

## Bhargav D. Sanketi

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### EDUCATION

<b>PhD</b>	Cornell University, Molecular and Cell Biology	Aug 2017 - Present
<b>BEng</b>	RV College of Engineering (India), Biotech/Engineering.	Aug 2013 - May 2017

### SELECTED RESEARCH EXPERIENCES

**Graduate Researcher**                      **Cornell University.**                      **Aug 2017 – Present**

*PI: Dr. Natasza Kurpios, Department of Molecular medicine, Cornell University.*

*Thesis: Design principles of intestinal coiling and fat absorption*

*Rotation projects in the labs of Dr. Marcus Smolka and Dr. Carolyn Adler.*

**Research Project Fellow**                      **Center for Stem Cell Research**                      **Dec 2016 – June 2017**

*PI: Dr. Mohankumar K Murugesan*

*Project: CRISPR aided Ex-vivo gene therapy for Beta-hemoglobinopathies*

**Khorana Research Scholar**                      **Uni. of Wisconsin-Madison**                      **May 2016 – July 2016**

*PI: Dr. Anjon Audhya*

*Project: CRISPR-aided tagging of Trafficking proteins for Live-cell Imaging*

**Research Intern**                      **inStem, NCBS, India.**                      **May 2015 – July 2015**

*PI: Dr. Akash Gulyani*

*Project: Planarian neural and eye regeneration and novel aspects of Planarian light sensing.*

**Undergraduate Researcher**                      **RV College of Engineering**                      **2014 – 2016**

### HONORS, AWARDS AND ACHIEVEMENTS

#### Academic

1. Cornell College of Veterinary Medicine Graduate research fellowship – 2022
2. Telluride Scholarship – Telluride Association - 2020 onwards
3. Three-Minute thesis (3MT) competition
  - North American National 3MT (Council of graduate schools) – Winner 2022
  - Ivy+ 3MT – Runner up 2021
  - North-east regional 3MT – Runner up – 2021
  - Cornell University 3MT – Winner – 2021
  - Cornell College of Veterinary Medicine 3MT – Runner up 2021
4. Center for Vertebrate Genomics seed grant - Cornell University – 2021 (Award team)
5. Center for Vertebrate Genomics Scholarship - Cornell University – 2020
6. Graduate School Travel Award – Cornell University – 2019, 2022
7. Stem Cell Technologies Travel Award - 2018
8. Presidential Life Science Fellowship - Cornell University - 2017
9. Gold Medal for Best Academic Performance - RV College of Engineering 2017
10. CTS Best Outgoing Student Award – Class of 2017 - RV College of Engineering 2017
11. Center for Stem Cell Research, CMC, Vellore - Project Research Fellowship – 2017
12. Khorana Research Scholarship - Dept. of BT, Govt. of India and IUSSTF, USA - 2016
13. State of Karnataka Common Entrance Test - Merit Scholarship Admission - 2013

#### Leadership / Outreach

1. Preferment committee – Telluride House – preferment strategies for equitable scholarship 2021

2. Member of the Global Cornell Anti-racism engagement team - Spring 2021
3. Participant in "Letters to a Pre-scientist" and "Skype a scientist" programs - 2019, 2020
4. Researcher collaborator - eTrash theatre research on human-nature interaction - Cornell Center for Performing and Media Arts - 2019
5. Outreach Chair – Graduate Women in Sciences, Cornell - arranged women scientists to speak at 4 of the nearby high schools on a regular basis - 2018-19
6. Co-founded the Baked Potato Productions to do theater to spread awareness on Mental and Nervous Health, marginalization, etc. - 3 critically acclaimed productions covered by major news outlets - 2016
7. Head of Circle of Acting at RV (CARV) - The theater club of RVCE - Headed the 200 - member group - Participated and won at National and International level Theatre festivals - 2016-17
8. JENESYS Scholarship - Selected to be a cultural ambassador to Japan and discuss measures to improve relationships between Asian countries - Govt. of Japan – 2011

### Teaching / Mentoring

1. Teaching Assistant – BioMG1350 Intro: Cell and Developmental Biology – Weekly teaching for 3 sections of students – Spring 2022
2. Life Science Leaders of Tomorrow – seminar series – Lecturer for Single cell technology – Fall 2021
3. "Teaching and learning in diverse classrooms" – Class from Center for Teaching Innovation at Cornell University – Summer 2021
4. Mentor for the HHMI CHAMPS program for underrepresented students - 2018, 2019
5. Research mentorship for 5 Undergraduate research assistants, 4 graduate research assistants and 10 PhD rotation students in the lab of Dr. Natasza Kurpios, Cornell University.

