2014
22.	Dhayal, D., Sharma, A., Adak, T. and **Jaiwal, R.**	Effect of *Carnobacterium Sp.* on Plasmodium Sporogony in *Anopheles Stephensi* Mosquito	Internatl. J. Life Sci. Res.	**3/ 2348-313X**	50-54	2014

23.	Jaiwal, A. Chaudhary, D. and **Jaiwal, Ranjana**	Genetically modified crops for developing countries.	Proc. Natl. Sem. On "Next Generation Sciences: Vision 2020 and Beyond (NGSV)	978-81-920945-4-0	312-323	2014
24.	Jaiwal, A. and **Jaiwal, Ranjana**	Genetic reprogramming of animals: Animal Cloning.	Proc. Natl. Sem. On "Next Generation Sciences: Vision 2020 and Beyond (NGSV)	978-81-920945-4-0	324-334	2014

25.	**Jaiwal R.** and Chaturvedi CM.	Four Hour Temporal Relation of 5-HTP and L-DOPA Induces Inhibitory Responses in Recrudescing Gonad of Indian Palm Squirrel (*Funambulus pennanti*)	ISRN Endocrinology	2013	1-5	2013
26.	Priyanka, Bhardwaj S. and **Jaiwal Ranjana**	An overview of an auto immune disease systemic lupus erythematosus.	Proc. Natl. Sem. on "Promising Trends in Sci. Galaxy (PTSG-2013)"	978-81-920945-2-6	195-205	2013
27.	Priyanka and **Jaiwal Ranjana**	Production and Expression of Recombinant Erythropoietin in Plants	Proc. Natl. Sem. on "Promising Trends in Sci. Galaxy (PTSG 2013)"	978-81-920945-2-6	8-19	2013
28.	Janhawi and **Jaiwal Ranjana**	ATP-dependent Chromatin remodeling.	Proc. Natl. Sem. on "Promising Trends in Sci. Galaxy (PTSG-2013)"	978-81-920945-2-6	58-66	2013
29.	**Jaiwal Ranjana**, Dhayal D and Adak T	Symbiotic gut bacteria of insects: disease control & future perspectives.	Proc. Natl. Sem. on Combating Diseases: Cause to cure	978-81-920945-2-6		2012
30.	**Jaiwal Ranjana** and Dhayal D	Low cost production of insulin for diabetic patient.	Proc. Natl. Sem. on Combating Diseases: Cause to cure	978-81-920945-2-6	45-49	2012
31.	**Jaiwal Ranjana** and Bharadwaj S.	Emerging applications of internet in endocrinology.	Proc. Natl. Sem. on Internet: Applications in Research	978-81-920945-1-9	48-49	2011
32.	Dhayal D, Sharma A, Parasher H, **Jaiwal Ranjana** and Adak T	Polypeptide profiling of *Plasmodium* infected and uninfected host plasma	Proc. Natl. Sem. on Internet: Applications in Research	978-81-920945-1-9	1-5	2011
33.	**Jaiwal Ranjana**	Inter-relationship between the seasonal adrenal and gonadal cycles of male Indian Palm Squirrel, *Funanbulus pennanti*.	Proc. Natl. Seminar Computing Life: Raw to Refined	978-81-920945-0-2).	210-214	2010
34.	**Jaiwal Ranjana**	Effect of altered adrenal function on seasonal reproduction of Indian Palm Squirrel (*Funanbulus pennanti*).	Proc. Natl. Conf. on Environ. and health issues: In a changing climatic scenario,	-	254-262	2010
35.	Sonia, **Jaiwal Ranjana** and Jaiwal P K	Genetic Engineering for storage pest resistance	Physiol. Mol. Biol. Plants **IF: 1.35**	13/ 0971-5894	101-113	2007

36.	Chowdhury S, Madanpotra S, **Jaiwal Ranjana**, Saini R, Kumar PA and Jaiwal P K	*A. tumefaciens* mediated high frequency genetic transformation of cowpea (*V. unguiculata*) and transmission of transgenes to progeny.	Plant science **IF = 3.437**	172/ 0168-9452	692-700	2007
37.	**Jaiwal Ranjana** and Chaturvedi C M	Seasonal and diurnal variations in the hormonal profile of thyroid in relation to gonadal cycle of Indian Palm Squirrel, *Funanbulus pennanti*	J. Environ. Biol. **IF = 0.697**	**17**/ 0254-8704	93-100	1996
38.	**Jaiwal Ranjana** and Chaturvedi C M	Elimination of testicular regression by 12 h temporal relationship of serotonergic and dopaminergic activity in Indian Palm Squirrel, *Funanbulus pennanti*.	J. Neural Transmission (Springer-Verlag) **IF = 2.392**	0300-9564 (Print)	45-52	1991
39.	**Jaiwal Ranjana** and Chaturvedi C M	Temporal synergism of neurotransmitter affecting drugs and seasonal reproductive responses of Indian Palm Squirrel, *Funanbulus pennanti*.	J. Neural Transmission (Springer-Verlag) **IF = 2.392**	0300-9564 (Print)	31-40	1990
40.	**Jaiwal Ranjana**, Chaturvedi C M and Dubey L B	Cloacal gland and testicular response of Japanese quail to male hormones and photoperiod interaction	Trends Life Sci	3	1-6	1988
41.	**Jaiwal Ranjana** and Chaturvedi C M	Serotonergic and dopaminergic drugs in the regulation of seasonal reproduction of Indian Palm Squirrel, *Funanbulus pennanti*.	Proc. Natl. Symp. on current status of Gen. Comp. Endo	-	Pp 76-77	1988

Book-Chapters

S. No.	Title	Author's	Publisher	Year of publication
1.	Vitamin B6-, C- and E-enrichment in crops	Pawan K Jaiwal, Anil K. Chiller, Darshana Chaudhary, **Ranjana Jaiwal**	In: *Nutritional Quality Improvement in Plants*. Springer Nature publisher, Switzerland	2019
2.	*Agrobacterium Protocols:* Sesame (*Sesamum indicum* L.)	Kapoor, S., Parmar, S. S., Yadav, M., Chaudhary, D., Sainger, M., **Jaiwal R.**, and Jaiwal, P. K	In: Methods in Molecular Biology, Wang, K. (ed.), *Volume 2*, 1224,	2015
3.	GM Crops for Developing World in the Era of Climate Change: For Increase of Farmer's Income, Poverty Alleviation, Nutrition and Health.	Sainger M, Sainger P A, Chaudhary D., **Jaiwal R**., Singh RP, Dhankher OP, and Jaiwal PK	In: Genetic manipulation in plants for mitigation of climate change, Springer DOI: 10.1007/978-81-322-2662-8_11	2015

Book Published: 1

1.	Nutritional Quality Improvement in Plants	Pawan K Jaiwal, Anil K. Chiller, Darshana Chaudhary, **Ranjana Jaiwal**	Springer Nature publisher, Switzerland	2019

Responsibilities/Duties

- Member, Curriculum Development UG (General and Hons.), PG and Ph. D program of Zoology
- Act as Organizing Secretary/Joint Organizing of National/International Seminars organized by Department of Zoology/faculty of Lifesciences from 2010-2018
- Appointed IQAC officer at Deptt. level 2015-2021
- Member of PGBOS/UGBOS/Faculty of Life sciences
- Member, Academic Council, M.D. University, Rohtak
- Member, Faculty of Life Sciences, M.D. University, Rohtak
- Member, PGBOS, Zoology, M.D. University, Rohtak
- Member, UGBOS, Zoology, M.D. University, Rohtak
- Member of other various administrative and academic committee

Ranjana Jaiwal