

## MARSHLEEN YADAV, Ph.D.

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<https://publons.com/researcher/1611851/marshleen-yadav/>

### SUMMARY

A self-motivated and goal oriented independent researcher with overall lab experience especially in radiation oncology, biochemistry, and molecular biology. My innovative, rational thinking, multitasking abilities and building good working relationships with team/collaborators have contributed immensely in completing multiple projects under tight time constraints. I aim to be a successful Research Investigator focusing on application-oriented research for development of new strategies/products in Translational/Biotech sector.

### EDUCATION

**Postdoctoral Research Scientist**, Radiation Oncology, The Ohio State University, USA-Current

**Postdoctoral Fellow**, Hematology, Institut Gustave Roussy, Paris, France 2014

**Ph.D.**, Biochemistry, Banaras Hindu University, India 2011

**PG Diploma**, Bioinformatics, Bioinformatics Institute of India, India 2005

**M.Sc.**, Biotechnology, Bundelkhand University, India 2003

**Diploma**, Computation, National Institute of Information Technology, India 2001

**B.Sc.**, Biology, Kumaun University, India 2000

### EXPERIENCE

#### 2013-present: Postdoctoral Research

- Developed a novel microRNA based blood assay for rapid radiation biodosimetry (submitted)
- Successfully headed multiple projects on non-coding RNAs in Radiation resistance, normal tissue toxicity, Acute Radiation Syndrome (1), and preclinical study (2), and novel radiation countermeasure (3)
- Established protocols for blood based experiments and In vitro and in vivo studies on normal/leukemic stem cells aimed to provide clinical relevance for transplantation
- Standardized retroviral, lentiviral and siRNA techniques on primary and stem cells
- Conceptualized, designed and executed complex laboratory experiments
- Effectively managed multiple projects under tight deadlines that secured funding to PI (NASA Grant, Pelotonia Seed Grant; DOD Expansion Grant)
- Research Grant proposals, Manuscripts, Conference Abstracts writing
- Supervised/mentored Postdoctoral fellows, PhDs and Undergraduates

#### Clinical Experience

- Comprehensive understanding of clinical trial protocols and proficiency in clinical and scientific data handling and analysis
- Key research personnel in an a-year-long follow-up study on leukemia patients clinical trial, established at the Radiation Oncology lab, Ohio State University
- Successfully established collaboration with Hematology team for archived cancer samples

#### 2006-2011: Project Fellow and PhD

- Successfully demonstrated ScGST as a vaccine candidate against filarial parasite and established methods for the detection of antigenic epitopes on parasitic proteins.
- Depicted the homology protein model of filarial GST (PMDB: PM0075818) and performed protein-ligand interaction studies.
- PhD work successfully yielded peer reviewed internationally reputed publications (4, 5, 6, 7, 8, 9, 10) and presented oral/poster in various international and national conferences.

### TECHNICAL SKILLS

Molecular: DNA/RNA isolation, sequencing, qRT-PCR, cloning, spectroscopy

Cell culture: Mammalian primary/stable cell lines, Hematopoietic cells, Virus handling

Flow cytometry: Cell sorting, Multicolor, Intracellular and phospho protein staining

Biochemistry: Protein purification, electrophoresis, Western blotting, ELISA, Exosomes

Oncology: Primary sample bank, maintenance, clinical studies, Immunostaining analysis

Bioinformatics: Molecular profiling, Dynamics, Modeling and Docking tools

Statistics: Minitab, GraphPad Prism, SPSS tools

## CERTIFICATIONS

NCCN 2018 Congress Series-Leukemia by OSU, USA  
Authorized user of Gammacell-40, X-ray Irradiator, Small Animal Radiation Research Platform (SARRP), and Controlled substance by Collage of Medicine, OSU, USA  
Animal Handling trainings by OSU-ULAR, USA

## PROFESSIONAL VALUE OFFERED

Journal Reviewer: Neoplasma, MDPI Journals  
Associate Editor: Current Research in Bioinformatics  
Postdoctoral Scholar Mentor-of the-Year Award 2018 Nominee  
Invited Member: 2<sup>nd</sup> World Congress on Bioinformatics & System Biology 2018, Dubai  
Invited Speaker: International Conference and Exhibition on Genome Science 2018, USA  
Invited Panelist/Judge Hayes Research Forum, 2016-2019. The Ohio State University, USA  
Invited Judge for Sigma Xi at the 2018 Ohio Academy of State Science Day, USA  
Recipient of University Grant Commission Research Fellowship 2005-2008, India  
INSA and CSIR travel grants 2007  
CSIR-NET Junior Research Fellowship 2008-2010  
GATE 2005, India

