

Curriculum Vitae

Dr. Sonu Chand Thakur

Professor

Centre for Interdisciplinary Research in Basic Sciences

Jamia Millia Islamia

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RESEARCH AREA: Reproductive Biology, Pharmacology.

EMPLOYMENT PROFILE:

- Professor (From 15th January 2018)
Centre for Interdisciplinary Research in Basic Sciences, Jamia Millia Islamia, New Delhi.
- Associate Professor (From 15th January 2015)
Centre for Interdisciplinary Research in Basic Sciences, Jamia Millia Islamia, New Delhi,
- Assistant Professor (15th January 2007 to 14th January 2015)
Centre for Interdisciplinary Research in Basic Sciences, Jamia Millia Islamia, New Delhi.
- Principal Investigator, DST Young Scientist (27th April 2006- 26th April 2009), JNU/JMI, New Delhi. Worked on a project entitled “Regulation of hyaluronan binding protein 1 (HABP1) during follicular development and cumulus oocyte complex maturation in rat”
- Research Associate, CSIR (19th April 2001- 26th April 2006)
School of Environmental Sciences, Jawaharlal Nehru University, New Delhi.
Worked on a project entitled “Studies on expression of hyaluronan binding protein 1 (HABP1) in sertoli cells during early development and with spermatogenic arrest in rat”

RESEARCH GUIDANCE:

Ph.D thesis supervised – 12

Ph.D students guided as co-supervisor – 2

Ph.D students enrolled as supervisor – 4

M.Phil. thesis supervised - 6

MSc Dissertation-25

Publications:

- Sneh Prabha, Arunabh Choudhury, Juhi Saraswat, Rajan Patel, Md. Imtaiyaz Hassan, and Sonu Chand Thakur. Identification of potential inhibitors of Fyn-Kinase from bioactive phytochemicals of *Berberis lycium* for therapeutic targeting of neurodegenerative disease. *Journal of Biomolecular Structure and Dynamics*, Feb 2025, DOI: 10.1080/07391102.2025.2468296.
- Sneh Prabha, Arunabh Choudhury, Asimul Islam, Sonu Chand Thakur, Hassan MI. Understanding of Alzheimer's Disease Pathophysiology for Therapeutic Implications of Natural Products as Neuroprotective Agents. *Ageing Research Reviews*. 2025 Feb 6:102680.
- Mohd Sajad, Rafat Ali, Rajesh Kumar, Shadma Wahab, Saad Ali Alshehri, Sonu Chand Thakur. β -Sitosterol ameliorates the cognitive deficits and neuropathological hallmarks in an Alzheimer's disease model. *Arabian Journal of Chemistry*. 2025 Jan 1;18(1):106072.
- Sneh Prabha, Mohd Sajad, Farah Anjum, Md. Imtaiyaz Hassan, Anas Shamsi, and Sonu Chand Thakur. Investigating gene expression datasets of hippocampus tissue to discover Alzheimer's disease-associated molecular markers. *Journal of Alzheimer's Disease*. 2024 Dec;102(4):994-1016.
- Nida Andlib, Mohd Sajad and Sonu Chand Thakur Association of diabetes mellitus with risk of reproductive impairment in females: A comprehensive review. *Acta Histochemica*. 2024 Oct 1;126(5-7):152173.
- Nida Andlib, Sneh Prabha and Sonu Chand Thakur. Unraveling the molecular pathogenesis of Type 2 Diabetes and its impact on female infertility: A bioinformatics and systems biology approach. *Computers in biology and medicine*, 2024 Sep, 180, 108987.
- Sneh Prabha, Mohd Sajad, Gulam Mustafa Hassan, Asimul Islam, Md Imtaiyaz Hassan, and Sonu Chand Thakur. Recent advancement in understanding of Alzheimer's disease: Risk factors, subtypes, and drug targets and potential therapeutics. *Ageing research reviews*. 2024 Aug 31:102476.
- Virendra Singh, Ranjeet Kumar Nirala, Divya Verma, Fareeda Athar, T.G. Shrivastav, Bimal Prasad Jit, Sanju Sharma, Sonu Chand Thakur. Synthesis of Coumarin thiazole based Schiff base Derivatives and Their Evaluation as Potential Antiuro lithiatic Agents. *Korean Journal of Physiology and Pharmacology* 2023; 27(3).
- Verma, D., Shrivastav, T. G., & Thakur, S. C. Homologous ELISA for detection of 17 α -methyltestosterone in serum. *International Journal of Health Sciences*, 2022, 6(S6), 6457–6474.
- Mazharul Haque, Amjad Beg, Virendra Singh, Ahmed I Abdelneam, Mohammad Arshad, b, 1, and Sonu Chand Thakur. Antiproliferative and antioxidant studies of novel chalcones derivatives. Mazharul Haque, Md. *Russian Journal of Bioorganic Chemistry*, 2023.
- Nida Andlib, Mohd Sajad, Rajesh Kumar, Sonu Chand Thakur. Abnormalities in sex hormones and sexual dysfunction in males with diabetes mellitus: A mechanistic insight. *Acta Histochemica* Jan 2023; 125(1).
- Mohd Sajad, Mohd Murshad Ahmad and Sonu Chand Thakur. An Integrated Bioinformatics Strategy to Elucidate the Function of Hub Genes Linked to Alzheimer's Disease. *Gene Reports*, 2022, 26.
- Mohd Sajad, Rajesh Kumar and Sonu Chand Thakur. History in Perspective: The Prime Pathological Players and Role of Phytochemicals in Alzheimer's Disease. *IBRO Neuroscience Reports* 2022; 12:377-389.
- Md Amjad Beg, Iram Iqbal Hejazi, Sonu Chand Thakur, Fareeda Athar. Domain-wise differentiation of *Mycobacterium tuberculosis* H37Rv hypothetical proteins: A roadmap to discover bacterial survival potentials. *Biotechnol Appl Biochem* 2021 Jan. doi:

