

GIDI SHEMER, PhD
Teaching Associate Professor/Advisor
Department of Biology
University of North Carolina at Chapel Hill
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EDUCATION

The Technion, Israel Institute of Technology

Ph.D. in Biology, 2002

Dissertation: "Cell fusion and vulva organogenesis in *Caenorhabditis elegans*"

Advisor : Dr. Benjamin Podbilewicz

The Technion, Israel Institute of Technology

M.Sc. in Biology, 1998

Thesis: "Isolation and characterization of the human reduced folate carrier (RFC-1) gene"

Advisor : Dr. Yehuda G. Assaraf

Tel-Aviv University, Israel

B.A. in Biology, 1992

PROFESSIONAL EXPERIENCE

Teaching Associate Professor- Advisor, Department of Biology University of North Carolina, Chapel Hill	2017- Current
Senior Lecturer-Advisor, Department of Biology University of North Carolina, Chapel Hill	2016- C2017
Lecturer-Advisor, Department of Biology University of North Carolina, Chapel Hill	2009-2016
Visiting Lecturer, Department of Biology University of North Carolina, Chapel Hill	2008-2009
Postdoctoral fellow, Department of Biology University of North Carolina, Chapel Hill	2005-2009
Postdoctoral fellow, Department of Biology Technion, Israel	2002-2005
Lecturer, Department of Biology Technion, Israel	2004-2005

OTHER PROFESSIONAL EXPERIENCE

Abbey Fellow http://abbeyfellows.unc.edu/	2016- current
Director of the SMART and SMART-Transfers summer research programs University of North Carolina, Chapel Hill	2013-current
Director of Undergraduate Research in Biology University of North Carolina, Chapel Hill	2010-current
Founder and Director of the Biology Peer Tutoring program University of North Carolina, Chapel Hill	2010-current
Summer School Administrator for the Biology Department University of North Carolina, Chapel Hill	2012

HONORS

Teaching and Advising Honors

Tanner award for excellence in undergraduate teaching, UNC <i>A Campus-wide, student-nominated, committee chosen award</i>	2016
Biology Department Instructor of the Year, UNC <i>A student nominated/chosen award</i>	2015
Spirit of Inquiry Award, Pope Foundation for Higher Education <i>A statewide, student-nominated, committee chosen award</i>	2013
Biology Department Instructor of the Year, UNC <i>A student nominated/chosen award</i>	2013
National Outstanding New Advising Faculty Award, NACADA <i>A nationwide, committee chosen award</i>	2012
The Class of 1996 Award for Advising Excellence <i>A Campus-wide, student-nominated, committee chosen award</i>	2011
Best Lecturer Award of the Technion, Technion, Israel <i>A Campus-wide, student-nominated, committee chosen award</i>	2005
Teaching Assistant Technion Award, Technion, