

CURRICULUM VITAE

NAME : **PARTHA ROY**

DATE OF BIRTH : 1.8.1970

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EDUCATIONAL/ PROFESSIONAL QUALIFICATIONS

APRIL 2014 – TILL DATE	PROFESSOR DEPARTAMNT OF BIOTECHNOLOGY INDIAN INSTITUTE OF TECHNOLOGY ROORKEE 247 667 UTTARAKHAND, INDIA
NOVEMBER 2009 – APRIL 2014	ASSOCIATE PROFESSOR DEPARTAMNT OF BIOTECHNOLOGY INDIAN INSTITUTE OF TECHNOLOGY ROORKEE 247 667

UTTARAKHAND, INDIA

JANUARY 2004 – NOVEMBER

2009

ASSISTANT PROFESSOR
DEPARTMENT OF BIOTECHNOLOGY
INDIAN INSTITUTE OF TECHNOLOGY
ROORKEE 247 667
UTTARAKHAND, INDIA

DECEMBER 2001 - DECEMBER

2003

WELLCOME TRUST RESEARCH
ASSOCIATE
INSTITUTE OF REPRODUCTIVE AND
DEVELOPMENTAL BIOLOGY
IMPERIAL COLLEGE LONDON
FACULTY OF MEDICINE
DU CANE ROAD
LONDON, UK

MAY 2001 – DECEMBER 2001

RESEARCH SCIENTIST
GELNMARK RESEARCH CENTER
GLENMARK PHARMACEUTICALS LTD.
NEW MUMBAI, MAHARASTRA

JANUARY 2001 – MAY 2001

LECTURER
DEPARTMENT OF BIOTECHNOLOGY
BIRLA INSTITUTE OF TECHNOLOGY
AND SCIENCE
PILANI, RAJASTHAN, INDIA

NOVEMBER 1998 – DECEMBER

2000 :

POSTDOCTORAL TRAINING
AT DEPARTMENT OF PHYSIOLOGY
INSTITUTE OF BIOMEDICINE
UNIVERSITY OF TURKU
KIINAMYLLEYNKATU 10

20520 TURKU
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SEPTEMBER 1997 -- SEPTEMBER
1998

EXCHANGE PROGRAMME FOR
GRADUATE STUDENTS AT
HORMONE RESEARCH CENTER
CHONNAM NATIONAL UNIVERSITY
KWANGJU, SOUTH KOREA

1992 - 1997

Ph.D. ON ENDOCRINE BIOCHEMISTRY &
REPRODUCTIVE PHYSIOLOGY (VISVA
BHARATI UNIVERSITY, INDIA)
TITLE OF THESIS: PURIFICATION OF
GnRH FROM THE HYPOTAHALIMI OF
AN INDIAN MAJOR CARP (*Catla catla*):
BIOLOGICAL ACTIVITY AND
MECHANISM OF ACTION.

1990 - 1992

: MASTER OF SCIENCES IN ZOOLOGY
(UNIVERSITY OF KALYANI, INDIA)
MAJOR: ENDOCRINOLOGY AND
REPRODUCTIVE PHYSIOLOGY.

1987 - 1990

: BACHELOR OF SCIENCES IN ZOOLOGY
(UNIVERSITY OF KALYANI, INDIA)

AWARDS AND DISTINCTIONS

1. Awarded National Merit Scholarship for securing first class and first position in the order of merit in Bachelor of Science in Zoology.
2. Secured first class and first position in the order of merit in Master of Science (MS) in Zoology.

