**CURRICULUM VITAE**

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**ACADEMIC APPOINTMENTS**

 2022- Present Associate Professor, Biology Department, Boston College, MA.

2020 - 2022 Associate Professor, Department of Biochemistry and Cellular and Molecular Biology, University of Tennessee at Knoxville, TN.

2020 - 2022 Associate Professor, Genome Science and Technology Program, University of Tennessee at Knoxville, TN.

2014 - 2020 Assistant Professor, Genome Science and Technology Program, University of Tennessee at Knoxville, TN.

2013 - 2020 Assistant Professor, Department of Biochemistry and Cellular and Molecular Biology, University of Tennessee at Knoxville, TN.

**EDUCATION/TRAINING**

2011 - 2012 Assistant Scientist, Department of Cellular and Molecular Pharmacology, University of Miami, Miami, Florida. Mentor- Dr. Fulvia Verde

2006 - 2011 Post-Doctoral Associate, Department of Cellular and Molecular Pharmacology, University of Miami, Miami, Florida. Mentor-Dr. Fulvia Verde

2004 - 2006 Post-doctoral Fellow, Cell Cycle Laboratory, Cancer Biology Program, University of Helsinki, Helsinki, Finland. Mentor- Dr. Tomi Makela

2004 PhD, School of Biosciences and Bioengineering, IIT, Bombay, India. Mentor- Dr. Paike Jayadeva Bhat

1998 M.Sc, Biochemistry, M.S. University, Baroda, Gujarat, India

1996 B.Sc, Microbiology, Ramnarain Ruia College, Mumbai University, India

**HONORS AND AWARDS**

2020 - 2024 NSF CAREER award

2020 - 2025 NIH/NIGMS research (R01) award

2017, 2018 BCMB Junior Faculty Distinguished Teaching Award. Department of Biochemistry, Cellular and Molecular Biology, UT-Knoxville.

2017, 2020 BCMB Junior Faculty Distinguished Scholarship Award. Department of Biochemistry, Cellular and Molecular Biology, UT-Knoxville.

2016-2020 NSF research award.

2015 NSF TN-Score Seed award.

2014 University of Tennessee, SARIF Foreign travel award.

2014 University of Tennessee, SARIF Equipment and Infrastructure award

2008 American Society for Cell Biology Postdoc Travel Award.

2007, 2010 Margaret Whelan Postdoctoral Travel Award.

1998 Qualified the All-India Graduate Aptitude Test in Engineering (GATE).

**RESEARCH FUNDING**

**Ongoing (as PI)**

1. NIH R01- 1R01GM136847-01 **Maitreyi Das** (PI) 03/2020- 02/2025

***Cell-cycle-dependent cell polarity control*** $1,522,319

We investigate how polarized cell growth is regulated throughout different cell cycle stages using fission yeast as a model system. The research includes experimental and mathematical approaches.

Co-I: Tian Hong

1. NSF CAREER- 1941367 **Maitreyi Das** (PI) 01/2020- 12/2024

***CAREER: Spatiotemporal organization of cytokinetic events.*** $1,273,335

We investigate how Cdc42 and other RHO family GTPases crosstalk to coordinate different cytokinetic steps using fission yeast as a model system. The research includes experimental and mathematical approaches.

**(as Co-PI)**

1. NIH- 1T32GM142621-01 **Maitreyi Das** (Co-PI) 7/2021-6/2026

***The Integrated Membrane Program (IMP) T32 Training Grant*** $146,289

PI: Todd Reynolds, Co-PIs: Heidi Goodrich-Blair, Elizabeth Fozo, Francisco Barrera, Michael Best, Eric Boder

**Completed**

1. NSF- MCB- 1616495 **Maitreyi Das** (PI) 08/2016-01/2021

***Cytokinetic events that promote actomyosin ring constriction and septum formation*.**

Co-PI: Steven Abel $868,000

1. NSF- MRI- 1828300 **Maitreyi Das** (Co-PI) 10/2018-09/2021

***Acquisition of a transmission electron microscope (TEM) for soft materials for the Advanced Microscopy and Imaging Center (AMIC).*** $439,938

PI: Andreas Nebenfuehr, Co-PIs: Barry Bruce, Tessa Burch-Smith, Brian Long

1. NSF-EPSCoR, EPS-1004083 **Maitreyi Das** (PI) 01/15-07/15

***Actomyosin Ring Dynamics at the Onset of Constriction.*** $20,000

Co-PI: Steven Abel

1. SARIF Equipment award-UTK **Maitreyi Das** (PI) 2014

***A Quantitative Infrared Western Blot Detection System.*** $15,270

**As Mentor**

Completed

1. NSF-Graduate Research Fellowship Program- awarded to Julie Rich (2017-2020)
2. NSF-Graduate Research Fellowship Program- awarded to Udodirim Onwubiko (2018-2021)

**PUBLICATIONS:** (§Graduate students, #Undergraduate students, †High School students)

Preprint

1. Onwubiko UN§, Koory E#, Pokharel S#, Roberts H#, Mitoubsi A, **Das M.** 2022. Cdc42 prevents precocious Rho1 activation during cytokinesis in a Pak1-dependent manner. *bioRxiv* doi:10.1101/2022.06.14.496145

Peer-reviewed:

1. Campbell BF§, Hercyk BS§, Williams AR #, San Miguel ES #, Young HG #, **Das ME**. 2022. Cdc42 GTPase activating proteins Rga4 and Rga6 coordinate septum synthesis and membrane trafficking at the division plane during cytokinesis. *Traffic*, in Press, doi:10.1111/tra.12864
2. Rich-Robinson J§, Russell A#, Mancini E†, **Das ME**. 2021. Cdc42 reactivation at growth sites is regulated by cell-cycle-dependent loss of its GAP Rga4. *Journal of Cell Science*, in Press, doi: 10.1242/jcs.259291

**Work Featured in:** Research highlights, Journal of Cell Science

1. Rodriguez Pino M, Nuñez I, Chen C, **Das ME**, Wiley DJ, D’Urso G, Buchwald P, Vavylonis D, Verde F. 2021. Cdc42 GTPase Activating Proteins (GAPs) Regulate Generational Inheritance of Cell Polarity and Cell Shape in Fission Yeast. *Molecular Biology of the Cell*, Jul 21, doi: 10.1091/mbc.E20-10-0666
2. Onwubiko UN§, Rich-Robinson J§, Mustaf RA†, **Das ME**. 2019. Cdc42 promotes Bgs1 recruitment for septum synthesis and glucanase localization for cell separation during cytokinesis in fission yeast. *Small GTPases* 2020, Mar 22:1-8.
3. Hercyk B§, Rich J§, Mitoubsi A, Harrell M, **Das M**. 2019. A novel interplay between GEFs orchestrates Cdc42 activation in cell polarity and cytokinesis. *Journal of Cell Science* 2019, 132:jcs236018-jcs236018.

**Work Featured in:**  *preLights*, Company of Biologists.

1. Hercyk B§ and **Das M**. 2019. F-BAR Cdc15 Promotes Gef1-mediated Cdc42 Activation During Cytokinesis and Cell Polarization in *S. pombe*. *Genetics*, 2019, 213 (4): 1341-1356.
2. Hercyk B§ and **Das M**. 2019. Rho Family GTPases in Fission Yeast Cytokinesis. *Communicative and Integrative Biology*, 12(1):171–180. Published 2019 Oct 21.
3. Hercyk B§, Onwubiko UN§, **Das M**. 2019. Coordinating Septum Formation and the Actomyosin Ring during Cytokinesis in Schizosaccharomyces pombe. *Molecular Microbiology*, 112(6):1645–1657.
4. Onwubiko UN§, Mlynarczyk PJ§, Wei B, Habiyaremye J#, Clack A#, Abel SM, **Das ME**. A Cdc42 GEF, Gef1, through endocytosis organizes F-BAR Cdc15 along the actomyosin ring and promotes concentric furrowing. *Journal of Cell Science* 2019 132: jcs223776 doi: 10.1242/jcs.223776 Published 28 February 2019.

**Work Featured in:** Editor’s highlight, Journal of Cell Science

1. Wei B, Hercyk BS§, Habiyaremye J#, **Das M**. 2017. Spatiotemporal analysis of cytokinetic events in fission yeast. *JoVE*, 120.
2. Nuñez I, Rodriguez Pino M, Wiley DJ, **Das M**, Chen C, Goshima T, Kume K, Hirata D, Toda T and Verde F. 2016. Spatial control of translation repression and polarized growth by conserved NDR kinase Orb6 and RNA-binding protein Sts5. *eLife*, pii:e14216.
3. Wei B, Hercyk BS§, Mattson N, Mohammadi A#, Rich J#, DeBruyne E#, Clark MM#, **Das M**. 2016. Unique Spatiotemporal Activation Pattern of Cdc42 by Gef1 and Scd1 Promotes Different Events during Cytokinesis. *Molecular Biology of the Cell*. 27(8):1235-45.