10.1002/bab.2109.

- Chitrakshi Consul, Md Amjad Beg and Sonu Chand Thakur. Terpenoids from *Centella asiatica*, a novel inhibitor against RNA-dependent-RNA polymerase activity of NSP12 of the SARS CoV-2 (COVID-19). *Indian Journal of Natural Products and Resources* Vol. 12(4), Dec 2021: 527-537.
- Mohd Sajad, Mofieed Ahmed, Sonu Chand Thakur. An Outbreak of Severe Acute Respiratory Syndrome-2019 (COVID-19): A Major Health Concern. *Indian Journal of Pharmaceutical Education and Research*, 54 (4), 2020 Oct-Dec: 847-857.
- Bushra Khan, Abdullah Naiyer, Fareeda Athar, Shakir Ali, Sonu Chand Thakur. Synthesis, characterization and anti-inflammatory activity evaluation of 1, 2, 4-triazole and its derivatives as a potential scaffold for the synthesis of drugs against prostaglandin-endoperoxide synthase. *J Biomol Struct Dyn*. 2021 Feb; 39(2):457-475.
- Md Amjad Beg, Sonu Chand Thakur, Fareeda Athar. Molecular modeling and in silico characterization of mycobacterial Rv3101c and Rv3102c proteins: prerequisite molecular target in cell division. *Pharmacy & Pharmacology International Journal* 2020, 8(4): 234-243.
- Md Amjad Beg, Sonu Chand Thakur, Fareeda Athar. Computational annotations of mycobacterial Rv3632 that confers its efficient function in cell wall biogenesis. *Journal of Bacteriology & Mycology* 2020, 8(2): 46-53.
- Ranjeet Kumar Nirala, Pratuyasha Dutta, Md Zubair Malik, Lalita Dwivedi, Tulsidas G Shrivastav, Sonu Chand Thakur. *In Vitro* and *In Silico* Evaluation of Betulin on Calcium Oxalate Crystal Formation. *J Am Coll Nutr*. Sep-Oct 2019; 38(7):586-596.
- Amjad B, Shivangi, Sonu CT, and Laxman SM. Systematical Analysis to Assist the Significance of Rv1907c Gene with the Pathogenic Potentials of *Mycobacterium tuberculosis* H37Rv. *J Biotechnology and Biomaterials* 2019, 8 (4): 286. doi: 10.4172/2155-952X.1000286.
- Mohmmmed Sajad, Sonu Chand Thakur. Traditional uses and anti-inflammatory activities of different medicinal Plants. *International Journal of Ayurvedic and Herbal Medicine*, 2019(Jan-Feb), 9(1): 3410-3432.
- Ahmad K, Hafeez ZB, Bhat AR, Rizvi MA, Thakur SC, Azam Athar. Antioxidant and apoptotic effects of *Callistemon lanceolatus* leaves and their compounds against human cancer cells. *Biomedicine & Pharmacotherapy*: 2018, 106: 1195-1209.
- Dutta P, Shrivastav TG, Thakur SC, Homologous ELISA for measurement of medroxyprogesterone acetate in serum. *Analytical Biochemistry* 2018 Oct 1; 558:60-68.
- Beg MA, Shivangi, Thakur SC, Meena LS Structural Prediction and Mutational Analysis of Rv3906c Gene of *Mycobacterium tuberculosis* H37Rv to Determine Its Essentiality in Survival. *Advances in Bioinformatics* 2018: doi 10.1155/2018/6152014.
- Hejazi II, Khanam R, Mehdi SH, Bhat AR, Rizvi MMA, Thakur SC, Athar F. Antioxidative and anti-proliferative potential of *Curculigo orchioides* Gaertn in oxidative stress induced cytotoxicity: In vitro, ex vivo and in silico studies. *Food and Chemical toxicology* 2018: Volume 115, Pages 244-259.
- Hejazi II, Khanam R, Mehdi SH, Bhat AR, Rizvi MMA, Thakur SC, Athar F. New insights into the antioxidant and apoptotic potential of *Glycyrrhiza glabra* L. during hydrogen peroxide mediated oxidative stress: An in vitro and in silico evaluation. *Biomedicine & Pharmacotherapy* 2017; 94:265-279.
- Dohare N, Khan AB, Maurya N, Thakur SC, Athar F, Singh P, Patel R. An insight into the binding of aceclofenac with bovine serum albumin at physiological condition: a spectroscopic and computational approach. *Journal of Biomolecular Structure and Dynamics*. 2017 Jan; 24:1-9
- Sharma S, Arif M, Nirala RK, Gupta R, Thakur SC. Cumulative therapeutic effects of

