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## Rupali Gupta B.S.E, Ph.D.

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Current Position: **Postdoctoral Research Associate & Teaching Support**

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### EDUCATION/TRAINING.

INSTITUTION AND LOCATION	DEGREE	START DATE MM/YYYY	END DATE MM/YYYY	FIELD OF STUDY
Duke University, USA	Postdoctoral Associate	07/2017	Present	Neuroscience
NIPS, Japan	Postdoctoral Associate	10/2016	03/2017	Physiology
NIPS, SOKENDAI, Japan	Ph.D.	10/2011	09/2016	Physiology
RTU, SADTM, India	B.S.E.	08/2006	10/2010	Engineering-Biotechnology

### A. Publications

#### [Google Scholar Page](#)

1. **R Gupta**, R Lee, and WB Liedtke (**in preparation**) "Engineer the ionic baseline of primary sensory neurons."
2. A. Sikdar, **R Gupta** and Evzen Boura (**submitted**) "Developing Antivirals Against Viruses Causing Human Diseases - A Structure Guided Approach".
3. C. Moore & **R. Gupta**, et al (2017) "Regulation of pain and itch by TRP channels", Neuroscience bulletin. PMID: 29282613 DOI: [10.1007/s12264-017-0200-8](https://doi.org/10.1007/s12264-017-0200-8)
4. **R. Gupta** et al (2016) "Structural basis of TRPA1 inhibition by HC-030031 utilizing species-specific differences", Scientific Reports. PMID: 27874100 DOI: [10.1038/srep37460](https://doi.org/10.1038/srep37460)
5. K. Nakatsuka & **R. Gupta**\* et al (2013) "Identification of molecular determinants for a potent mammalian TRPA1 antagonist by utilizing species differences", Journal of Molecular Neuroscience 51:754–762. \*Both authors contributed equally. PMID: 23872983 DOI: [10.1007/s12031-013-0060-2](https://doi.org/10.1007/s12031-013-0060-2)
6. A. Kumar, **R. Gupta** and Mukesh K. Upadhyay (2010) "Production and Characterization of amylases from Aspergillus niger" FGC/ JNU 101. (**University communication**)

### B. Experience and Honors

#### Research Positions and Employment

2017-present	Postdoctoral associate, Duke Medical University, USA
2016-17	Postdoctoral associate, National Institute for Physiological Sciences, Japan
2014	Trainee at University of Cambridge, UK
2012	Trainee at Johns Hopkins University School of Medicine, Baltimore MD
2010-11	Invited Researcher, National Institute for Physiological Sciences, Japan
2010	Intern at CSIR-Institute of Genomics and Integrative Biology, Delhi, India
2009	Intern at Indian Academy of Sciences, Bangalore, India
2009	Research Assistant at Jaipur National University, India
2008	Trainee at Defense Institute of Physiology and Allied Sciences, Delhi, India

2007 Trainee at Jawaharlal Nehru University, Delhi, India

### **Teaching/ Mentoring**

2020 Instructed Neurology/Psychology 106 at Duke University (Summer)  
2018-19 Audited multiple courses of Duke University.  
2018-19 Teaching Support for Neurology/Psychology 106 at Duke University (Spring)  
2018 Teaching Support for Neuroscience 223 at Duke University (Spring)  
2012-17 Volunteer teaching at VIVA Okazaki, Toyota International & Okazaki International Association, Junior and High School, Japan

### **Honors**

#### **Fellowships:**

2020-21 Preparing Future Faculty fellowship, Duke, USA  
2011-16 NIPS Research Assistance Fellowship, Japan  
2014-15 Monbukagakusho Honour's Scholarship (JASSO), Japan  
2013 Ryugaku Gakugei Scholarship Japan  
2011-12 Monbukagakusho Honour's Scholarship (JASSO), Japan  
2009 IAS Summer Fellowship, Bangalore, India.

#### **Grants:**

2013-16 The Encouraging Grant for Graduate by NIPS, Japan.  
2013-16 Management Expenses travel Grant by NIPS, Japan  
2015 Travel grants for Belgium and Japan by Grant-in-Aid, NIPS, Japan  
2014 Interdisciplinary Research Collaboration Grant for UK by IBEP, SOEKANDA, Japan  
2012 Short-stay study abroad program grant for USA by SOKENDAI, Japan  
2011 Grant-in-Aid "Kiban-kenkyu-A" NIPS, Japan  
2010-11 Grant-in-Aid "Tokutei-ryoiki kenkyu" NIPS, Japan

#### **Awards:**

2016 Best poster in "Okazaki Institute for Integrative Bioscience retreat"  
2014 Like award for best poster in "SOKENDAI Life science retreat".  
2011 Awarded Honor's degree in Bachelor of Engineering in Biotechnology, India.

#### **Memberships:**

2019 National Postdoctoral Association.  
2019 American Association of Advancement of Science.  
2019 Women in Bio, RTP, USA  
2015 Member, Chubu Physiological Society of Japan  
2012-16 Physiological Society of Japan.

## **C. Science & Research**

### **1. Early Career:**

#### **Undergraduate Projects**

**2010** Thesis on "Phosphoproteomics Studies in tissue of Rheumatoid Arthritis Patients" CSIR-IGIB, Delhi, India.

- 2009** Project on “PER protein abundance profile of *D. melanogaster* selected for morning and evening emergence” from IAS-JNCSR, Bangalore, India.
- 2009** Project on Mushroom culturing from Jaipur National University, Jaipur, India.
- 2008** Training on "Cellular & Molecular Biology Techniques" at Defense Institute of Physiology and Allied Sciences, Delhi, India.
- 2007** Training on "Plant Molecular Biology Techniques" at Jawaharlal Nehru University, Delhi, India.

### **Undergraduate International Projects**

- 2010-11** National Institute for Physiological Sciences on “Vector construction and sequencing of TRPA1 in green anole” under the guidance of Dr. Prof. Makoto Tominaga, Japan.

## **2. Graduate Career:**

### **Talks**

- 2017:** Invited speaker at Ludwig-Maximilians-Universitaet Muenchen, Munich, Germany
- 2017:** Leading edge aim to understand the advances in Pain studies, Okazaki, Aichi, Japan
- 2016:** 38<sup>th</sup> Annual Meeting of Japanese Association for study of Pain, Sapporo, Hokkaido, Japan
- 2016:** TRP and SOCs Meeting, Okazaki, Aichi, Japan
- 2015:** 62<sup>nd</sup> Chubu Physiological Society Meeting, Toyama, Japan

### **International Projects:**

- 2014:** University of Cambridge, on “Development of *Drosophila* TRP channels” under the guidance of Prof. Roger Hardie, Cambridge, UK.
- 2012:** Johns Hopkins University School of Medicine on “*Drosophila* TRP Channels” under the guidance of Dr. Prof. Craig Montell, Baltimore MD, USA.

### **International (poster presentations):**

- 2016:** Regulation of Cell Functions by Transient Receptor Potential Channels, Munich, Germany
- 2015:** Third Leuven TRP Symposium, Leuven, Belgium
- 2012:** International workshop on Transient Receptor Potential Channels, Valencia, Spain

### **National (Japan) (poster presentations):**

- 2016:** The 93<sup>rd</sup> Annual Meeting of the Physiological Society of Japan, Sapporo, Hokkaido, Japan.
- 2015:** The 92<sup>nd</sup> Annual Meeting of the Physiological Society of Japan, Kobe, Kobe, Japan.
- 2014:** SOKENDAI Life-Science Retreat, Yamaha Resort, Shizuoka, Japan.
- 2014:** 91<sup>st</sup> Annual Meeting of the Physiological Society of Japan, Kagoshima, Kyushu, Japan.
- 2013:** The Global COE program “5th NAGOYA Global Retreat” Nagoya, Aichi, Japan.
- 2012:** SOKENDAI Life-Science Retreat, Yamaha Resort, Shizuoka, Japan.

## **3. Postdoctoral Career:**

### **Poster presentation**

- 2017:** Poster presentation in Duke Neurology Retreat.

### **Talk & Outreach**

- 2020:** Invited research speaker at North Carolina State University, USA.
- 2020:** Guest speaker for BIO 264 Lecture Elon University, USA.

- 2020:** Guest speaker for BIO 488 Lecture North Carolina State University, USA.
- 2020:** Guest speaker for BIO 251 Lecture Meredith College, USA.
- 2019:** BOOST program interview with kids “POSTDOCUMENTARIES”.
- 2019:** Research demonstration for North Carolina School of Science and Mathematics.
- 2018:** Guest speaker for Cellular and Molecular Neurobiology 223 Lecture Duke, USA.

**Course Audit**

- 2020:** Digital Pedagogy GS.762.01.Sp20.
- 2019:** Duke Workshop in Transcranial Magnetic Stimulation.
- 2019:** Child Psychology and PTSD 450S.
- 2018:** Cellular and Molecular Neurobiology 223.

**D. Additional credentials: Professional development & Volunteer work**

**1. Professional development:**

**Teaching & Writing Workshops and Series**

- 2020 Metacognition workshop for Skillful Learning and Teaching
- 2020 Certified: online teaching course for active & engaged learning
- 2019 Professional Development series for Academia/Teaching Career
- 2019 Designing Effective and Innovative Courses Tutorial
- 2018-19 Teaching IDEAS Series by Duke University.
- 2019 BRITE Ideas Teaching and Research series.
- 2019 Design Your Course with Dynamic Lectures series by Dr. Todd Zakrajsek
- 2018 George Gopens's: “Writing from the Readers Perspective” seminar series.

**2. Volunteer work:**

**Volunteer Experience**

- 2019-20 Big Brothers Big Sisters, NPO, USA
- 2019-20 Durham Crisis Center, NPO, USA
- 2018-19 DUPA outreach program for Durham Junior and Senior high School USA
- 2012-17 NIPS outreach program for Okazaki Junior and Senior high School Japan
- 2012-17 VIVA Okazaki, Toyota International & Okazaki International Association Japan.
- 1999-10 Summer Hygiene & Education awareness camps in Indian Villages.
- 1999-10 Summer assistant for the medical camps in the Indian Villages.

**Management Skills**

- 2018-20 Supervising and guiding undergraduate & master students
- 2012-16 Team Leader for International activity club in NINS Japan
- 2016 Team leader “Life Science Retreat- interdisciplinary symposium” Japan
- 2012 Team leader “Follow your Rainbow” Student Orientation program, Japan
- 2008-09 Organized and participated in “RazzaMatas” College festival, India
- 2006 Hosted “5 yearly high school education program”, India
- 2005 Hosted “high school seniors’ farewell event”, India.