Saurin Bipin Parikh

University of Pittsburgh School of Medicine
Integrative Systems Biology Program
Dept. of Computational and Systems Biology
Center for Evolutionary Biology and Medicine

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Github: https://github.com/sauriiiin

Physician – Engineer – Scientist
Problem solver

PERSONAL
Nationality: Indian
Visa Sponsorship: Required

EDUCATION

Doctor of Philosophy in Integrative Systems Biology
University of Pittsburgh School of Medicine
Pittsburgh, Pennsylvania, USA
August 2018 to Present

Master of Science in Bioengineering
University of Pittsburgh Swanson School of Engineering
Pittsburgh, Pennsylvania, USA
August 2016 to April 2018

Bachelor of Medicine, Bachelor of Surgery (M.B.,B.S.) [MD equivalent]
Smt. NHL Municipal Medical College
Ahmedabad, Gujarat, India
July 2008 to June 2014

WORK EXPERIENCE

Graduate Research Assistant, *Carvunis Lab, Department of Computational and Systems Biology*
University of Pittsburgh School of Medicine
Pittsburgh, Pennsylvania, USA
August 2017 to Present

Technology Fellow, *Coulter Translational Research Partners II Program*
University of Pittsburgh Swanson School of Engineering
Pittsburgh, Pennsylvania, USA
January 2017 to June 2017

Student Intern, *PECA Labs*
Pittsburgh, Pennsylvania, USA
January 2017 to April 2017

Junior Surgeon, *Parth Hospital*
Ahmedabad, Gujarat, India
January 2015 to June 2016

Clinical Internship, *Massachusetts General Hospital*
Boston, Massachusetts, USA
February 2014 to March 2014

Clinical Internship, *Sheth Vadilal Sarabhai General Hospital*
Ahmedabad, Gujarat, India
March 2013 to May 2014

SKILLS

Programming Expertise

- Data management, data analytics, data visualization and version control
- MATLAB, R, Python, Bash, SQL, mySQL, Git, github

Subject Expertise

- Human health and biology
- Evolutionary biology, systems biology, computational biology
- *De novo* gene birth, genome engineering, next-generation sequencing, genomics
- Phenomics, high-throughput screening, robotic handling
- Biostatistics

Medical Product Development

- Product ideation, prototyping, stakeholder discovery, intellectual property analysis, human factor engineering, reimbursement strategy, clinical trial design

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PUBLICATIONS

Under review

Wacholder, A., **Parikh, S. B.**, Castilho Coelho, N., Acar, O., Houghton, C., Chou, L., Carvunis, A.-R. A vast evolutionary transient translatome contributes to phenotype and fitness. **Cell Systems**. Preprint available - https://doi.org/10.1101/2021.07.17.452746

Published

Parikh, S. B.*, Van Oss, S. B.*, Castilho Coelho, N.*, Wacholder, A., Belashov, I., Zdancewicz, S., Michaca, M., Xu, J., Kang,Y. P., Ward, N. P., Yoon, S. J., McCourt, K. M., McKee, J., Ideker, T., VanDemark, A. P., DeNicola, G. M., & Carvunis, A.-R. (2022). On the illusion of auxotrophy: *met15Δ* yeast cells can grow on inorganic sulfur thanks to the previously uncharacterized homocysteine synthase Yll058w. **Journal of Biological Chemistry**, 298(12), 102697. https://doi.org/10.1016/j.jbc.2022.102697
*these authors contributed equally

Parikh, S. B., Houghton, C., Van Oss, S. B., Wacholder, A., & Carvunis, A.-R. (2022). Origins, evolution, and physiological implications of *de novo* genes in yeast. **Yeast**, 39(9), 471–481. https://doi.org/10.1002/yea.3810

Parikh, S. B., Castilho Coelho, N., & Carvunis, A.-R. (2021). LI Detector: a framework for sensitive colony-based screens regardless of the distribution of fitness effects. **G3**, 11(2). https://doi.org/10.1093/g3journal/jkaa068

Vakirlis, N., Acar, O., Hsu, B., Castilho Coelho, N., Van Oss, S. B., Wacholder, A., Medetgul-Ernar, K., Bowman, R. W., 2nd, Hines, C. P., Iannotta, J., **Parikh, S. B.**, McLysaght, A., Camacho, C. J., O'Donnell, A. F., Ideker, T., & Carvunis, A.-R. (2020). *De novo* emergence of adaptive membrane proteins from thymine-rich genomic sequences. **Nature Communications**, 11(1), 781. https://doi.org/10.1038/s41467-020-14500-z

Widdowson, C., Ganhotra, J., Faizal, M., Wilko, M., **Parikh, S.**, Adhami, Z., & Hernandez, M. E. (2016). Virtual reality applications in assessing the effect of anxiety on sensorimotor integration in human postural control. **2016 38th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC)**, 33–36. https://doi.org/10.1109/EMBC.2016.7590633

TALKS (*presented by)

Parikh, S. B.* Castilho Coelho, N., Chiang A., Hedayati S., Yagan N., O'Donnell A., Carvunis A.-R. (2023). YBR196C-A: A story of a young yeast gene. Pittsburgh Area Yeast Meeting (PAYM), Pittsburgh, PA, USA.

Parikh, S. B.*, Castilho Coelho, N., Carvunis, A.-R. (2020). LI Detector: Measuring small fitness effects in high throughput. Pittsburgh Area Yeast Meeting (PAYM), Pittsburgh, PA, USA.

Parikh, S. B.*, Castilho Coelho, N., Carvunis, A.-R. (2019). LI Detector: Measuring small fitness effects in high throughput. EPiC, Evolution in Philadelphia Group, Philadelphia, PA, USA.

POSTERS (*presented by)

Chou, L.*, **Parikh, S. B.**, Castilho Coelho, N., Carvunis, A.-R. (2022). Searching the phenotypic impact of proto-genes in Saccharomyces cerevisiae. Integrative Systems Biology Open day, Pittsburgh, PA, USA.

Parikh, S. B.*, Castilho Coelho, N., Carvunis, A.-R. (2020). LI Detector: a framework for sensitive colony-based screens regardless of the distribution of fitness effects. Molecular Mechanisms in Evolution and Ecology Conference. European Molecular Biology Laboratory (EMBL), Online Conference.

Parikh, S. B.*, Castilho Coelho, N., Carvunis, A.-R. (2020). All Sizes Matter! Integrative Systems Biology Open day, Pittsburgh, PA, USA.

Castilho Coelho, N.*, Vakirlis, N., Iannotta, J., McCourt, K., Acar, O., **Parikh, S. B.**, Van Oss, S. B., O'Donnell, A. F., Carvunis, A.-R. (2019). Proto-biology: Exploring the potential of a yeast proto-

gene in *S. cerevisiae*. Yeast Research: Origins, Insights, Breakthroughs Meeting. Cold Spring Harbor, NY, USA.

Parikh, S. B.*, Carvunis, A.-R. (2018). How To Innovate: A Novel Method to Explore Evolutionary Novelty. Biomedical Graduate Student Association (BGSA) Symposium, Pittsburgh, PA, USA.

JOURNAL REFEREEING

- Genome Biology
- Genetics

AWARDS

Travel Award
September 2019
Biomedical Graduate Student Association (BGSA), University of Pittsburgh

Randall Family Big Idea Competition – Third Place
March 2017
Innovation Institute, University of Pittsburgh

StartUp Blitz – Finalist
January 2017
Innovation Institute, University of Pittsburgh

ADDITIONAL INFORMATION

Licenses and Certifications

- **Medical License and Registration**
  June 2014 to Present
  Registration No. G-52091, Gujarat Medical Council, India

Committee Involvement

- **Integrative Systems Biology (ISB) Program Admissions Committee**
  August 2020 to April 2021
- **Integrative Systems Biology (ISB) Program Representative at Biomedical Graduate Student Association (BGSA)**
  August 2019 to July 2020

Hobbies
Hiking, biking, cooking and photography.

Languages

- English – Fluent
- Hindi – Fluent
- Gujarati – Fluent