phytochemicals in Arnica montana flower extract alleviated collagen-induced arthritis: inhibition of both pro-inflammatory mediators and oxidative stress. Journal of science and food agriculture 2016; 96(5):1500-10.

- Arif M, Thakur SC, Datta K. Implication of thymoquinone as a remedy for polycystic ovary in rat. Pharmaceutical biology 2016; 54(4):274-85.
- Dohare N, Khan AB, Athar F, Thakur SC, Patel R. Urea-induced binding between diclofenac sodium and bovine serum albumin: a spectroscopic insight. Luminescence 2016 Jun; 31(4):1166-09.
- Abu Hasnath Md Golam Sarwar, Ranjeet Kumar Nirala, Mohammed Arif, Beena Khillare, Sonu Chand Thakur. Spermicidal activity of the hexane extract of *Piper longum*: An *in vitro* study. Natural Product Research 2015; 29(12): 1166-9.
- Arif M, Thakur SC, Datta K. Disrupted hyaluronan binding protein 1 (HABP1) expression: one of the key mediators for ovarian dysfunction in polycystic ovary rat. Molecular and Cellular Biochemistry 398(1-2):233-44.
- Abu Hasnath Md Golam Sarwar, Mohammed Arif, Beena Khillare, Sonu Chand Thakur. *In vitro* study of the contraceptive spermicidal activity of *Ensete superbum* on human sperm. International Journal of Pharmacy and Pharmaceutical Sciences 2014 6 (8):205-7.
- Sharma S, Gupta R, Thakur SC, Attenuation of collagen induced arthritis by Centella asiatica methanol fraction via modulation of cytokines and oxidative stress. Biomedical and Environmental Sciences 2014; 27(12):926-38.
- Abu Hasnath Md Golam Sarwar, Mohammed Arif, Beena Khillare, Sonu Chand Thakur. Suppression of fertility in male rats by hydroethanolic extract of *Achyranthes aspera*. Journal of Applied Pharmacy 2014 6(2): 156-165.
- Abu Hasnath Md Golam Sarwar, Shikha Sharma, Mohammed Arif, Sarjeet Singh Thakur, Fareeda Athar, Beena Khillare, Sonu Chand Thakur. *Piper Longum* hexane fraction induces infertility by modulation of inflammatory mediators and gonadotropin insufficiency in Female rats. International Journal of Pharmacy and Pharmaceutical Sciences 2014; 6(2): 416- 420.
- Bhaskar A, Gupta R, Sreenivas V, Rani L, Kumar L, Sharma A, Sharma OD, Sharma MC, Thakur SC. Synergistic effect of vascular endothelial growth factor and angiotensin- 2 on progression free survival in multiple myeloma. Leuk Res. 2013; 37(4): 410-415.
- Bhaskar A, Gupta R, Vishnubhatla S, Kumar L, Sharma A, Sharma MC, Das P, Thakur SC. Angiotensin as biomarker of disease activity and response to therapy in multiple myeloma. Leuk Lymphoma. 2013 Jul;54(7):1473-8
- Bhaskar A, Gupta R, Kumar L, Sharma A, Sharma MC, Kalavani M, Thakur SC. Circulating endothelial progenitor cells as potential prognostic biomarker in multiple myeloma. Leuk Lymphoma. 2012 Apr; 53(4):635-40.
- Alam MJ, Devi GR, Singh RK, Ramaswamy R, Thakur SC, Sharma BI. Stochastic synchronization of interacting pathways in testosterone model. Comput Biol Chem. 2012 Dec; 41:10-17.
- Thakur SC, Kumar V, Ghosh I, Bhardwaj A, Datta K. Appearance of hyaluronan binding protein 1 proprotein in pachytene spermatocytes and round spermatids correlates with spermatogenesis. J Androl. 2006 Jul-Aug; 27(4):604-10. Epub 2006 Apr 1.
- Thakur SC, Datta K. Higher expression of hyaluronan binding protein 1 (HABP1/p32/gC1qR/SF2) during follicular development and cumulus oocyte complex maturation in rat. Mol Reprod Dev. 2008 Mar; 75(3):429-38.
- Chaube SK, Prasad SV, Thakur SC, Shrivastav TG. Estradiol protects clomiphene citrate-induced apoptosis in ovarian follicular cells and ovulated cumulus-oocyte complexes. Fertil

Steril. 2005 Oct; 84 Suppl 2:1163-72.

- Chaube SK, Prasad SV, Thakur SC, Shrivastav TG Hydrogen peroxide modulates meiotic cell cycle and induces morphological features characteristic of apoptosis in rat oocytes cultured in vitro. *Apoptosis*. 2005 Aug; 10(4):863-74.
- Thakur SC, Thakur SS, Chaube SK, Singh SP. An ethereal extract of Kamala (*Mallotus philippinensis* (Moll.Arg) Lam.) seed induce adverse effects on reproductive parameters of female rats. *Reprod Toxicol*. 2005 May-Jun; 20(1):149-56.
- Thakur SC, Thakur SS, Chaube SK, Singh SP. Subchronic supplementation of lithium carbonate induces reproductive system toxicity in male rat. *Reprod Toxicol*. 2003 Nov-Dec; 17(6):683-90.
- Thakur SC, Thakur SS, Banerjee S, Singh SP. Evaluation of adverse effect of Emisan-6 on male albino rats. *Bull Environ Contam Toxicol*. 2001 Mar; 66(3):306-12.
- Thakur SC, Thakur SS, Banerjee S, Singh SP. Evaluation of the reproductive toxicity of Emisan 6 in female rats. *Bull Environ Contam Toxicol*. 2001 Jan; 66(1):132-8.

BOOK CHAPTERS:

1. Mohd Sajad and Sonu Chand Thakur.
Insights of Sperm Pathology and Its Association with Infertility.
Innovations In Assisted Reproduction Technology.
IntechOpen. Published in London, United Kingdom, 2020.
Print ISBN 978-1-83880-548-7
Online ISBN 978-1-83880-549-4
eBook (PDF) ISBN 978-1-78985-871-6
2. Mohd Sajad and Sonu Chand Thakur
Occurrence and Bioactivity of Phytochemicals and their Role in Human Health
Advances in Health and Disease, Volume-21, 2020.
Published by Nova Science Publishers, Inc. † New York.
ISBN: 978-1-53617-783-1
3. Mohd Sajad and Sonu Chand Thakur
The Association of Diabetes and Obesity with Urolithiasis: A Review
Oxalate: Structure, Function and Occurrence
Nova Science Publishers, Inc. New York, 2020
ISBN: 9781536183030 (paper back)
ISBN: 9781536183528 (adobe pdf)
4. Chitrakshi Consul and Sonu Chand Thakur
Pathophysiologic and Therapeutic Aspects of Renal Calculi
Oxalate: Structure, Function and Occurrence
Nova Science Publishers, Inc. New York, 2020
ISBN: 978-1-53618-303-0 (paper back)
ISBN: 9781536183528 (adobe pdf)
5. Bushra Khan and Sonu Chand Thakur
Thiazolidinone-Related Heterocyclic Compounds as Potential Therapeutic Agents
Advances in Medicine and Biology, Volume-166, 2020.
Nova Science Publishers, Inc. New York
ISBN: 978-1-53618-365-8
ISSN: 2157-5398
6. Bushra Khan and Sonu Chand Thakur