3. Stood first in University Scholarship examination for undergraduate students.
4. Stood first in University Scholarship examination for Master Course students.
5. Participated in a summer course on “Molecular Biology” held at Banaras Hindu University, Varanasi, during June -July, 1992 under the supervision of Professor S.C. Lakhotia.
6. Selected for a research fellowship sponsored by the Department of Science and Technology, Government of India, in order to carry out Research on “Endocrine Biochemistry”.
7. Selected for an exchange program in a collaborative project between VisvaBharati University and Hormone Research Center, South Korea.
8. Received a postdoctoral fellowship in a collaborative project between Department of Physiology, Institute of Biomedicine, University of Turku and Department of Medical Chemistry, Institute of Biomedicine, University of Helsinki, Finland which was funded by Finnish Academy of Sciences, one of the most prestigious fellowship in Europe.
9. Received a Postdoctoral Fellowship from Wellcome Trust Fund to work as a postdoctoral fellow at Institute of Reproductive and Developmental Biology, Imperial College, London.
10. Special invitation from Dr. T. Ramasami, Secretary, Department of Science and Technology, Government of India for delivering a special lecture in “Young Scientist Session” of the prestigious “Indian Science Congress” held at North Eastern Hill University, Shillong, between January 3-7, 2009.
11. Member of the National Board of Accreditation (NBA) set up by **All India Council for Technical Education**.
12. Member of the Scientific Panel on “Functional foods, nutraceuticals, dietetic products and other similar products” constituted by **Food Safety and Standards Authority of India**, Government of India.

13. Recipient of “Brain Pool Program Fellowship” offered by Korean Federation of Science and Technology Societies as “Invited Visiting Scientist” at Chonnam National University, Republic of Korea, between March 2010 to July 2010.
14. Have been conferred with “Fellowship in Reproduction and Endocrinology (FRE)” by the Society for Reproductive Biology and Comparative Endocrinology, Madras, India on January 31, 2012 in recognition of his contributions in the field of Reproduction and Endocrinology.
15. Recipient of “Visiting Professorship” offered by Academy of Finland (Apex body of Science of Finland) at Department of Physiology, Institute of Biomedicine, University of Turku, Finland between May 2012 to July 2012.
16. Recipient of “Outstanding Teacher’s Award – 2014” by Indian Institute of Technology Roorkee, Roorkee.

MY RESEARCH EXPERTISE

The major focus of my research interest is divided into four parts:

1. Development of plant based medicines for the cure of diabetes and cancer: Screening, isolation and analyzing their modes of action using *in vitro* cell based models and *in vivo* animal models

It has been known since ages that the plants are the great source of medicines and nutritive values. Here my group is trying to give a scientific outlook towards this end. Firstly we are trying to identify these plants from ayurvedic literatures for their various biological activities. In this area of research, the major focus is towards isolation and screening of different herbal molecules related to diseases and health care products like nutraceuticals. For understanding the medicinal values of herbal products, the major thrust is towards diabetes and prostate cancer. The bioactive molecules from plants are being isolated and screened for their activity towards the targeted therapies for cancer and diabetes. Different sorts of high throughput assays are being developed towards this end to identify the bioactive compounds. In order to screen these molecules we have developed various cell based bioassay systems like diabetic cell lines, insulin over

expressing cell lines, various reporter based assay systems in cell lines etc. The bioactive molecules are then analyzed for their modes of actions at cellular and molecular level using various biotechnological tools. Till date we have analyzed about 20 different plants and their modes of action as anti-diabetic, anticancer and anti-lipidemic actions have been identified. This has provided enormous knowledge for using these plants in herbal formulations. We are in the process of finally isolating these compounds and till date we have found some flavonoid like molecules from *E. jambolana* seeds, alkaloid like molecules from *A. marmelos* plants. Also one plant based potent molecule “pterostilbene” has been further modified as a potent anticancer agent.

Our current area of research on cancer therapeutics are also linked to development of a combinatorial therapy for these diseases using plant based medicines and miRNA responsible for regulating cellular proliferation. A combinatorial therapy using miRNA and plant based drugs would always be more specific and precise for curing these diseases. For this we have analyzed several miRNAs responsible for regulating cellular proliferation in our laboratory. These miRNAs are being analyzed in the laboratory to be used for combinatorial therapy.

