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### **ACADEMIC QUALIFICATIONS**

- 1. Doctor of Philosophy (Ph.D.) (2011-2017)**  
Thesis entitled- “Studies on *Helicobacter pylori* Cag-T4SS Unique components CagU and CagN”, from Special Center for Molecular Medicine, Jawaharlal Nehru University, New Delhi, India.
- 2. Master of Science (M.Sc.) (2009-2011) (FGPA 6.18) in Life Sciences** from School of Life Sciences, Jawaharlal Nehru University, New Delhi, India.
- 3. Bachelor of Science (B.Sc.) (2005-2008) (84.51%) in Botany, Zoology and Chemistry** from BM girl’s college, Jhunjhunu, University of Rajasthan Jaipur, Rajasthan, India.
- 4. Higher secondary education (12<sup>th</sup>) 2005 (75.08%)** Indian public school Churu, Board of Secondary Education, Rajasthan.
- 5. Secondary education (10<sup>th</sup>) 2003 (75.17%)** Indian public school Churu, Board of Secondary Education, Rajasthan.

### **RESEARCH INTEREST**

Gut microbiome cross talk with infectious and metabolic diseases

### **PEER REVIEW PUBLICATIONS**

- 1. Kumari R, Dutta R, Ranjan P, Suleiman ZG, Goswami SK, Li J, Pal HC and Verma SK (2022)** ALKBH5 Regulates SPHK1-Dependent Endothelial Cell Angiogenesis Following Ischemic Stress. *Front. Cardiovasc. Med.* 8:817304.doi: 10.3389/fcvm.2021.817304.
- 2. Kumari R, Ranjan P, Suleiman Z, Goswami S, Li J, Prasad R, Verma SK (2021).** mRNA modifications in cardiovascular biology and disease: with a focus on m<sup>6</sup>A modification. *Cardiovascular Research*, cvab160, doi.org/10.1093/cvr/cvab160.
- 3. Ranjan P, Kumari R, Goswami S, Li J, Pal H, Suleiman Z, Cheng Z, Krishnamurthy P, Kishore R and Verma SK (2021).** Myofibroblast-Derived Exosome Induce Cardiac Endothelial Cell Dysfunction. *Front Cardiovasc Med*, doi: 10.3389/fcvm.2021.676267.
- 4. Ranajan P, Kumari R and Verma SK (2019).** Cardiac Fibroblasts and Cardiac Fibrosis: Precise Role of Exosomes. *Front. Cell. Dev. Biol.*, 7: 318.
- 5. Kumari R, Shariq M, Sharma S, Kumar A, Mukhopadhyay G (2019).** CagW, a VirB6 homologue interacts with Cag-type IV secretion system substrate CagA in *Helicobacter pylori*. *Biochem Biophys Res Commun*, 515 (4), 712-718.
- 6. Ayana R, Yadav P, Kumari R, Ramu D, Garg S, Pati S and Singh S (2018).** Identification and Characterization of a Novel Palmitoyl Acyltransferase as a Druggable Rheostat of Dynamic Palmitoylome in *L. donovani*. *Front. Cell. Infect. Microbiol.* 8:186.

7. **Kumari R\***, Shariq M, Kumar N, Mukhopadhyay G (2017). Biochemical Characterization of the *Helicobacter pylori* Cag-T4SS Unique Component CagU. *FEBS Letter.* 591 (3), 500-512.\*  
**Corresponding author.**
8. Kumar N, Shariq M, Kumar A, **Kumari R**, Subbarao N, Tyagi RK, Mukhopadhyay G (2017). Functional Analysis of CagV, a VirB8 Homologue of Cag-T4SS of *Helicobacter pylori*. *FEBS Open Bio.* 7(7):915-933.
9. Shariq M, Kumar N, **Kumari R**, Kumar A, Subbarao N, Mukhopadhyay G (2015). Biochemical Analysis of CagE: A VirB4 Homologue of *Helicobacter pylori* Cag-T4SS. *PLoS ONE* 10(11): e0142606.
10. Kumar N, Shariq M, **Kumari R**, Tyagi RK, Mukhopadhyay G (2013). Cag Type IV Secretion System: CagI Independent Bacterial Surface Localization of CagA. *PLoS ONE* 8(9): e74620.

