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EDUCATION

Ph.D., Developmental Biology, Lund University, Lund, Sweden, 2006

B.Sc., Natural Resources, Environmental Science, Yazd University, Iran, 2001

ACADEMIC AND RESEARCH EXPERIENCE

2018-present: Appointed as member, Stephenson Cancer Center, University of Oklahoma Health Sciences Center

2018-present: Assistant Professor, Department of Biology, University of Oklahoma

2017-2018: Lecturer, Department of Biology, University of Oklahoma, USA

2013-2016: Postdoctoral fellow, Division of Biological Sciences, University of Missouri, USA

2012-2013: Postdoctoral fellow, Department of Biology, University of Oklahoma, USA

2008-2009: leave of absence

2007-2015: Postdoctoral fellow, Zoology Department, University of British Columbia, Canada

2001-2006: Ph.D. in Developmental Biology, Lund University, Sweden

1998-2001 (3 Yrs): B.Sc. in Environmental Science, Yazd University, Iran

2000-2001: Exchange student at University of Tehran, Karaj, Iran

2000-2001: Studied the biodiversity of the Caspian white fish (*rutilus frisii kutum* Kamensky) population using a genetic fingerprinting method, University of Tehran, Karaj, Iran

2000-2001: Participated in transferring two genes (*cryIA*, *cryIB*) to cotton plants using an agrobacterium mediated gene transfer method, Agricultural Biotechnology Research Institute of Iran, Karaj, Iran

PUBLICATIONS

- Das S., Hassan R., **Padash Barmchi M.** A *Drosophila* study identifies iPLA2-VIA as potential novel chemoprevention target for HPV-induced cancer. Manuscript in preparation
- Hassan R., Kennedy A., Benbrook D., **Padash Barmchi M.** *Drosophila* model of HPV-induced pathogenesis identifies novel subunits of proteasome as therapeutic target for cervical cancer. Manuscript in preparation
- Rai R., Kennedy A., Benbrook D., **Padash Barmchi M.** Anticancer activity of FDA-approved gold compound, Auranofin, in cervical cancer. Manuscript in preparation

- **Padash Barmchi M.**, Hassan R., Afkhami M., Masly J., Brown H., Collins Q., Grunsted M. Drosophila model of HPV18-induced pathogenesis reveals a role for E6 oncogene in regulation of NF- κ B and Wnt to inhibit apoptosis. Submitted
- Collins Q., Grunsted M., Arcila D., Xiong Yi., **Padash Barmchi M***. Transcriptomic analysis provides insight into the mechanism of IKK β -mediated suppression of HPV18E6-induced cellular abnormalities. **G3 Genes/Genomes/Genetics**. doi: [10.1093/g3journal/jkad020](https://doi.org/10.1093/g3journal/jkad020) (2023) (* **corresponding author**)
- Hashemi L., Ormsbee M., Patel P., Nielson J., Ahlander J., **Padash Barmchi M***. A Drosophila model of HPV16-induced cellular abnormalities reveals a conserved mechanism. **PLoS One**. doi: [10.1371/journal.pone.0278058](https://doi.org/10.1371/journal.pone.0278058) (2022) (***corresponding author**)
- Samarasekera G., Ho R., **Padash Barmchi M.**, Auld V. Overexpression of the tricellular junction protein Gliotactin elicits multiple signaling pathways. In revision
- **Padash Barmchi M***, Thomas M., Thatte J.V., Vats A., Zhang B., Cagan R.L., Banks L. Inhibition of kinase IKK β suppresses cellular abnormalities induced by the human papillomavirus oncoprotein HPV 18E6. **Sci Rep**. doi: [10.1038/s41598-020-80193-5](https://doi.org/10.1038/s41598-020-80193-5) (2021) (* **corresponding author**)
- Sheldon K. S., **Padash M.**, Carter A. W., Marshall K. E. Different amplitudes of temperature fluctuation induce distinct transcriptomic and metabolomic responses in the dung beetle *Phanaeus vindex*. **J Exp Biol**. (2020)
- **Padash Barmchi M***, Gilbert M, Thomas M, Banks L, Zhang B, Auld VJ. A Drosophila Model of HPV E6-Induced Malignancy Reveal Essential Roles for Magi and the Insulin Receptor. **PLoS Pathog**. 12(8): e1005789. doi:10.1371 (2016) (* **Co-corresponding author**)
- **Padash Barmchi M.**, Samarasekera G., Gilbert M., Auld V.J., Zhang B. Magi Is Associated with the Par Complex and Functions Antagonistically with Bazooka to Regulate the Apical Polarity Complex. **PLoS ONE**. (2016)
- Sharifkhodaei Z., **Padash Barmchi M.**, Gilbert M., Samarasekera G., Fulga T.A., Van Vactor D., Auld V. The Drosophila tricellular junction protein Gliotactin regulates its own mRNA levels through BMP-mediated induction of miR-184. **J Cell Sci**. (2016)
- Vanlandingham P.A., **Barmchi MP.**, Royer S., Green R., Bao H., Reist N., Zhang B. AP180 couples protein retrieval to clathrin-mediated endocytosis of synaptic vesicles. **Traffic**. 15: 433-50 (2014)
- **Padash-Barmchi M.**, Charish K., Auld V.J. Gliotactin and Discs-large are co-regulated to maintain epithelial integrity. **J Cell Sci**. 126: 1134-43 (2013).
- **Padash-Barmchi M.**, Browne K., Sturgeon K., Jusiak B., Auld V.J. Control of Gliotactin localization and levels by tyrosine phosphorylation and endocytosis is necessary for survival of polarized epithelia. **J Cell Sci**. 123: 4052-62 (2010)
- Mulinari S., **Barmchi MP.**, Hacker U. DRhoGEF2 and diaphanous regulate contractile force during segmental groove morphogenesis in the *Drosophila* embryo. **Mol Biol Cell**. 19: 1883-92 (2008)
- **Padash Barmchi M.**, Rogers, S., Häcker, U. DRhoGEF2 regulates actin organization and contractility in the Drosophila blastoderm embryo. **The Journal of Cell Biology**. 168: 575-585 (2005).
- Häcker U., Nystedt S., **Barmchi MP.**, Horn C., Wimmer E.A. *piggyBac*-based insertional mutagenesis in the presence of stably integrated *P* elements in *Drosophila*. **Proc Natl Acad Sci U S A**. 100: 7720-7725 (2003)

PATENT

- Lead inventor- Padash Barmchi, M. (2024). Inhibiting 20S Proteasome Subunits β 2 and β 6 and β -Transducin Repeat-Containing Protein as Antiviral Therapies. Provisional patent application, U.S. Patent and Trademark Office.
- Lead inventor– Padash Barmchi, M., Zhang, B., Auld, V.J., Banks, L., Gilbert, M. (2018). Drosophila model of human cervical cancer. U.S. Patent Application Publication No. 20180044743(A1). Washington, DC: U.S. Patent and Trademark Office.

MEDIA EXPOSURE

Link to news release: <http://scienmag.com/fruit-flies-could-be-key-to-fighting-cervical-cancer-caused-by-human-papillomavirus/>

<http://timesofindia.indiatimes.com/life-style/health-fitness/health-news/Fruit-flies-could-be-helpful-to-fight-cervical-cancer-caused-by-HPV/articleshow/53795525.cms>

<http://www.futurity.org/fruit-flies-hpv-cervical-cancer-1231792/>

TEACHING EXPERIENCE

- Instructor of record, BIOL 3113 (Cell Biology), Department of Biology, University of Oklahoma, Fall 2024
- Instructor of record, BIOL 3113 (Cell Biology), Department of Biology, University of Oklahoma, Spring 2024
- Instructor of record, BIOL 3113 (Cell Biology), Department of Biology, University of Oklahoma, Fall 2023
- Independent Study, Department of Biology, University of Oklahoma, 2018-Present
- Honors Reading and Research, Department of Biology, University of Oklahoma, 2018-Present
- Instructor of record, BIOL 3113 (Cell Biology), Department of Biology, University of Oklahoma, Spring 2023
- Developed a new course (Cell Biology lab) for 3000 level, 2022- I will be teaching this in Spring 2025
- Instructor of record, BIOL 3113 (Cell Biology), Department of Biology, University of Oklahoma, Fall 2022
- Instructor of record, BIOL 3113 (Cell Biology), Department of Biology, University of Oklahoma, Spring 2022
- Instructor of record, BIOL 3113 (Cell Biology), Department of Biology, University of Oklahoma, Fall 2021
- Instructor of record, BIOL 3333 (Genetics), Department of Biology, University of Oklahoma, Spring 2021
- Instructor of record, BIOL 3113 (Cell Biology), Department of Biology, University of Oklahoma, Fall 2020
- Instructor of record, BIOL 3113 (Cell Biology), Department of Biology, University of Oklahoma, Summer 2020
- Instructor of record, BIOL 3333 (Genetics), Department of Biology, University of Oklahoma, Spring 2020
- Instructor of record, BIOL 3333 (Genetics), Department of Biology, University of Oklahoma, Fall

2019

- Instructor of record, BIOL 3113 (Cell Biology), Department of Biology, University of Oklahoma, Spring 2019
- Instructor of record, BIOL 3333 (Genetics), Department of Biology, University of Oklahoma, Fall 2018
- Instructor of record, BIOL 3113 (Cell Biology), Department of Biology, University of Oklahoma, Summer 2018
- Instructor of record, BIOL 3342 (Genetics Lab), Department of Biology, University of Oklahoma, Spring 2018
- Instructor of record, BIOL 3333 (Genetics), Department of Biology, University of Oklahoma, Fall 2017
- Instructor of record, BIOL 3113 (Cell Biology), Department of Biology, University of Oklahoma, Summer 2017
- GTA, BIOL 3333 (Genetics), Department of Biology, University of Oklahoma, Spring 2017
- GTA, BIOL 3342 (Genetics Lab), Department of Biology, University of Oklahoma, Fall 2016
- Instructor of record, BIOL 4970 (Cornerstone), Department of Biology, University of Oklahoma, Spring 2016
- Guest lecturer, BIOL 1114 (a class of 400 students), University of Oklahoma, Fall 2015
- Instructor of record, BIOL 458 201, Developmental Neurobiology, University of British Columbia, Vancouver, Canada, Spring 2011
- Mentoring several graduate and undergraduate students in Lund University, UBC as well as University of Oklahoma

PRESENTATIONS

- 36th Annual Undergraduate Research Day (two presentations), University of Oklahoma (2024), Role: senior author and faculty mentor
- Annual Cancer Research Symposium, Stephenson Cancer Center, Oklahoma City (2024), Role: senior author and faculty mentor
- 35th Annual Undergraduate Research Day, University of Oklahoma (2023), Role: senior author and faculty mentor
- Annual Cancer Research Symposium, Stephenson Cancer Center, Oklahoma City (2023), Role: Presenter
- The Cell and Molecules of Life seminar series, Department of Biology, University of Oklahoma, (2022), Role: Presenter
- Research Day at the Capitol, Oklahoma City (2022), Role: senior author and faculty mentor
- The Gynecologic Cancer Research Interest Group, OUHSC (2022), Role: Presenter
- Annual Cancer Research Symposium, Stephenson Cancer Center, Oklahoma City (2021), Role: Presenter
- Invited speaker, Computer Science in Modern Biology Workshop, Collaborative effort between University of Oklahoma and Miami University (2020)
- Invited speaker, Department of Biochemistry & Molecular Biophysics, Kansas State University (2020)
- The American Society for Cell Biology Conference, Washington, DC, USA (2019), Role: Presenter
- Speaker, Annual Cancer Research Symposium, Stephenson Cancer Center, Oklahoma City (2019)

- Invited speaker, Symposium on Vaccine Research, Education, and Public Outreach, University of Oklahoma (2019)
- Invited speaker, Oklahoma Comprehensive Cancer Network, Cleveland County Health Department (2018)
- Invited speaker, Gynecologic cancers program (Think Tank series), Stephenson cancer center, University of Oklahoma Health Sciences center (2018)
- Speaker, Department of Biological Sciences, Southwestern Oklahoma State University, Oklahoma, USA (2018)
- Speaker, Department of Natural Sciences, Northeastern State University, Oklahoma, USA (2018)
- Speaker, Department of Molecular Biosciences, University of Kansas, USA (2017)
- The American Society for Cell Biology Conference, San Francisco, USA (2016), Role: Presenter
- Invited speaker, Institute for Natural Products and Research Technologies, University of Oklahoma (2016)
- Departmental Seminar, Department of Biology, University of Oklahoma, USA (2014), Role: Presenter
- Cold Spring Harbor Asia Conference, Neurobiology: Diverse Species and Conserved Principles, Suzhou, China (2014), Role: Presenter
- The American Society for Cell Biology Conference, New Orleans, USA (2013), Role: Presenter
- Annual Drosophila Research Conference, Chicago, USA (2012), Role: Presenter
- Keystone Symposia, Epithelial Plasticity and Epithelial to Mesenchymal Transition, Vancouver, Canada (2011), Role: Presenter
- 4th Canadian Developmental Biology Conference, Banff, Canada (2008), Role: Presenter
- 15th International Developmental Biologists Congress, Sydney, Australia (2005), Role: Presenter
- 1st Scandinavian Drosophila Symposium, Kristineberg Marine Research Station, Sweden (2005), Role: Presenter
- 18th European Drosophila Research Conference, Göttingen, Germany (2003), Role: Presenter

FUNDING, HONORS AND AWARDS

PI: Current and completed supports

- Stephenson Cancer Center Cancer Biology Seed Grant, (\$10,000), Role: PI, 2024-2025
- Collaborative Research Faculty Fellowship (CRFF), University of Oklahoma and match fund from OUVPRP, (\$50,000), Role: PI, 2024-2025
- Oklahoma Center for the Advancement of Science and Technology, (\$134,903), Role: PI, 2023-2026
- Proposal entitled “Validation and Mechanistic Studies of a Novel Drug Target in Cervical Cancer” was nominated as the one applicant from the Science category of STEM²D discipline for submission to Johnson & Johnson Scholars Award Program, University of Oklahoma
- Foundation for Women’s Cancer, letter of intent selected for full proposal submission, Round 2- Not funded (\$25,000)
- Stephenson Cancer Center Pilot Grant Program, (\$24,945), Role: PI, 2019-2023
- Oklahoma Shared Clinical and Translational Resources, (\$76,515), Role: PI, 2019-2021

PI: Pending supports

- National Science Foundation-MRI, \$752,797, Role: Co-PI, 2025-2028

- National Institute of Health-R01 (resubmission), \$1,872,941, Role: PI, 2025-2030
- American Cancer Society Research Scholar Grant, \$946,000, Role: PI, 2025-2029
- National Institute of Health-R21, \$418,245, Role: PI, 2025-2027

Research supports through PI-mentored undergraduate awards

- Honors Research Assistant Program, Faculty mentored, recipient: McKailey Holt \$1,000, 2024
 - Undergraduate Research Opportunity Program-Faculty Mentored-recipient: Arjun Penmatsa and Lindsey Frick \$1,000, 2024
 - Undergraduate Research Opportunity Program-Faculty Mentored-recipient: Elena Hollopeter \$1,000, 2023
 - Undergraduate Research Opportunity Program-Faculty Mentored-recipient: Rami Hassan \$1,000, 2022
 - Undergraduate Research Opportunity Program-Faculty Mentored-recipient: Rachel Baker and Mohammad Osama \$1,000, 2022
 - Undergraduate Research Opportunity Program-Faculty Mentored-recipient: Quincy Collins and Michael Grunsted \$800, 2021
 - Undergraduate Research Opportunity Program-Faculty Mentored-recipient: Harrison Brown \$1,000, 2021
 - Undergraduate Research Opportunity Program-Faculty Mentored-recipient: Chelsea Guo \$915, 2021
 - Undergraduate Research Opportunity Program-Faculty Mentored-recipient: Luis Longoria \$800, 2019
 - Undergraduate Research Opportunity Program-Faculty Mentored-recipient: Jacquelyn Nielson, \$800, 2019
 - Undergraduate Research Opportunity Program-Faculty Mentored-recipient: McKenzi Ormsbee \$800, 2018
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- Spotlited in the Stephenson Cancer Center Gynecologic Cancers Newsletter, 2022
 - My student, Lydia Hashemi, was selected as one of the four students representing University of Oklahoma at the Research Day at Capitol, Spring 2022
 - My student, Rachel Baker, was selected as second place award winner, 36th annual undergraduate research day, University of Oklahoma, 2024
 - My student, Rami Hassan, was selected as second place award winner, 35th annual undergraduate research day, University of Oklahoma, 2023
 - The only student in the university who completed B.Sc. in 3 years, 2001
 - GULLI GUNVALD travel award, Lund University, Sweden, 2006

PROFESSIONAL EXPERIENCE

- Served on several doctoral students advisory committee, University of Oklahoma
- Served on Mass Spectrometry, Proteomics & Metabolomics Committee, University of Oklahoma, 2024-present
- Served on search committee for new faculty hire, University of Oklahoma, 2024
- Judge at the Three Minute Thesis (3MT®) Competition, University of Oklahoma Graduate College, 2024

- Lead Judge at Undergraduate Research Day, University of Oklahoma, 2023
- Organized seminar/think tank series “Cells and Molecules of Life”, Department of Biology, University of Oklahoma, Fall 2022
- Review editor, *Frontiers in Cell and Developmental Biology - Signaling*, Sep 2022-present
- Served on pre-medical interview committee, University of Oklahoma, 2019-present
- Panel member at Genetics Society of America's Multilingual Seminar Series, July 2021
- Panel member in a session with the topic of “Research in Academia” for Four-Year Research Engagement (FYRE) students, University of Oklahoma, Spring 2021
- Served on Diversity, Inclusion, and Equity Committee, Department of Biology, University of Oklahoma, 2019-2022
- Completed a course entitled “Nature Masterclass in Scientific Writing and Publishing”, OSCTR, Oklahoma Medical Research Foundation, Oklahoma City, Summer 2019
- Panel member at “What next? Careers Beyond A Postdoc”, postdoctoral association event, University of Oklahoma Health Sciences Center, Oklahoma City, Summer 2019
- Served on honor students dissertation committee, Department of Biology, Spring 2019
- Served on organizing Committee-Symposium on vaccine research, education and public outreach, University of Oklahoma, Spring 2019
- Member of Cleveland County Immunization Coalition, Nov 2018-present
- Member of Oklahoma Comprehensive Cancer Network, Oklahoma State Department of Health, Sep 2018-present
- Served as faculty marshal at the commencement Ceremony-College of Arts and Sciences, University of Oklahoma, Fall 2018 and 2023
- Served on honor students dissertation committee, Department of Biology, Spring 2018
- Moderator in the Health Disparities, Social Science & Humanities Symposium, University of Oklahoma, 2017
- Poster Judge at Undergraduate Research Day, University of Oklahoma
- Session chair at Cold Spring Harbor Asia Conference, *Neurobiology: Diverse Species and Conserved Principles*, Suzhou, China, 2014
- Invited to ASCB-IAC Roundtable, The American Society for Cell Biology Conference, New Orleans, USA, 2013

MENTORSHIP AND SUPERVISION

- Arabella Martin, Undergraduate research, 2024-2025
- Mehrnaz Afkhami, Graduate Research Assistant, Summer 2023
- Sagarika Das, Doctoral student, Spring 2024-present
- Rami Hassan, Doctoral student, Fall 2023-present
- Arjun Penmatsa, Honors research*, 2023-2024
- Lindsey Frick, Honors research*, 2023-2024
- Mckailey Holt, Honors research*, 2023-2024
- Tandi Richey, Honors research*, 2023-2024
- Wyatt Parks, Undergraduate research, 2023
- Alex Moore, Undergraduate research, 2022-2023
- Rachel Baker, Undergraduate research, 2022-2024
- Mohammad Osama, Undergraduate research, 2022-2023
- Rami Hassan, Undergraduate research, 2021-2023