2. Development of genetically modified reporter based recombinant mammalian stable cell lines for screening various steroidal bioactive molecules: therapeutics for hormone related cancer

The major thrust in this project is the development different cell based assays for screening and identifying various steroidal bioactive molecules from different sources like environment, plant and other synthetic sources using in vitro approach. In the in vivo approach we are also trying to generate transgenic mice over expressing luciferase reporter gene under the control of various steroid receptors. For the in vitro approach, the in vitro cell based assays developed could be used for different drug developments also. In this area of research, we design multi-tiered bioassays: in vitro binding assays and transactivation assays. For binding assays, recombinant receptor proteins are expressed and purified from *E. coli*. The purified proteins are then used for binding analysis. In the transactivation study, we are creating cell lines stably expressing steroid receptors and steroid response element driven reporter genes like lucifersae and green fluorescent

protein (GFP). The test chemicals can either activate or inhibit the transactivation of the reporter genes. Once the chemicals are identified, their molecular mechanisms of actions are being determined by analyzing the downstream gene expressions. In this area we have already screened the industrial effluents from sewage, leather industry, paper industry and sugarcane industry and even from blood samples. Our studies showed that these effluents are rich in various types of contaminants some of which are endocrine disruptors and some of them are even toxic.

3. Differentiation of adult and embryonic stem cells under various conditions: Utilization of them for various tissue engineering applications

Our laboratory is also working on stem cells where we are trying to differentiate the adult stem cells to tissues of various lineages. Our major focus is towards the differentiation of stem cells to osteoblastic lineage with ultimate goal to utilize them for various tissue engineering applications like fracture, osteoarthritis, and osteoporosis. Our future plan with this project is to create the transplantable engineered bone cells for the cure of these disorders. We have already optimized various methods for differentiation of stem cells to osteoblasts and some are in late stage of tissue engineering applications.

Further we are also exploring various modulators for stem cell differentiation and our ultimate goal is to determine their lineage specificity. We have succeeded in differentiating mesenchymal stem cells to pancreatic cells capable of secreting insulin. Our future goal is their successful transplantation to diabetic patients.

4. Cancer stem cells: Isolation, characterization and understanding their biology for the cure and management of cancer

In this project we are trying to isolate the cancer stem cells which are basically very illusive cells in cancer and are known to play major role in recurrence of this disease. Our major goal in this project is to isolate these cells from various cancerous tissues like breast, prostate and oral cancers. For this project we have collaboration with oncologists who provides the tissue samples for various stages of cancer and we are trying to isolate and then analyze the role of these cells in the development of cancer. For this various cancer stem cell markers are analyzed and the isolated cells are then studied for their role

in metastasis, angiogenesis and other deleterious effects of cancer.

Details of completed/ongoing Ph.D. thesis in my laboratory:

1. Student: Mr. Vikas Kumar

Title of Thesis: Screening and biological characterization of some natural/ synthetic endocrine disruptors

Funding: MHRD

Status: Awarded, 2008

2. Student: Ms. Bhavna Sharma

Title of Thesis: Studies on anti-diabetic active principles from plants and mechanism of action.

Funding: UGC

Status: Awarded, 2009

3. Student: Mr. G. Viswanath

Title of Thesis: Development of bioassays for endocrine disruptors and study their mode of action.

Funding: DBT

Status: Awarded, 2009

4. Student: Mr. Sharad Sharma

Title of Thesis: Investigation of pharmacological profile of some endocrine disruptors in male rats.

Funding: MHRD

Status: Awarded 2009

3. Student: Mr. Shamba Chatterjee

Title of Thesis: Development of yeast based steroid bioassay for screening some natural endocrine disruptors.

Funding: CSIR

Status: Awarded 2009

4. Student: Ms. Ajanta Chakraborty

Title of Thesis: A study on regulation of cancer development in some reproductive

organs and accessory sex organs and their therapy using herbal medicines.

Funding: UGC

Status: Awarded 2011

5. Student: Ms. Rajni Salunke

Title of Thesis: Development cell based of *in vitro* and animal based *in vivo* assays to screen the bioavailability of iron and zinc from different herbal sources with special emphasis on wheat.

Funding: DBT

Status: Awarded, 2012

6. Student: Ms. Monika Vats

Title of Thesis: Organitin (IV) carboxylates: Potential anti-tumor and anti-inflammatory agents.

