

# ANKUR SAXENA

Department of Biological Sciences  
University of Illinois at Chicago  
900 S Ashland Avenue  
Chicago, Illinois 60607  
Citizenship: U.S.A.

312.413.8137  
214.274.9630  
[saxenaa@uic.edu](mailto:saxenaa@uic.edu)  
[www.saxenlab.com](http://www.saxenlab.com)  
[www.orcid.org/0000-0001-8646-2887](http://www.orcid.org/0000-0001-8646-2887)

## Experience

- 2015-present Assistant Professor, University of Illinois, Chicago, IL  
Department of Biological Sciences: Molecular, Cell, & Developmental Biology Group  
Additional Affiliations: University of Illinois Cancer Center  
Graduate Program in Neuroscience, UIC  
Laboratory of Integrative Neuroscience, UIC  
Medical Scientist Training Program, UIC  
Honors College, UIC  
Visiting Associate, California Institute of Technology
- 2014-2015 Senior Research Fellow, California Institute of Technology, Pasadena, CA  
Mentor: Marianne E. Bronner, Professor, Division of Biology & Biological Engineering
- 2008-2014 Postdoctoral Fellow, California Institute of Technology, Pasadena, CA  
Mentor: Marianne E. Bronner, Professor, Division of Biology & Biological Engineering
- 2006-2007 Postdoctoral Fellow, Harvard Medical School, Boston, MA  
Mentor: Clifford J. Tabin, Chairman, Department of Genetics

## Education

- 1999-2005 Ph.D., Genetics & Development, University of Texas Southwestern Medical Center  
“Cell Migration and Survival Pathways in Cardiac Development and Disease”  
Mentor: Deepak Srivastava, President, Gladstone Institutes, UCSF
- 1996-1999 B.S., Molecular Biology; minor in Spanish, University of Texas at Austin  
Research Mentor: George Georgiou, Professor, Dept. of Chemical Engineering

## Publications

**Citations: 1,638; h-index: 12** (Google Scholar, 08/2018)

[www.scholar.google.com/citations?user=9S-yoHMAAAAJ](http://www.scholar.google.com/citations?user=9S-yoHMAAAAJ) Download PDFs: [www.saxenlab.com/publications](http://www.saxenlab.com/publications)

1. Rajan SG\*, Gallik KL\*, Monaghan JR, Uribe RA, Bronner ME, **Saxena A**<sup>†</sup>. Tracking neural crest cell cycle progression *in vivo*. **genesis**, 56:e23214 (2018). <https://doi.org/10.1002/dvg.23214>
2. Suarez-Bregua P, **Saxena A**, Bronner ME, Moran P, Rotllant, J. Targeted Pth4-expressing cell ablation impairs skeletal mineralization in zebrafish. **PLOS ONE**, 12(10), e0186444 (2017). <https://doi.org/10.1371/journal.pone.0186444>
3. Gallik KL\*, Treffy R\*, Nacke L, Ahsan K, Rocha M, Green-Saxena A, **Saxena A**<sup>†</sup>. Neural Crest and Cancer: Divergent Travelers on Similar Paths. **Mechanisms of Development** (Invited Review), 148, 89-99 (2017). <https://doi.org/10.1016/j.mod.2017.08.002>
4. Suarez-Bregua P, Torres-Nuñez E, **Saxena A**, Guerreiro P, Braasch I, Prober D, Moran P, Cerda-Reverter JM, Du SJ, Adrio F, Power DM, Canario AVM, Bronner ME, Postlethwait J, Cañestro C, Rotllant J. Pth4, an ancient parathyroid hormone lost in eutherian mammals, reveals a new brain-to-bone signaling pathway. **FASEB J.**, 31(2), 569-83 (2017). <https://doi.org/10.1096/fj.201600815R>