## AFFILIATIONS

National Aeronautics and Space Agency (NASA)  
National Comprehensive Cancer Network (NCCN)  
Member of American Association of Cancer Research (AACR)  
New York Academy of Sciences (NAS)

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## MANAGEMENT SKILLS

Written/submitted IRB protocol for the utilization of human samples  
Collaborated with academic groups and RedCross America for primary samples  
Organized lab trainings, scientific workshops and seminars  
Made important decisions for the betterment of scientific society in University  
Maintained CHP and laboratory equipments/animals/chemical ordering records  
Communication with collaborators, Record keeping

## COMPUTER SKILLS

MS-Office, Outlook, Graphics, Power point, Coral Draw

## INTERESTS

Traveling, Photography, Philately

## PUBLICATIONS

### Peer reviewed publications

- Bhayana S\*, **Yadav M\***, Lanchun Lu, Joseph Liu, Jason Huang, Diviya S. Jacob, Xiaokui Mo, Zahida Qamri, Shashaank T. Parasa, Noreen Bhuiya, Paolo Fadda, Meng Xu-Welliver, Arnab Chakravarti, Naduparambil K. Jacob. Novel fingerstick blood test for rapid estimation of absorbed radiation dose (Submitted, \* equal authors).
- **Yadav M**, Qamri Z, Song F, Chakravarti A, Jacob NK. Non-coding RNAs as biomarkers for early detection of radiation induced late pulmonary effects (In preparation).
- Yadav M, Xiaokui Mo, Arnab Chakravarti, Naduparambil K Jacob. miR-150 induces radiation resistance and modulates hematopoietic reconstitution (In preparation).
- **Yadav M**, Song F, Arnab Chakravarti, Naduparambil K. Jacob (2018). Ocimum flavone Orientin as a countermeasure for thrombocytopenia. Nature Scientific Reports, 5075, DOI: 10.1038/s41598-018-23419-x.
- Menon N, Rogers CJ, Lukaszewicz A, Axtelle J, **Yadav M**, Song F, Chakravarti A and Jacob NK. Detection of Acute Radiation Sickness (ARS) and Organ Responses: A Feasibility Study in Non-human Primates (NHP) circulating miRNAs for triage in Radiological Events. PLOS One, 11(12), 2016: e0167333
- Dorrance AM, P Neviani P, Ferenchak G J, Huang X, Nicolet D, K S Maharry KS , H G Ozer HG, Hoellarbauer P, J Khalife J, Hill EB, **Yadav M**, B N Bolon BN, Lee RJ, Lee LJ, Croce CM, Garzon R, Caligiuri MA, Bloomfield CD and Marcucci G (2015). Targeting leukemia stem cells in vivo with antagomiR-126 nanoparticles in acute myeloid leukemia. Leukemia, doi: 10.1038/leu.2015.139.

- Rathaur S, **Yadav M**, Singh N, and Singh A (2011). Effect of Diethylcarbamazine, Butylated Hydroxy Anisole and Methyl Substituted Chalcone on filarial parasite *Setaria cervi*: proteomic and biochemical approaches. *Journal of Proteomics*, 74:1595-1606.
- **Yadav M**, Liebau E, Haldar C and Rathaur S (2011). Identification of major antigenic peptide of filarial Glutathione-S-transferase. *Vaccine* 29: 1297-1303.
- **Yadav M**, Singh A, Rathaur S, and Liebau E (2010). Structural modeling and simulation studies of *Brugia malayi* Glutathione-S-transferase with compounds exhibiting antifilarial activity: Implications in drug targeting and designing (BmGST Homology Model Ref: PM0075818). *Journal of Molecular Graphics and Modelling*, 28:435–445.
- Awasthi SK, Mishra N, Dixit SK, Singh A, **Yadav M**, Yadav SS, and Rathaur S (2009). Antifilarial Activity of 1, 3-Diarylpropen-1-One: Effect on Glutathione-S-Transferase, a Phase II Detoxification Enzyme. *American Journal of Tropical Medicine & Hygiene*, 80(5): 764-768.
- Rathaur S, Singh A, **Yadav M**, and Rai R (2009). Evidence for the presence of prostaglandin H synthase like enzyme in female *Setaria cervi* and its inhibition by diethylcarbamazine. *Acta Tropica*, 111: 71–77.
- Rathaur S, **Yadav M**, Gupta S, Anandharaman V, Reddy MVR (2008). Filarial Glutathione-S-transferase: a potential vaccine candidate against enzymatic filariasis. *Vaccine*, 26: 4094-4100.
- Gupta S, Singh A, **Yadav M**, Singh K, and Rathaur S (2007). MALDI-mass sequencing and characterization of filarial Glutathione-S-transferase. *Biochemical and Biophysical Research Communication*, 356: 381-385.