Funding: CSIR

Status: Awarded, 2013

7. Student: Ms. Swati Srivastava

Title of Thesis: Development and validation of methods for differentiating rat embryonic stem cells to various functional cells

Funding: DBT

Status: Completed 2014

10. Student: Mr. Nikhil Kumar Singh

Title of Thesis: Screening, isolation and understanding the mode of action of some anti-cancer molecules from Indian plants.

Funding: CSIR

Status: Ongoing

11. Student: Mr. Narender Kumar

Title of Thesis: Determination of endocrine disrupting activities of some common environmental and industrial chemicals.

Funding: DBT

Status: Ongoing

12. Student: Ms. Ritu Varshney

Title of Thesis: Understanding the mode of action of some flavonoids as anti-diabetic and anti-obesity drugs

Funding: CSIR

Status: Ongoing

13. Student: Mr. Snehasish Das

Title of Thesis: Pterostilbene and its conjugate as an anti-cancer molecule: their role in inhibiting metastasis

Funding: DBT

Status: Ongoing

14. Student: Ms. Shruti Sharan

Title of Thesis: Determination of endocrine disrupting activities of some common environmental chemicals regulating thyroidal and reproductive functions.

Funding: DBT

Status: Ongoing

15. Student: Ms. Rutusmita Mishra

Title of Thesis: Differentiation of stem cells to osteoblastic lineage: the mechanism of action of various agents.

Funding: MHRD

Status: Ongoing

Masters Thesis guided

Master of Sciences (M.Sc.) : 19 (Completed)

Master of Technology (M.Tech.) :10 (Completed)

Funding Agency Supported Research Projects:

1. Funding agency: Department of Science and Technology, Govt. of India

Title of the project: A detailed study on some of the active principles from black berry (*Eugenia jambolana*) seeds in relation to their molecular mechanism of action as an anti-diabetic agent.

Duration: 3 years (2004-2007).

Amount: Rs. 6 Lacs

Status: PI

2. Funding Agency: Council for Scientific and Industrial Research, Govt. of India

Title of the project: Development of a rapid and robust yeast based steroid hormone bioassay, based on the expression of green fluorescent proteins and luciferase reporter genes for screening different environmental endocrine disruptors from industrial wastes.

Duration: 3 years (2005-2008)

Amount: Rs. 12.44 Lacs

Status: PI

3. Funding Agency: Department of Biotechnology, Govt. of India

Title of the project: Development of multi-tier cell based bioassays for high throughput screening and study the molecular mechanism of action of endocrine disrupting chemicals from industrial wastes.

Duration: 3 years (2005-2008)

Amount: Rs. 24.22 Lacs

Status: PI

4. Funding agency: Ministry of Human Resources and Development

Title of the project: Development of methods for differentiation of mouse embryonic stem cells to insulin producing cells

Duration: 3 years (2007-2010)

Amount: Rs. 10.50 Lacs

Status: PI

5. Funding agency: Council of Scientific and Industrial Research

Title of the project: Sperm chemotaxis: Investigations with bioactive peptides from female reproductive tract of goats

Duration: 3 years (2007-2010)

Amount: Rs. 14 Lacs

Status: PI

6. Funding agency: Department of Biotechnology

Title of the project: Biofortification of wheat for micronutrients through conventional and molecular breeding approaches.

Duration: 5 years (2005-2010)

Amount: Rs. 84.34 Lacs

Status: Co-PI

7. Funding Agency: Council for Scientific and Industrial Research, Govt. of India

Title of the project: Organotins and phthalates: An *in vitro* and *in vivo* approach to understand their mechanism of actions as endocrine disruptor causing reproductive and metabolic disorders.

Duration: 3 years (2010-2013)

Amount: Rs. 19.36 Lacs

Status: PI

8. Funding Agency: Department of Science and Technology, Govt. of India

Title of the project: Isolation and characterization of flavonoids from *Eugenia jambolana* and their use for the cure and management of diabetes and obesity

Duration: 3 years (2011-2014)

Amount: Rs. 42.75 Lacs

Status: PI

9. Funding Agency: Department of Biotechnology, Govt. of India

Title of the project: Environmental chemicals and their impact on thyroid functions: An *in vitro* and *in vivo* approach to identify them and understand their mode of action

Duration: 3 years (2011-2014)

Amount: Rs. 39.00 Lacs

Status: PI

10. Funding Agency: Department of Biotechnology, Govt. of India

Title of the project: A detailed study on the toxic effects of some environmental chemicals on reproductive system of animals

Duration: 2 years (2011-2013)

Amount: Rs. 37.00 Lacs

Status: PI

11. Funding Agency: Uttarakhand State Council for Science and Technology, Government of Uttarakhand

Title of the project: Development of methods for differentiation of mouse embryonic and stem cells to insulin producing cells

Duration: 2 years (2012-2014)

Amount: Rs. 4.84 Lacs

Status: PI

12. Funding Agency: Department of Biotechnology, Govt. of India

Title of the project: Cancer Nanotheranostics: Development of Multifunctional Nanocomposite for Tumor Targeted Delivery of Suicide Gene and Imaging Probe

Duration: 3 years (2012-2015)

Amount: Rs. 54.00 Lacs

Status: Co-PI

13. Funding Agency: Department of Science & Technology, Govt. of India

Title of the project: Identification and molecular analysis of some bacterial proteins for their anti-cancer properties

Duration: 3 years (2012-2015)

Amount: Rs. 25.00 Lacs

Status: Mentor

14. Title of the project: Early cancer detection by polyelectrolyte carbon nanoparticle

Funding agency: Department of Science and Technology (DST), Govt. of India

Duration: 3 years (2012-2015)

Amount: Rs. 25.00 Lacs

Status: Mentor

MY TEACHING EXPERIENCES:

Courses taught

A) B.Tech Biotechnology: Animal Biotechnology; Cell Biology, Genetics, Biosafety & Bioethics

B) M.Sc. Biotechnology: Cell and Tissue Culture Technology; Transgenic Animal Technology; Reproductive Endocrinology & Contraceptive Technology; Developmental Biology

Courses developed:

B.Tech Biotechnology, Transgenic Animal Technology

MY PROFESSIONAL EXPERIENCES:

As a consultant for some pharmaceutical companies in India and abroad towards the development of cell based in vitro bioassays. The main assays developed are CHO cell lines stably over expressing beta 2 and 3 adrenergic receptors for screening antidiabetic and antiobesity drug screening. This cell line is being used by several R & D laboratories for their new drug discovery programs. In addition, developed and screened several compounds having the PPAR γ activities. This screening was done by developing a CV 1 cell based bioassay.

In addition to long research experience I have a teaching experience of about 10 years, first at Birla Institute of Technology and Science, Pilani and then here at Indian Institute of Technology, Roorkee. I had been teaching different courses like, Transgenic Animal Technology; Cell and Tissue Culture Technology; Reproductive Endocrinology and Contraceptive Technology; Cell Biology, Animal Biotechnology, for Bachelors and Masters students.

LIST OF PUBLICATIONS:

1. S. Halder, **P. Roy**, A. Chatterjee and S. Bhattacharya (1995): Bioactive forms of gonadotropin releasing hormone in the brain of an Indian major carp, *Catla catla* (Ham). **Journal of Biosciences** 20(4):551-561.
2. A. Bandyopadhyay, **P. Roy** and S. Bhattacharya (1996): Thyroid hormone induces the synthesis of a putative protein in rat granulosa cell which stimulates progesterone release. **Journal of Endocrinology** 150: 309-318.
3. B. Mukhopadhyay, **P. Roy**, A. Chatterjee and S. Bhattacharya (1997): Intracellular events in response to GnRH causing gonadotropin release from the pituitary cells of a channidae fish, *Channa punctatus*, Bloch. **Comparative Biochemistry and Physiology** 118C 2: 129-136.
4. M. Datta, **P. Roy** and S. Bhattacharya (1998): Thyroid hormone induces the

progesterone release from human corpus luteum by the synthesis of a putative protein. **Journal of Endocrinology** 158(3): 319-325.

5. **P. Roy**, A. Chatterjee, P. P. Banerjee and S. Bhattacharya (2000): A thyrotropin like molecule from the pituitary of an Indian fresh water murrel: Comparison of its biological activity with other thyrotropins. **Comparative Biochemistry and Physiology C** (Pharmacology and Toxicology) 125(2): 165-177.

6. **P. Roy**, M. Datta, S. Dasgupta and S. Bhattacharya (2000): GnRH stimulates thyroid activity in a fresh water murrel, *Channa gachua* (ham) and carps, *Catla catla* (ham) and *Cirrhinus mrigala* (ham). **General and Comparative Endocrinology** 117(3): 456-463.

7. P. R. Manna, **P. Roy**, B. Clarck, D. M. Stocco and I. T. Huhtaniemi (2001): Interaction of Thyroid hormone and steroidogenic acute regulatory protein in the regulation of murine Leydig cell steroidogenesis. **Journal of Steroid Biochemistry and Molecular Biology** 76 (1-5): 167-77

8. **P. Roy**, H. Salminen, P. Koskimies, J. Simola, A. Smeds, P. Saukko and I. Huhtaniemi (2004) Screening of some antiandrogenic endocrine disruptors using a recombinant cell based in vitro bioassay. **Journal of Steroid Biochemistry and Molecular Biology** 88: 157-166.

9. **P. Roy** and B. M. J. Pereira (2005) A treatise on the hazards of endocrine disruptors and tools to evaluate them. **Indian Journal of Experimental Biology** 43: 975-992.

10. **P. Roy**, S. Franks, M. S. Read and I Huhtaniemi (2006) Determination of androgen bioactivity in human serum samples using a recombinant cell based *in vitro* bioassay. **Journal of Steroid Biochemistry and Molecular Biology** 101: 68-77.

11. Shamba Chatterjee, Chandrajeet B. Majumder and **Partha Roy** (2007) Development of a yeast based assay to determine the (anti)androgenic contaminants from pulp and paper mill effluents in India **Environmental Toxicology and Pharmacology** 24: 114-121.

12. G. Vishawanath, S. Chatterjee, **P. Roy** (2007) Assessment of luteinizing hormone receptor function in an endometrial cancer cell line, Ishikawa cells in response to human chorionic gonadotrophic hormone. **Molecular and Cellular Endocrinology** 272: 14-21.

13. Bhavna Sharma, Santosh K. Satapathi and **Partha Roy** (2007). Hypoglycemic and antihyperglycemic effect of *Aegle marmelos* (L.) leaf extracts on streptozotocin induced diabetic mice. **International Journal of Pharmacology** 3(6): 444-452.

14. Mesala Lavanya, Chandrajeet Balomajumder, Shamba Chatterjee and **Partha Roy** (2008). Biodesulfurization of dibenzothiophene using recombinant *Pseudomonas* strain. **Journal of Chemical Technology and Biotechnology** 83(3): 294-298.