5. **Saxena A<sup>†</sup>** & Bronner ME. A novel HoxB cluster protein expressed in the hindbrain and pharyngeal arches. *genesis* (Cover Image), 52(10), 858-63 (2014). <https://doi.org/10.1002/dvg.22806>
6. Wang K, Milkie D, **Saxena A**, Engerer P, Misgeld T, Bronner ME, Mumm J, Betzig E. Rapid adaptive optical recovery of optimal resolution over large multicellular volumes. *Nature Methods*, 11(6), 625-8 (2014). <https://doi.org/10.1038/nmeth.2925>
7. Maier EC, **Saxena A**, Alsina B, Bronner ME, Whitfield TT. Sensational placodes: Neurogenesis in the otic and olfactory systems. *Developmental Biology* (Invited Review; Cover Image), 389(1), 50-67 (2014). <https://doi.org/10.1016/j.ydbio.2014.01.023>
8. Rogers CD, **Saxena A**, Bronner ME. Sip1 mediates an E-cadherin-to-N-cadherin switch during cranial neural crest EMT. *J. of Cell Biology* (Cover Image; Highlighted), 203(5), 835-47 (2013). <https://doi.org/10.1083/jcb.201305050>
9. **Saxena A**, Peng BN, Bronner ME. Sox10-dependent neural crest origin of olfactory microvillous neurons in zebrafish. *eLife* (Editor's Choice; Highlighted), 2:e00336 (2013). <https://doi.org/10.7554/eLife.00336>  
ScienceDaily: <http://tinyurl.com/m7fcx4s> Insight: <dx.doi.org/10.7554/eLife.00648>
10. Trinh LA, Hochgreb T, Graham M, Wu D, Ruf-Zamojski F, Jayasena CS, **Saxena A**, Hawk R, Gonzalez-Serricchio A, Dixon A, Chow E, Gonzales C, Leung HY, Solomon I, Bronner-Fraser M, Megason SG, Fraser SE. A versatile gene trap to visualize and interrogate the function of the vertebrate proteome. *Genes & Development* (Cover Image), 25(21), 2306-20 (2011). <https://doi.org/10.1101/gad.174037.111>
11. **Saxena A** & Tabin CJ. The miRNA-processing enzyme Dicer is necessary for cardiac outflow tract alignment and chamber septation. *Proc. Natl. Acad. Sci. USA*, 107(1), 87-91 (2010). <https://doi.org/10.1073/pnas.0912870107>
12. **Saxena A**, Fish JE, White MD, Yu S, Smyth JWP, Shaw RM, DiMaio JM, Srivastava D. Stromal cell-derived factor-1 alpha is cardioprotective during myocardial infarction. *Circulation*, 117(17), 2224-31 (2008). <https://doi.org/10.1161/CIRCULATIONAHA.107.694992>
13. Srivastava D, **Saxena A**, DiMaio JM, Bock-Marquette I. Thymosin  $\beta$ 4 is cardioprotective after myocardial infarction. *Ann. N.Y. Acad. Sci.*, 1112, 161-170 (2007). <https://doi.org/10.1196/annals.1415.048>
14. Gao J<sup>\*</sup>, Lee K<sup>\*</sup>, Zhao M, Qiu J, Zhan X, **Saxena A**, Moore CJ, Cohen SN, Georgiou G. Differential modulation of *E. coli* mRNA abundance by inhibitory proteins that alter the composition of the degradosome. *Molecular Microbiology*, 61(2), 394-406 (2006). <https://doi.org/10.1111/j.1365-2958.2006.05246.x>
15. Bock-Marquette I<sup>\*</sup>, **Saxena A<sup>\*</sup>**, White MD, DiMaio JM, Srivastava D. Thymosin  $\beta$ 4 activates integrin-linked kinase and promotes cardiac cell migration, survival and cardiac repair. *Nature* (Article; Highlighted), 432(7016), 466-72 (2004). <https://doi.org/10.1038/nature03000>
16. Cowan CA<sup>\*</sup>, Yokoyama N<sup>\*</sup>, **Saxena A**, Chumley MJ, Silvany RE, Baker LA, Srivastava D, Henkemeyer M. Ephrin-B2 reverse signaling is required for axon pathfinding and cardiac valve formation but not early vascular development. *Developmental Biology*, 271(2), 263-71 (2004). <https://doi.org/10.1016/j.ydbio.2004.03.026>

\* Equal Contribution † Corresponding Author

## **Patents**

|           |   |
|-----------|---|
| 2010      | US # 7,776,816 Preserving Hypoxic Tissue (w/ Dr. Deepak Srivastava)   |
| 2006/2009 | WO # 023879/US # 7,531,318 Screening of Agents for Activity Against Ischemic Myocardial Insults (w/ Dr. Deepak Srivastava, Dr. Ildiko Bock-Marquette) |

## **Grants**

2017-2021 National Institutes of Health R01HL138737 (PI: D. Darbar) Role: Co-I  
2016-2018 Chicago Biomedical Consortium Catalyst Award (w/ Co-PI V. Prince) Role: PI  
2013 HHMI Janelia Visiting Scientist Program Research Support Award Role: PI  
2009-2012 National Institutes of Health NRSA T32 Fellowship Role: Trainee  
2008-2009 Gordon Ross Foundation Fellowship (terminated early to accept NIH T32) Role: PI

## **Awards & Honors**

2009-2016 Ten Travel Funding Awards, Various Conferences  
2014 Selected for Global Young Scientists Summit 2015, Singapore (NRF Singapore Funding)  
2013 Best Postdoc Presentation Award, Midwest Society for Developmental Biology  
2008 Selected for 'Frontiers in Developmental Biology' Course, Argentina (NSF Funding)  
2002-2004 Five First Prize & Finalist Awards, Various Poster Competitions

## **Invited Seminars**

2018 Midwest Society for Developmental Biology Conference  
2018 Morgridge Institute, Skala Lab (Informal)  
2018 University of Illinois Cancer Center Seminar Series  
2017 Purdue University Northwest, Dept. of Biological Sciences  
2017 University of Illinois at Chicago, 'MBRB Research Day' Symposium  
2017 University of Texas at Austin, Eberhart Lab (Informal)  
2017 University of Illinois at Chicago, Center for Cardiovascular Research  
2017 University of Chicago, Institute for Mind and Biology (Invited by Postdoctoral Trainees)  
2016 SUNY Albany, Dept. of Biological Sciences  
2016 University of California San Francisco, Gladstone Institutes, 'Hands That Make a Heart: A Cardiovascular Development and Regeneration Symposium'  
2016 Northwestern University, 'Innovative Biological Microscopy' Symposium  
2016 Loyola University, Neuroscience Seminar Series  
2016 California Institute of Technology, 'Stem Cells, Gene Regulatory Networks, and the Evolution of Vertebrates' Symposium  
2015 Harvard Medical School, Reproductive Endocrine Sciences Shoolman Seminar Series  
2015 University of Illinois at Chicago, Dept. of Biochemistry & Molecular Genetics  
2015 University of Illinois at Chicago, Dept. of Biological Sciences  
2015 University of Kansas Medical Center, Dept. of Anatomy and Cell Biology  
2015 Duke-NUS Graduate Medical School Singapore, Cancer & Stem Cell Biology Program  
2015 NTU LKC School of Medicine, Singapore Developmental Biology Club  
2015 New York University, Center for Genomics & Systems Biology  
2014 Academia Sinica, Institute of Cellular & Organismic Biology  
2014 Hong Kong University of Science & Technology, Division of Life Science  
2014 University of California San Francisco, Center for Craniofacial Anomalies  
2013 HHMI Janelia Research Campus