- Synthesis and Pharmacological Activities of Triazole Derivatives.
Advances in Medicine and Biology, Volume-166, 2020.
Nova Science Publishers, Inc. New York
ISBN: 978-1-53618-365-8
ISSN: 2157-5398
7. Chitrakshi Consul and Sonu Chand Thakur
Endocrine Disruptors: Associated Disorders and Mechanisms of Action
Advances in Medicine and Biology, Volume-167, 2020.
Nova Science Publishers, Inc. New York
ISBN: 978-1-53618-439-6 (eBook)
ISSN: 2157-5398
 8. Shiereen Fatima and Sonu Chand Thakur
Polycystic Ovary Syndrome: Current Status and Future Perspective
Advances in Medicine and Biology, Volume-167, 2020.
Nova Science Publishers, Inc. New York
ISBN: 978-1-53618-439-6 (eBook)
ISSN: 2157-5398
 9. Shiereen Fatima and Sonu Chand Thakur
Role of Reactive Oxygen Species in Male Infertility: A Prospective Review
Advances in Medicine and Biology, Volume-167, 2020.
Nova Science Publishers, Inc. New York
ISBN: 978-1-53618-439-6 (eBook)
ISSN: 2157-5398
 10. Chitrakshi Consul and Sonu Chand Thakur
Hyaluronan: Role in Biological and Pathological Processes Advances in Medicine and
Biology, Volume-168, 2020. Nova Science Publishers, Inc. New York
ISBN: 978-1-53618-600-0 (eBook)
ISSN: 2157-5398
 11. Shiereen Fatima and Sonu Chand Thakur
Rheumatoid Arthritis: Pathological Mechanisms and Pharmacological Therapies
Advances in Medicine and Biology, Volume-168, 2020.
Nova Science Publishers, Inc. New York
ISBN: 978-1-53618-600-0 (eBook)
ISSN: 2157-5398
 12. Shiereen Fatima and Sonu Chand Thakur
Approaches to Evaluating Male Reproductive Toxicity
Advances in Medicine and Biology, Volume-169, 2020.
Nova Science Publishers, Inc. New York
ISBN: 978-1-53618-669-7 (eBook)
ISSN: 2157-5398
 13. Mohd Sajad and Sonu Chand Thakur
Pathophysiological Risk Factors for Infertility in Women
Advances in Medicine and Biology, Volume-169, 2020.
Nova Science Publishers, Inc. New York
ISBN: 978-1-53618-669-7 (eBook)
ISSN: 2157-5398
 14. Chitrakshi Consul and Sonu Chand Thakur
Spermatogenesis and Cryptorchidism
Advances in Medicine and Biology, Volume-169, 2020.
Nova Science Publishers, Inc. New York
ISBN: 978-1-53618-669-7 (eBook)