15. Vikas Kumar, Ajanta Chakraborty, Gunda Viswanath and **Partha Roy** (2008). Androgenic endocrine disruptors in wastewater treatment plant effluents in India: their influence on reproductive processes and systemic toxicity in male rats. **Toxicology and Applied Pharmacology** 226: 60-73.
16. **P. Roy**, M. Alevizaki, and I. Huhtaniemi (2008). In vitro bioassays for androgens and their diagnostic applications. **Human Reproduction Update** 14(1): 73-82.
17. Shamba Chatterjee, Vikas Kumar, Chandrajeet B. Majumder, **Partha Roy** (2008). Screening of some anti-progestin endocrine disruptors using a recombinant yeast-based in vitro bioassay. **Toxicology In Vitro** 22: 788-798.
18. Bhavna Sharma, G. Viswanath, Rajni Salunke and **Partha Roy** (2008). Effects of flavonoid rich extract from seeds of *Eugenia jambolana* (L.) on carbohydrate and lipid metabolism in diabetic mice. **Food Chemistry** 110: 697-705.
19. Anil K Mathur, C. B. Majumder, Shamba Chatterjee, **Partha Roy** (2008). Biodegradation of pyridine by the new bacterial isolates *S. putrefaciens* and *B. sphaericus*. **Journal of Hazardous Materials** 157: 335-343.
20. B. Sharma, C. B. Majumder and **P. Roy** (2008). Assessment of hypoglycemic and hypolipidemic effect of flavonoid rich extract from *Eugenia jambolana* (L.) seeds on streptozotocin induced diabetic rats. **Food and Chemical Toxicology** 46: 2376-2383.
21. Vikas Kumar, Chandrajeet Balomajumder and **Partha Roy** (2008). Effects of endocrine disrupting chemicals from leather industry effluents on male reproductive system. **Journal of Steroid Biochemistry and Molecular Biology** 111: 208-216.
22. Vikas Kumar, Chandrajeet Balomajumder and **Partha Roy** (2008). Disruption of LH induced testosterone biosynthesis in testicular Leydig cells by Triclosan: probable mechanism of action. **Toxicology** 250:124-131.
23. Vikas Kumar, Mool Raj Kural, B.M.J. Pereira and **Partha Roy** (2008). Spearmint induced hypothalamic oxidative stress and testicular anti-androgenicity in male rats - altered levels of gene expression, enzymes and hormones. **Food and Chemical Toxicology** 46: 3563-3570.
24. Gunda Viswanath, Sujata Halder, Gunda Divya, Chandrajeet B Majumder, **Partha Roy** (2008). Detection of potential progestogenic endocrine disruptors using a recombinant human progesterone receptor binding assay and transactivation bioassay. **Molecular and Cellular Endocrinology** 295: 1-9.
25. Sham M. Sondhi, Reshma Rani, **Partha Roy**, S. K. Agarwal and S. K. Saxena (2009). Microwave assisted synthesis of N-substituted cyclic imides and their evaluation

for anticancer and anti-inflammatory activities. **Bioorganic and Medicinal Chemistry Letters** 19: 1534-1538.

26. Vikas Kumar, Ajanta Chakraborty, Mool Raj Kural, **Partha Roy** (2009). Alteration of testicular steroidogenesis and histopathology of reproductive system in male rats treated with triclosan. **Reproductive Toxicology** 27: 177-185.

27. Bhavna Sharma, Rajani Salunke, Swati Srivastava, Chandrajeetbalo Majumder, **Partha Roy** (2009). Effects of guggulsterone isolated from *Commiphora mukul* in high fat diet induced diabetic rats. **Food and Chemical Toxicology** 47: 2631-2639.

28. Bhavna Sharma, Rajani Salunke, Chandrajeetbalo Majumder, Supriya Daniel, **Partha Roy** (2010). Anti-diabetic potential of alkaloid rich fraction from *Capparis decidua* plants on diabetic mice. **Journal of Ethnopharmacology** 127: 457-462.

29. Sham M. Sondhi, Reshma Rani, **Partha Roy**, S. K. Agrawal, A. K. Saxena (2010). Conventional and microwave assisted synthesis of small molecule based biologically active heterocyclic amidine derivatives. **European Journal of Medicinal Chemistry** 45: 902-908.

30. Sham M. Sondhi, Reshma rani, Jaiveer Singh, **Partha Roy**, S. K. Agrawal, A. K. Saxena (2010). Solvent free synthesis, anti-inflammatory and anticancer activity evaluation of tricyclic and tetracyclic benzimidazole derivatives. **Bioorganic and Medicinal Chemistry Letters** 20: 2306-2310.

31. Gunda Viswanath, Shamba Chatterjee, Swati Dabral, Siddharth R Nanguneri, Gunda Divya, **Partha Roy** (2010). Anti-androgenic endocrine disrupting activities of chlorpyrifos and piperophos. **Journal of Steroid Biochemistry and Molecular Biology** 120: 22-29.