- Fardaan Jamil, Honors research*, 2021-2022
- Elena S. Hollopeter, Undergraduate research, 2021-2024
- Quincy P. Collins, Honors research*, 2021-2022
- Michael Grunsted, Undergraduate research, 2020-2022
- Lydia Hashemi, Independent study, 2020-2021
- Chelsea Guo, Honors research*, 2020-2022
- Harrison Brown, Honors research*, 2020-2021
- Harrison Brown, Undergraduate research assistant, 2019-2020
- Megan Holmes, Undergraduate research assistant, Summer 2019
- Luis Longoria, Honors research*, 2019-2020
- Jacquelyn Nielson, Honors research*, 2019-2020
- Chelsea Guo, Undergraduate research (FYRE), 2019
- Nishit Garg, Independent study, 2019-2020
- Viktor Kutsyi, Undergraduate research, 2018-2019
- Mruga Patel: Independent study, 2018
- Prashant Patel: Independent study, 2018-2019
- McKenzi Ormsbee: Honors research*, 2018-2019
- Sydany Tran: Undergraduate research, 2017
- Honieh Sowdagar: Undergraduate research project, 2017
- Matthew Bruns: Undergraduate research project, 2017
- Jonah Farha: Undergraduate research project, 2017
- Victoria Balise: Graduate student thesis, 2012
- Yue Ban, Graduate student, 2012
- Provided recommendation letters for many pre-med, pre-dental students as well as students pursuing graduate school, 2018-present

*Each honor research project was completed with a thesis, which was defended in the presence of a Committee.

OUTREACH EXPERIENCE

- Hands-on brain activities for brain awareness, Women in STEAM Conference, Oklahoma City, October 2024
- Hands-on brain activities for brain awareness, Women in Science Conference, Oklahoma City, October 2023
- Hands-on brain activities for brain awareness, Oklahoma Neuroscience Chapter, Science Museum, Oklahoma City, April 2023
- Second Annual Oklahoma HPV Summit, Stephenson Cancer Center, Oklahoma City, March 2021
- Speaker, Computer Science in Modern Biology Workshop, Collaborative effort between University of Oklahoma and Miami University (2020)
- First Annual Oklahoma HPV Summit, Stephenson Cancer Center, Oklahoma City, January 2020
- Oklahoma NSF EPSCoR, Women in Science Conference, Oklahoma City, October 2019
- Volunteered with Oklahoma State Department of Health at Regional Food Bank of Oklahoma, August 2019
- Hands-on brain activities for brain awareness, Oklahoma Neuroscience Chapter, Science Museum, Oklahoma City, April 2019

- A member of the HPV work group (Oklahoma Comprehensive Cancer Network), advocating for increase in HPV vaccination rate in Oklahoma, September 2018-present
- Oklahoma NSF EPSCoR, Women in Science Conference, Oklahoma City, October 2018
- Hands-on brain activities for brain awareness, Oklahoma Neuroscience Chapter, Science Museum, Oklahoma City, April 2018
- Hands-on brain activities, Middle School STEM day, Gordon Cooper Technology Center, Shawnee, OK, October 2017
- Hands-on brain activities for brain awareness, Oklahoma Neuroscience Chapter, Science Museum, Oklahoma City, April 2017
- Hands-on brain activities, Middle School STEM day, Gordon Cooper Technology Center, Shawnee, OK, October 2016
- Hands-on brain activities for Science in Action day, Sam Noble Museum, Norman, OK, September 2016
- Hands-on brain activities, Science Fest at state fairgrounds, OKC, April 2016
- Hands-on brain activities for brain awareness, Science Museum, Oklahoma City, April 2016
- Hands-on brain activities, Science Fest at state fairgrounds, OKC, April 2015
- Hands-on brain activities, annual Science in Action day, Sam Nobel Museum, Norman, Ok, September 2015
- Hands-on brain activities, Middle School STEM day, Gordon Cooper Technology Center, Shawnee, OK, October 2015
- Hands-on brain activities for brain awareness, Science Museum, Oklahoma City, April 2014
- Hands-on brain activities for Science in Action day, Sam Noble Museum, Norman, OK, September 2014
- Hands-on brain activities in Women in Science conference, Tulsa, OK, October 2014
- Hands-on brain activities in Eisenhower Elementary school, Norman, OK, December 2014