### FELLOWSHIPS AND AWARDS

- Awarded **CIRTL Practitioner Certificate** by CIRTL (Center for the Integration of Research, Teaching and Learning, USA) (2021).
- Awarded **CIRTL Associate Certificate** by CIRTL (2019).
- Recipient of **Junior Research fellowship and Senior Research Fellowship** by CSIR, for pursuing PhD India (2011 to 2016).
- Recipient of **DAAD Fellowship** by University of Wurzburg, Germany, (2015).
- Aailed **INSA Summer Research Fellowship** by Indian National Academy of Sciences (INSA), during MSc, India (2010).
- Qualified **National Eligibility Test for Lectureship, CSIR NET-JRF** conducted jointly by CSIR and UGC (December 2010).
- Qualified **GATE** (Life Sciences, 2011).

### RESEARCH EXPERIENCE

1. **Research fellow** (October 2021 to 15 July 2022)  
Joslin Diabetes Center, Harvard Medical School, Boston, Massachusetts, USA  
Project title: Studying the role of m<sup>6</sup>A mRNA methylation in exocrine pancreas.
2. **Post-doctoral research associate** (March-September 2021)  
The Department of Pharmaceutical Sciences, Northeastern University, Boston, Massachusetts, USA  
Project title: SARS-Cov-2 diagnostic assay development using rolling circle amplification (RCA).
3. **Post-doctoral research fellow** (June 2018-Feb2021)  
Department of Medicine, University of Alabama at Birmingham, Birmingham, Alabama, USA.  
Project title: Understanding the role m<sup>6</sup>A mRNA methylation in cardiac remodeling and heart failure.
4. **Project fellow in continuation after Ph.D.** (February 2017-March 2018)  
Special Center for Molecular Medicine, Jawaharlal Nehru University, New Delhi, India.

Project title: The role of protein palmitoylation on pathogenesis of *Leishmania donovani* and *Plasmodium falciparum*.

5. **Junior and Senior Research Fellow**, CSIR, India, (During Ph.D.) (July 2011-January 2017)  
Special Center for Molecular Medicine, Jawaharlal Nehru University, New Delhi, India.  
Thesis Title: Studies on *Helicobacter pylori* Cag-T4SS Unique components CagU and CagN.
6. **DAAD Fellow**, “A New passage to India” DAAD Germany (November 2014-January 2015).  
Institute for Molecular Infection Biology, University of Wurzburg, Germany.  
Project Title: Complementation and functional characterization of isogenic *HpΔcagU* mutant to study its gain of function in the type IV secretion system.
7. **M.Sc. Dissertation** (December 2010-May 2011)  
School of Life Sciences, Jawaharlal Nehru University, New Delhi, India.  
Project Title: Characterization and Purification of MAD50 Protein.
8. **INSA Summer Research Fellow** (May-July 2010)  
School of Life Sciences, Jawaharlal Nehru University, New Delhi, India.  
Project Title: Characterization of ascorbic acid biosynthesis pathway in *Leishmania donovani*.

### **TEACHING/MENTORING EXPERIENCE**

**Pursued Teaching skill Certificates** from **CIRTL** from **CIRTL** (Center for the Integration of Research, Teaching, and Learning, [www.cirtl.net](http://www.cirtl.net)) (2019 to March 2021).

#### **Level 1: CIRTL Associate Certificate (courses completed):**

1. Teaching at the College Level
2. CIRTL Seminar in Teaching & Learning I
3. Introduction to STEM (science, technology, engineering, and math) Teaching

#### **Level 2: CIRTL Practitioner Certificate (Courses completed):**

1. CIRTL Seminar in Teaching & Learning II
  2. CIRTL Teaching Practicum
  3. Presentation & Discussion Skills
  4. Developing a Teaching Portfolio
  5. Advanced STEM Teaching Approaches (completed with Distinction)
- **Taught** non major undergraduate biology online class at the **University of Alabama at Birmingham** (UAB, Alabama, USA) on 15 Feb 2021.  
Course Name: BY 101. Topics in Contemporary Biology  
Responsible teaching advisor: Dr. Samiksha Raut (Associate Professor, department of biology, UAB, Birmingham, AL, USA)  
Topic: DNA synthesis and mitosis in cancer
  - **Taught** basics of microbiological, biochemical, and other laboratory associated methodologies to **earlier Ph.D. (#1)** and **master students (#7)**, (2013 to present).