32. Ajanta Chakraborty, Neetu Gupta, Kaushik Ghosh, **Partha Roy** (2010). In vitro evaluation of the cytotoxic, anti-proliferative and anti-oxidant properties of pterostilbene isolated from *Pterocarpus marsupium*. **Toxicology in Vitro** 24: 1215-1228.

33. Ajanta Chakraborty, Shamba Chatterjee, **Partha Roy** (2010). Progesterone receptor agonists and antagonists as anticancer agent. **Mini Reviews in Medicinal Chemistry** 10(6): 506-517.

34. Ajanta Chakraborty, Pramod Kumar, Kaushik Ghosh, **Partha Roy** (2010). Evaluation of a Schiff base copper complex compound as potent anticancer molecule with multiple targets of action. **European Journal of Pharmacology** 647: 1-12.

35. Rajani Salunke, Kumari Neelam, Nidhi Rawat, Vijay Kumar Tiwari, Gursharn S Randhawa, Harcharan Singh Dhaliwal, **Partha Roy** (2011). Bioavailability of iron from wheat *Aegilops* derivatives selected for high grain iron and protein contents. **Journal of Agricultural and Food Chemistry** 59(13): 7465-7473.

36. Sham M Sondhi, Jaiveer Singh, **Partha Roy**, S. K. Agrawal, A. K. Saxena (2011). Conventional and microwave-assisted synthesis of imidazole and guanidine derivatives and their biological evaluation. **Medicinal Chemistry Research** 20: 887-897.
37. Bhavna Sharma, Rajani Salunke, Santosh Satapati, Chandrajeet Balomajumder, **Partha Roy** (2011). Screening of some Indian medicinal plant extracts for their anti-hyperglycemic activities in streptozotocin induced diabetic mice. **Journal of Food Biochemistry** 35: 1398-1406.
38. Kaushik Ghosh, Pramod Kumar, Nidhi Tyagi, Udai P Singh, Nidhi Goel, Ajanta Chakraborty, **Partha Roy**, Maria C Baratto (2011). DNA interaction, super oxide scavenging and cytotoxicity studies on new Copper (II) complexes derived from tridentate ligand. **Polyhedron** 30(16): 2667-2677.
39. Sham M. Sondhi, Surbhi Arya, Reshma Rani, Nikhil Kumar, **Partha Roy** (2012). Synthesis, anti-inflammatory and anticancer activity evaluation of some mono- and bis-Schiff's bases. **Medicinal Chemistry Research** 21: 3620-3628.
40. Swati Srivastava, Ajanta Chakraborty, Rajani Salunke, **Partha Roy** (2012). Development of a novel Polygalacturonic acid- Gelatin blend scaffold fabrication and biocompatibility studies for tissue-engineering applications. **International Journal of Polymeric Materials** 61: 1-20.
41. Ajanta Chakraborty, Naganjaneyulu Bodipati, Marija Krstic Demonacos, Ramakrishna Peddinti, Kaushik Ghosh, **Partha Roy** (2012). Long term induction by pterostilbene results in autophagy and cellular differentiation in MCF-7 cells via ROS dependent pathway. **Molecular and Cellular Endocrinology** 355(1): 25-40.
42. Sham M. Sondhi, Sandeep Kumar, Nikhil Kumar, **Partha Roy** (2012). Synthesis of anti-inflammatory and anticancer activity evaluation of some pyrazole and oxadiazole derivatives. **Medicinal Chemistry Research** 21: 3043-3052.
43. Swati Srivastava, Upasana Bedi, **Partha Roy** (2012). Synergistic actions of insulin-sensitive and Sirt1-mediated pathways in the differentiation of mouse embryonic stem cells to osteoblast. **Molecular and Cellular Endocrinology** 361: 153-164.
44. Rajani Salunke, Nidhi Rawat, Vijay Kumar Tiwari, Kumari Neelam, Gursharn Singh Randhawa, Harcharan Singh Dhaliwal, **Partha Roy** (2012). Determination of bioavailable-zinc from biofortified wheat using a coupled in vitro digestion/Caco-2 reporter-gene based assay. **Journal of Food Composition and Analysis** 25: 149-159.
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