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15. Shiereen Fatima and Sonu Chand Thakur
New Insights into the Role of Matrix Metalloproteinases
Advances in Medicine and Biology, Volume-169, 2020.
Nova Science Publishers, Inc. New York
ISBN: 978-1-53618-669-7 (eBook)
ISSN: 2157-5398
16. Mohd Sajad and Sonu Chand Thakur
An Overview of Alzheimer`s Disease
Advances in Medicine and Biology, Volume-170, 2020.
Nova Science Publishers, Inc. New York
ISBN: 978-1-53618-748-9 (eBook)
ISSN: 2157-5398
17. Chittrakshi Consul, Virendra Singh and Sonu Chand Thakur
Pathophysiological Implications of the Peptic Ulcer Disease and its Therapeutic Approaches
Advances in Medicine and Biology, Volume-177, 2021.
Nova Science Publishers, Inc. New York
ISBN: 978-1-53619-509-5 (eBook)
ISBN: 978-1-53619-491-3
ISSN: 2157-5398
18. Nupur Aggarwal and Sonu Chand Thakur
Metabolomics in Bio-medical Research: Challenges and Oppurtunities
Advances in Medicine and Biology, Volume-182, 2021.
Nova Science Publishers, Inc. New York
ISBN: 978-1-53619-953-6
ISSN: 2157-5398
19. Pratuyasha Dutta, Tulsidas G. Shrivastav and Sonu Chand Thakur.
Review on Medroxyprogesterone Acetate and Its Detection
Advances in Medicine and Biology, Volume-183, 2021.
Nova Science Publishers, Inc. New York
ISBN: 978-1-53619-938-3
ISSN: 2157-5398
20. Sayeed Ghulam Razi, Chittrakshi Consul, Virendra Singh and Sonu Chand Thakur.
Pathophysiological Implications of Vitamin A in the Human Biological System
Advances in Medicine and Biology, Volume-186, 2021.
Nova Science Publishers, Inc. New York
ISBN: 978-1-68507-122-6 (eBook)
ISSN: 2157-5398
21. Nida Andlib, Virendra Singh and Sonu Chand Thakur.
Diabetes Mellitus: Pathophysiology and possible treatments.
Advances in Medicine and Biology, Volume-190, 2022.
Nova Science Publishers, Inc. New York
ISBN: 978-1-68507-436-4 (eBook)
ISSN: 2157-5398
22. Shiereen Fatima, Chittrakshi Consul, Virendra Singh and Sonu Chand Thakur.
Prostaglandins and Inflammation
Advances in Health and Disease, Volume-48, 2022.
Nova Science Publishers, Inc. New York
ISBN: 978-1-68507-375-6
ISBN: 978-1-68507-400-5 (e book)

23. Shiereen Fatima, Chitrakshi Consul, Virendra Singh and Sonu Chand Thakur
Prostaglandins and Their Role in the Physiology of Reproduction
Advances in Health and Disease, Volume-48, 2022
Nova Science Publishers, Inc. New York
ISBN: 978-1-68507-400-5 (e-book)

RESEARCH PROJECTS COMPLETED

- Project entitled “Differential Expression of Hyaluronan Binding Protein (HABP1) During Ovulation: Implication in Hyaluronan (HA) Matrix Formation Surrounding Cumulus Oocyte Complex (COC) in Normal and Anovulated Conditions in Rat” from **Indian Council of Medical Research (ICMR)**, India for a period of three years from May 2011.
- Project entitled “Study of anti-fertility efficacy and toxicity of *Piper longum* in female rats” from **University Grant Commission (UGC)** for a period of three years from February 2009.
- Project entitled “Regulation of hyaluronan binding protein 1 (HABP1) during follicular development and cumulus oocyte complex maturation in rat” from **DST** for a period of three years from April 2006.

COURSES/ CONFERENCES ORGANIZED:

- **Coordinated:** 4th, 3-week Refresher Course (12 May 14 – 02 June, 2014) in Basic Sciences (Interdisciplinary) organized by UGC- Academic Staff College, Jamia Millia Islamia, New Delhi.
- **Organized: Secretary** –National Interdisciplinary Science Conference on ‘Interface between Chemistry and Biology’ -8th October 2009, Jamia Millia Islamia, New Delhi.

MEMBER ADMINISTRATIVE/ ACADEMIC COMMITTEES:

- Warden of J&K Girl’s Hostel from 3rd November 2020- 2021.
- Advisor Subject Association since 2014- 2017, 2018 - 2021.
- Member of Animal Ethical Committee since 2011- 2014.
- M.Phil. Coordinator from 2017-2018.

RESEARCH INTEREST:

Successful ovulation and spermatogenesis involves the expression of various proteins at different stages in harmony with hormonal balance. Imbalance of these hormones can lead to overexpression or under expression of crucial proteins involved in the process of ovulation and spermatogenesis leading to the failure of these processes. We have been studying the expression and role of proteins that are expressed during ovulation and spermatogenesis and are involved in reproduction. An insight into the regulation of various proteins involved may open new vistas to understand the role of these proteins during these events. For the past few years we have been studying toxicity of various plants that affect spermatogenesis, oogenesis, and hormone level of male and female reproductive system. Furthermore, various other factors affecting reproductive parameters such as different stress conditions, environmental pollutants etc, which mimic hormones that lead to ovotoxicity and spermatotoxicity are part of investigations. Future work will also involve identification of various medicinal plant products or chemical compounds that can act as safe contraceptive. We are also studying the therapeutic efficacy and toxicity of plants, natural and synthesized compounds in various diseases like arthritis, diabetes, urolithiasis, cancer and polycystic ovary etc.