**Work Featured in:** Molecular Biology of the Cell, American Society for Cell Biology newsletter.

1. **Das M**, Nuñez I, Rodriguez M, Wiley D J, Rodriguez J, Sarkeshik A, Yates III. J R, Buchwald P, and Verde F. 2015. “Phosphorylation-dependent inhibition of Cdc42 GEF Gef1 by 14-3-3 protein Rad24 spatially regulates Cdc42 GTPase activity and oscillatory dynamics during cell morphogenesis.” *Molecular Biology of the Cell*, 26(19):3520-34.
2. **Das M**, Verde F. 2013. “Role of Cdc42 dynamics in the control of fission yeast cell polarization.” *Biochem Soc Trans*. 41(6):1745-9.
3. **Das M**\*, Drake T\*, Buchwald P, Vavylonis D and Verde F. 2012. “Oscillatory dynamics of Cdc42 GTPase in the spatial control of polarized cell growth.” *Science*, 2012, 337, 6091, 239-243. \*Co-authors

**Work Featured in:**  Editors’ Choice Cell Biology “Pole to Pole” Sci. Signal.

 Faculty of 1000 Biology

1. **Das M**, Chiron S and Verde F. 2010. “Microtubule-dependent spatial organization of mitochondria in fission yeast.” *Methods in Cell Biology*, 97, 203-21
2. **Das M**, Wiley D J, Chen X, Shah K and Verde F. 2009. “Conserved NDR kinase Orb6 controls polarized cell growth by spatial regulation of the small GTPase Cdc42.” *Current Biology*, 19, 1314-19.

**Work Featured in:**  Faculty of 1000 Biology.

1. Iyer R S, **Das M** and Bhat P J. 2008. “Pseudohyphal differentiation defect due to mutations in GPCR and ammonium signaling is suppressed by low glucose concentration: A possible integrated role for Carbon and Nitrogen limitation.” *Current Genetics*, 54, 71-81
2. **Das M**\*, Wiley D J\*, Medina S, Vincent H, Larrea M, Oriolo A and Verde F. 2007. “Regulation of cell diameter, For3p localization and cell symmetry by fission yeast Rho-GAP Rga4p.” *Molecular Biology of the Cell*, 18, 2090-101. \*Co-authors

**Work Featured in:**  InCytes in the June Issue of Molecular Biology of the Cell and American Society for Cell Biology newsletter.

1. **Das M** and Bhat P J. 2005. “Disruption of MRG19 results in altered nitrogen metabolic status and defect in pseudohyphal development: Evidence for a link between metabolic status and developmental pathway.” *Microbiology*, 151, 91-8

**Work Featured in:**  Faculty of 1000 Biology.

1. Khanday F A, ‡**Saha M** and Bhat P J. 2002. “Molecular Characterization of MRG19 of Saccharomyces cerevisiae. Implication in the Regulation of Galactose and Nonfermentable Carbon Source Utilization.” *European Journal of Biochemistry*, 269, 5840-50 (‡Maiden name)

**OTHER PROFESSIONAL ACTIVITIES:**

**Invited Talks**

1. Emory University, 2022 (Virtual)
2. University of California, Los Angeles, 2021
3. University of Toledo, Ohio, 2021 (Virtual)
4. National Institutes of Health, Bethesda, Maryland, 2019
5. University of Georgia, Georgia, 2019
6. High Point University, High Point, North Carolina, 2019
7. University of North Carolina Charlotte, North Carolina, 2019
8. Western Carolina University, Cullowhee, NC, 2017
9. Tata Institute of Fundamental Research, Mumbai, India, 2016.
10. Indian Institute of scientific education and research, Pune, India, 2014.
11. M. S. University, Baroda, India, 2014.
12. Indian Institute of Technology, Mumbai, India, 2014.
13. Department of Biology, University of Miami, Miami, Florida, February 2012.
14. School of Biosciences and Bioengineering, Indian Institute of Technology, Mumbai, India. January, 2007.
15. The Department of Biochemistry, M.S. University of Baroda, India. January, 2007.

**Seminar Talks**

1. BIRS Mathematics of the Cell Workshop, Banff, Canada, 2021 (Virtual)
2. Southeastern Society of Developmental biologists, 2021 (Virtual)
3. International Fission Yeast Meeting, Barcelona, Spain, 2019
4. International Fission yeast meeting, Banff, Canada, 2017.
5. Gordon Research Conference, Plant and Microbial Cytoskeleton, Proctor Academy, NH, 2016.
6. Cold Spring Harbor Cell Biology of the Yeasts Meeting, 2015.
7. International Pombe meeting, Japan, Kobe, 2015.
8. The American Society of Cell Biology Annual Meeting, Denver, CO, 2011.
9. The Sixth International Fission yeast meeting, Boston, MA. June 2011.
10. The Yeast Cell biology meeting, Cold Spring Harbor Laboratory, NY. August, 2009.
11. North-American Fission Yeast Meeting, Los Angeles, June, 2008.
12. The Yeast Cell biology meeting, Cold Spring Harbor Laboratory, NY. August, 2007.

**Institutional Talks**

1. Boston College Biology department retreat, Portsmouth, NH, 2022.
2. ACS Cancer Symposium, UT medical center, Knoxville, 2014.
3. Department of Molecular and Cellular Pharmacology, University of Miami, April 2009.
4. Developmental biology group, Biology Department, University of Miami, May 2008.
5. Department of Molecular and Cellular Pharmacology, University of Miami, February, 2007.