### Science outreach lectures

1. Ithaca College, NY – "Signaling pathways regulate gene expression in development" – Invited lecture for Upper-level Biochemistry / Molecular Biology class - Spring Fall 2019, Fall 2020, Spring 2021
2. Christ Academy, India – "Blueprint for building life" - Fall 2018, Fall 2019, Fall 2020
3. RV College of Engineering, India – "Signaling pathways regulate gene expression in development" – Junior-level Biology class– Spring 2019, Fall 2020
4. Lansing High school, NY STEAM Day – "Chicken or the egg: Lessons in Dev bio" – Feb 2019
5. Newfield Middle School, NY – "Chicken or the egg: Lessons in Dev bio" – April 2019

### PUBLICATIONS

1. Sanketi BD, et al, "Pitx2 patterns an accelerator-brake mechanical feedback through latent TGFb to rotate the gut." Science. (2022) DOI: 10.1126/science.abl3921  
Spotlight: Menon and Burdine, "A twist in Pitx2 regulation of gut looping." Dev Cell. (2022)  
Covered by ScienceDaily, Cornell chronicle, EurekaAlerts, News-medical.net
2. Sanketi BD, Mantri M, et al. "Spatiotemporal reconstruction of the origin and assembly of smooth muscles in the intestinal villus." Biorxiv. (2023) DOI: 10.1101/2023.01.19.523242
3. Sanketi BD, et al. "Spatiotemporal reconstruction of intestinal lymphatic heterogeneity" In Preparation.
4. Shiroor D, Wang KT, et al. "Inhibition of the ATM kinase rescues planarian regeneration after lethal radiation." Biorxiv (2022) DOI: 10.1101/2022.09.28.509579
5. Chen F, et al. "The long noncoding RNA PLAYRR regulates Pitx2 dosage and protects against cardiac arrhythmias." Biorxiv (2022) DOI: 10.1101/2022.09.20.508562
6. Hu S, et al. "The asymmetric Pitx2 regulates intestinal muscular-lacteal development and protects against fatty liver disease" Cell. Rep. (2021) DOI: 10.1016/j.celrep.2021.110030
7. Funk EC, et al. "Changes in Nkx2. 1, Sox2, Bmp4, and Bmp16 expression underlying the lung-to-gas bladder evolutionary transition in ray- finned fishes." Evolution & Development (2020) DOI: 10.1111/ede.12354

## Book Chapters

1. Sanketi BD, Kurpios NA "In ovo gain- and loss- of function approaches to study gut morphogenesis" *Methods in Molecular Biology: Cell Polarity Signaling* (2022) DOI: 10.1007/978-1-0716-2035-9\_11
2. Sanketi BD, Kurpios NA "Avian embryos as a model to study vascular development" *Methods in Molecular Biology: Cell Polarity Signaling* (2022) DOI: 10.1007/978-1-0716-2035-9\_12

## Undergraduate

1. Reddy CM, Sanketi BD, et al. "Corrosion inhibition of mild steel by Capsicum annuum fruit paste." *Perspectives in Science* (2016)
2. Sanketi BD, et al. "Enhancement of Spirulina platensis growth using Coconut water supplemented media" *Journal of Environmental Research and Development* (2016)
3. Shenoy A, et al. "Immobilization of Carbonic Anhydrase: A Review" *Research & Reviews: A Journal of Biotechnology* (2016)

## Selected Talks / Posters / Awards

1. Gordon Proteoglycans (GRS, GRC), Andover, NH. 2018 / "Dissection of a transcriptional network behind conserved midgut tilting controlled by Pitx2 and HC-HA/Tsg6 pathways" / Poster presentation - Best Poster winner
2. EMBO Mechanical Forces in Development, Heidelberg, Germany. 2019 / "Synchronizing midgut formation with the initiation of its leftward tilt" / Oral + poster presentation
3. iBio2 symposium, Iowa State university – Best talk, Developmental biology - 2021
4. Binghamton university symposium – Selected oral presentation, 2020
5. Cornell University BBS symposium – Best Poster award - 2019, 2020
6. International Developmental Mechanics seminar series – Oral presentation, 2022
7. Intestinal Stem Cell Niche – Fusion conference, Cancun, Mexico. 2022 / "Developmental assembly of the intestinal fat-absorption apparatus at single-cell resolution" / Poster presentation
8. Invited seminar – Harvard Medical School, USA, Nov 2022 / "Go with your gut: How the gut gets its coiled structure and fat absorption function."
9. Invited VERGE special seminar – Cornell University, USA, Dec 2022/ "Go with your gut: How the gut gets its coiled structure and fat absorption function."
10. Gordon Research conference – Vascular Cell Biology, Ventura, USA Jan 2023 / "Reconstruction of the origin and assembly of villus smooth muscles – drivers of intestinal fat absorption" / Oral + Poster presentation

Ad hoc reviews for manuscripts submitted to *Developmental cell*, *Development*, *Differentiation*, *eLife*, *Journal of visualized experiments* and *Review commons*.