## **Selected Talks (from submitted abstracts)**

2018 NSF Workshop: Finding Your Inner Modeler, Year Two  
2017 Midwest Zebrafish Meeting  
2016 Chicago Cancer Biology Conference  
2014 Society for Developmental Biology Conference  
2013 Midwest Society for Developmental Biology Conference  
2013 Neural Crest/Placodes Gordon Research Conference  
2013 Society for Developmental Biology Conference  
2012 American Society for Cell Biology Conference  
2012 Society for Developmental Biology Conference  
2004 Weinstein Cardiovascular Development Conference

## **Teaching & Mentoring**

2016-present Honors Fellow, Mentor for Honors College Students  
2016-present Instructor/Mentor, Bios 391 & 399: Independent Research  
2015-present Mentor, Multiple Postdoctoral, Grad., Med., & Undergrad. Fellows & Students  
2017-2018 Content Advisor/Mentor, Biomedical Visualization Graduate Student  
Spring 2018 Co-Instructor, Bios 222: Cell Biology (~350 students)  
Spring 2018 Co-Instructor, GEMS 510: Integrative Biology (~25 students)  
Fall 2017 Co-Instructor, Bios 526: Molecular and Genetic Analysis of Development (8 students)  
Fall 2017 Co-Instructor, Bios 286: Biology of the Brain (~150 students)  
Fall 2017 Co-Instructor, Bios 222: Cell Biology (~300 students)  
Spring 2017 Co-Instructor, Bios 222: Cell Biology (~350 students)  
Fall 2016 Co-Instructor, Bios 526: Molecular and Genetic Analysis of Development (12 students)  
Fall 2016 Co-Instructor, Bios 222: Cell Biology (~160 students)  
2014-2015 Mentor, One Caltech Postdoctoral Fellow & One Visiting Graduate Student  
2009-2014 Annual Guest Lecturer, Caltech Developmental Biology Course BI 117  
2009-2014 Mentor, Five SURF/Caltech Undergraduates & Two High School Students, including:  
- Vikas Trivedi, Winner of Summer Research Award (IIT-Kanpur) & Caltech graduate student  
- Brian Peng, Caltech SURF Competition Finalist (Top 5 out of >300 Caltech students)  
2011 Leader, Developmental Biology Summer Journal Club  
2009 Mentor, Caltech Graduate Rotation Student  
2003-2005 Mentor, One UT Southwestern Graduate Rotation Student & Two SURF Students

## **Service & Outreach**

2017-present Periodic 'Lab Tours' Community Outreach & Science Education, Including for UIC's Honors College, Bios 100, & Biology Colloquium (Bios 196) Students  
2015-present Prelim and/or Thesis Committee Member, Seven (Total) Graduate Students  
2013-present Ad Hoc Reviewer, *Developmental Biology*, *Molecular Biology of the Cell*, *genesis*  
2018 Session Chair/Organizer, Midwest Society for Developmental Biology Conference  
2018 Undergraduate-Invited Speaker/Mentor, UIC James Stukel Towers Faculty Program  
2018 Posters Judge, UIC College of Pharmacy Research Day  
2017-2018 Candidate Interviewer, UIC Graduate Program in Neuroscience  
2015-2018 Candidate Interviewer, UIC MSTP Program  
2017 Host, Childhood Cancer Awareness Event for G9 Nonprofit Organization  
2017 Saxena Lab Team Fundraising for St. Jude Walk/Run to End Childhood Cancer  
2017 Mentor, UIC Behavioral and Biomedical Sciences Bridges to Baccalaureate Program (Underrepresented Minority Students from Community Colleges)  
2017 Mentor, L@S GANAS Research Program (Underrepresented Minority Students)  
2017 Organizer & Host, "Sense'ational Neuroscience: Peripheral to Central and Back" Symposium at UIC  
2017 Search Committee Member, UIC Biological Sciences Clinical Assistant Professor  
2016 Posters Judge, Chicago Cancer Biology Conference  
2016 Posters Judge, UIC Neuroscience Day  
2016 Posters Judge, Society for Developmental Biology Meeting  
2016 Invited Panelist, National Science Foundation Study Panel  
2016 Member, UIC Biological Sciences Graduate Students Admissions Committee  
2016 Organizer, UIC Biological Sciences Graduate Students Recruitment Visits  
2015 Reviewer, UIC Chancellor's Graduate Research Award Program  
2015 Posters Judge, UIC Neuroscience Day  
2015 UIC Biological Sciences, MCDB Group Open House Presentation  
2015 UIC Open House Presentation  
2008-2014 Periodic 'Lab Tours' Community Outreach & Science Education  
2014 Event Volunteer, L.A. Centro Latino for Literacy  
2013 Proposal Reviewer & Session Chair, Caltech SURF Program  
2012-2013 Founding Board of Directors, Angie's Army (services for adults w/ Down syndrome)  
2008-2012 Annual Counselor, Camp del Corazon (children w/ congenital heart disease)

2000-2004 Annual Counselor, Camp John Marc (children w/ congenital heart disease)  
2000-2001 UTSW Graduate School Representative to UT System Board of Regents

## **Memberships**

2018-present American Society for Cell Biology  
2016-present International Zebrafish Society  
2009-present Society for Developmental Biology  
2015-2016 Society for Neuroscience  
2012-2014 American Society for Cell Biology  
2008-2009 Latin American Society for Developmental Biology

## **Conferences/Symposia**

2018 Midwest Society for Developmental Biology  
2018 NSF Workshop: Finding Your Inner Modeler, Year 2, Chicago, IL  
2018 International Zebrafish Conference, Madison, WI  
2018 ASCB/NCI Subcellular to Cellular Cancer Imaging Workshop, Bethesda, MD  
2017 Chicago Mass Spec Day, Chicago, IL  
2017 NSF Workshop: Finding Your Inner Modeler, Chicago, IL  
2017 Midwest Zebrafish Meeting, Cincinnati, OH  
2017 MBRB Research Day, Chicago, IL  
2017 'Sense'ational Neuroscience: Peripheral to Central and Back, Chicago, IL (Organizer)  
2017 Strategic Conference of Zebrafish Investigators, Pacific Grove, CA  
2016 Chicago Cancer Biology, Chicago, IL  
2016 Society for Developmental Biology, Boston, MA  
2016 Chicago Mass Spec Day, Chicago, IL  
2016 Cardiovascular Development and Regeneration Symposium, San Francisco, CA  
2016 Innovative Biological Microscopy Symposium, Chicago, IL  
2016 Stem Cells, GRNs, and the Evolution of Vertebrates Symposium, Pasadena, CA  
2015 Society for Neuroscience, Chicago, IL  
2015 Directed Cell Migration Gordon Research, Galveston, TX  
2015 Global Young Scientists Summit, Singapore  
2014 Santa Cruz Developmental Biology, Santa Cruz, CA  
2014 Society for Developmental Biology, Seattle, WA  
2013 Midwest Society for Developmental Biology, St. Louis, MO  
2013 Neural Crest/Cranial Placodes Gordon Research, Easton, MA  
2013 Society for Developmental Biology, Cancun, Mexico  
2012 American Society for Cell Biology, San Francisco, CA  
2012 Caltech Biology Division Retreat, Lake Arrowhead, CA  
2012 Society for Developmental Biology, Montreal, Canada  
2009 Centers of Excellence in Genomic Science, Pasadena, CA  
2009 Society for Developmental Biology, San Francisco, CA  
2008 Latin American Society for Developmental Biology, Buenos Aires, Argentina  
2008 Centers of Excellence in Genomic Science, Pasadena, CA  
2008 Southern California Zebrafish, Los Angeles, CA  
2004 Weinstein Cardiovascular Development, Leiden, Netherlands  
2001-2004 Annual Cardiovascular Symposium, Dallas, TX  
2002 Keystone Symposium: Molecular Biology of the Heart, Keystone, CO  
2001 Weinstein Cardiovascular Development, Dallas, TX