**Professional Memberships**

2018 eLife Ambassador

2009 - Present Member, Sigma Xi, The Scientific Research Society

2007 - Present Member, American Society for Cell Biology

**MENTORING/TEACHING**

**Students/ Trainees**

Bin Wei, Post-doctoral associate 2013-2016

Brian Hercyk, PhD degree granted 2014-2019

Julie Rich-Robinson, PhD degree granted 2015-2020

Udodirim Onwubiko, PhD candidate 2016-2022

Bethany Campbell, PhD candidate 2018- Present

Marcus Harrell, PhD student 2019-Present

Justin McDuffie, PhD student 2020-Present

Abigail Vickers, PhD student 2020-Present

Samriddhi Pathak, Post-doctoral associate 2020-Present

Dhanya Kalathil, Post-doctoral associate 2020-Present

**Awards and Recognitions by trainees**

2020 NSF GRFP Honorable Mention- Marcus Harrell

2020 BioMembranes 2020, Poster award- Marcus Harrell

2019 Scientific committee Pombe 2019, Poster Award- Udodirim Onwubiko

2019 Eureca Undergraduate research poster award- Afton Russell

2018 Cell Dynamics Symposium, Nashville, TN, Poster award- Julie Rich

2018 NSF GRFP- Udodirim Onwubiko

2017 NSF GRFP- Julie Rich

2017 Graduate Student Senate, Research Excellence Award- Brian Hercyk

2014 CNMS Undergraduate Research Symposium in the Chemical and Biological Sciences, Baltimore, MD. Awarded 2nd Prize- Julie Rich

**Teaching**

BCMB 311 Advanced Cellular Biology, Spr 2022

BCMB 530 Experimental Design and Analysis, Spr 2021

BIOL 160 Cellular and Molecular Biology, Spr 2014, Fall 2020

BIOL 168 Honors Cellular and Molecular Biology, Spr 2015-Spr 2018, Spr 2020

BCMB 512 Advanced Molecular Biology, Spr 2020- Spr 2022

BCMB 515 Experimental Techniques, Fall 2015-Fall 2018

BCMB 607 Journal club, Spr 2013, Fall 2015

BCMB 615 Professional Development seminar series, Spr 2018

CEM 541 Cellular and Molecular Basis of Disease (Guest lecturer), Fall 2015-Fall 2020

**PROFESSIONAL SERVICE**

**Departmental**

2021-2022 Departmental Executive committee

2021-2022 Core Biology Curriculum committee

2020-2022 Graduate admissions committee

2019 Cell Biology Faculty search committee

2019-2022 Cell Biology Lab course development committee

2018 - 2020 Biology Undergraduate degree committee

2017 BCMB Awards Committee as an ad-hoc.

2016 BCMB Awards Committee.

2015 Judge for Cynthia B. Peterson Poster Competition

2015 Systems Biology Faculty search committee.

2014 Faculty representative at the 2014 Commencement Ceremony

2013 Graduate Student affairs committee

**College**

2020 Inter Disciplinary Program Steering committee

2018 CAS Career Planning Task Force- Professional Development for Graduate students

2017 Interview of candidate GST graduate students

2014 - 2017 Curriculum development for BIOL168

**University**

2017 Lab tour for University of Tennessee, Governor’s school

2016 Panelist at Women in STEM’s Research Symposium

2016 Lab tour for University of Tennessee, Governor’s school

2014 Goldwater Campus Review and Endorsement Committee

**Disciplinary**

2022 Grant review panel member - NSF-MCB

2021 Ad hoc Panel Member - National Institutes of Health, Nuclear and Cytoplasmic Structure/function and Dynamics

2021 Grant review panel member - NSF-MCB

2020 Ad hoc reviewer for the Swiss National Science Foundation

2020 Ad hoc reviewer for the French National Research Agency (ANR)

2020 Co-Chair, ASCB Women in Cell Biology Communications and Outreach Committee

2019 Associate member ASCB, Women in Cell Biology

2019 Co-founder PombeSlack

2019 BioRxiv Affiliate

2018 GRC Plant and Microbial Cytoskeleton, Session Discussion Leader

2018 Grant review panel member - NSF-MCB

2016, 2017 ASCB Annual meeting, Mentoring Round table discussion leader

2017 Ad hoc reviewer- National Science Foundation- Molecular Biophysics Cluster

2017 Grant review panel member - NSF-MCB

2016 Peer reviewer for the following scientific journals: eLife, PLOS Biology, Molecular Biology of the Cell, Science Advances, Journal of Cell Biology

2016 Ad hoc Panel Member - National Institutes of Health, Nuclear and Cytoplasmic Structure/function and Dynamics

2016 - 2020 New PI Slack- membership advisory board member