#### Book Chapter

- Bhayana S, **Yadav M**, Jacob NK. "Role of Exosomes in Development of Pre-Metastatic Niche" Book entitled 'Diagnostic and Therapeutic Applications'. DOI: [10.1016/B978-0-12-812774-2.00014-6](https://doi.org/10.1016/B978-0-12-812774-2.00014-6).

#### Conference Papers & Proceedings

- Bhayana S\*, **Yadav M\***, Lanchun Lu, Xiaokui Mo, Meng Xu-Welliver, Arnab Chakravarti, Naduparambil K. Jacob. A Sensitive Blood Test for Rapid Estimation of Absorbed Radiation Dose. ASTRO 2018 (**Invited Talk**) [https://www.redjournal.org/article/S0360-3016\(18\)31202-1/abstract](https://www.redjournal.org/article/S0360-3016(18)31202-1/abstract)
- **Yadav M**, Song F, Qamri Z, Chakravarti A, Jacob NK. Non-coding RNAs as biomarkers for early detection of radiation induced late pulmonary effects. AACR 2018. [http://cancerres.aacrjournals.org/content/78/13\\_Supplement/3593.short](http://cancerres.aacrjournals.org/content/78/13_Supplement/3593.short) (**invited manuscript in AACR Journals**).
- **Yadav M**, Song F, Chakravarti A, Jacob NK. miR-150 as a predictor of hematopoietic reconstitution after myeloablation. AACR 2017. [http://cancerres.aacrjournals.org/content/77/13\\_Supplement/1787.short](http://cancerres.aacrjournals.org/content/77/13_Supplement/1787.short)
- **Yadav M**, Chakravarti A, Jacob NK. Phytochemical Orientin as a countermeasure for radiation induced thrombocytopenia. 62<sup>nd</sup> Annual International meeting of Radiation Research Society (RRS) , 2016, Hawaii, USA
- Seminar Cellules Souches, 2-4<sup>th</sup> April 2014, University Paris Diderot, Paris, France
- Rathaur S, **Yadav M**, Singh N and Singh A. Effect of Diethylcarbamazine, Butylated Hydroxy Anisole and Substituted Chalcone on filarial parasite *Setaria cervi*: proteomic and biochemical approaches. 79<sup>th</sup> annual meeting of the Society of Biological Chemists, 2010, Indian Institute of Science, Bangalore, India
- Rathaur S and **Yadav M**. Filarial Glutathione-S-transferase induced immune response. Wellcome-Trust Keystone Symposium on Molecular and Cellular Biology, 2010, Seattle, USA
- Yadav M and Rathaur S and. Antigenic epitope mapping of filarial Glutathione-S-transferase. X International Symposium on Vectors and Vector Borne Diseases, 2009, Goa, India
- **Yadav M** and Rathaur S. Exploring the binding structure of filarial GST and its binding site for antifilarial drugs by molecular docking. National Congress of Parasitology, 2008, Shillong, India (**Won best poster award**).
- Rathaur S, Singh A, **Yadav M**, Rai R. Biochemical and immunochemical characterization of filarial acid phosphatases. IX International Symposium on Vectors and vector borne diseases, 2008, Puri, Orissa, India
- Singh A, **Yadav M**, Rai R, Rathaur S. Filarial Prostaglandin synthase: a novel drug target. American Society for Cell Biology, 2007, Washington DC, USA
- **Yadav M**, Rai R, Srikanth E, Singh A and Rathaur S. Immunoregulation by Glutathione-S-transferase in human lymphatic filariasis. 13<sup>th</sup> International Congress of Immunology, 2007, Rio de Janeiro, Brazil

## REFERENCES

Available upon request