### **OTHER SCIENTIFIC ACTIVITIES**

- Experience of **Scientific Manuscript Writing and Submission** in reputed journals (2013 to present),
- **REVIEWER:** 1. Journal of Translational Medicine and International Journal of Cardiovascular Research (2019 to present).  
2. Frontiers in Pharmacology (2021 to present)

### **PROFESSIONAL COURSES**

1. How to Make Strategic Thinking a Habit (<https://www.linkedin.com/learning/how-to-make-strategic-thinking-a-habit/why-make-strategic-thinking-a-habit>)
2. Project Management Foundations (<https://www.linkedin.com/learning/project-management-foundations-4/deliver-successful-projects-3>)

### **HANDS ON TRAINING WORKSHOPS**

- Selected in the **Workshop on X-Ray Crystallography** (February 2013), organized by Advanced Instrumentation Research facility Jawaharlal Nehru University, New Delhi, India.
- Selected in the **Workshop on Confocal/Live Imaging Microscopy and its Application** (March 2012), organized by Advanced Instrumentation Research facility Jawaharlal Nehru University, New Delhi, India.
- Selected in the **Workshop on Electron Microscopy and its Application** (February 2012), organized by Advanced Instrumentation Research facility Jawaharlal Nehru University, New Delhi, India.
- Participated in **Author workshop** on August 27, 2012 conducted by Springer and Edanz in collaboration with Jawaharlal Nehru University, New Delhi, India.
- Participated in **Author workshop** on September 20, 2012 conducted by Wiley in collaboration with Jawaharlal Nehru University, New Delhi, India.

### **ORAL AND POSTER PRESENTATION IN SYMPOSIA/CONFERENCES**

- Attended the virtual activity entitled “**EMBO Workshop: The Epitranscriptome**” February 9-11, 2022, organized by The European Molecular Biology Laboratory (EMBL), Heidelberg, Germany.
- Participated in the virtual activity titled “**Basic Cardiovascular Sciences 2020 Scientific Sessions Virtual Event**” July 27-30, 2020, organized by American Heart Association (AHA).
- **Poster presentation**, in the “**Basic Cardiovascular Sciences 2019 Scientific Sessions: Innovating in Cardiovascular Research**” (July-August 2019) organized by American Heart Association at Westin Boston, MA, USA.
- **Poster presentation**, in the “**2018 CCVC 7<sup>th</sup> Annual Symposium--Focus on Heart Failure**” (September 2018) organized by Medicine – Cardiovascular Disease, The University of Alabama at Birmingham, Birmingham, AL, USA.
- **Poster presentation**, in the **7<sup>th</sup>** symposium on “**Frontiers in Molecular Medicine**” (March 2017) organized by SCMM, Jawaharlal Nehru University, New Delhi, India.

- **Oral work presentation** in the **Bioepoch 2016**, organized by SBT, Jawaharlal Nehru University, New Delhi, India.
- **Oral work presentations**, in the **12<sup>th</sup>** and **13<sup>th</sup>** annual research festival, **Biosparks, 2014** and **2015** organized by SLS, Jawaharlal Nehru University, New Delhi, India.
- Given an **oral presentation in an event “What India can teach us” (Dec. 2014)** organized by DAAD, in Germany.
- Participated in **Indo-Swiss joint symposium** on parasitic diseases/infectious diseases held at Jawaharlal Nehru University, India on 3-4th November, 2011.
- Presented oral research proposal in **Biosparks 2010** organized by School of Life Sciences, Jawaharlal Nehru University, New Delhi, India.

### **REFERENCES AVAILABLE UPON REQUEST**

#### **1. Prof. Suman. K. Dhar**

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Jawaharlal Nehru University,  
New Delhi –110067, India, Phone- +91(11) 26738735, 26704559  
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#### **2. Dr. Rohini Muthuswami**

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Jawaharlal Nehru University,  
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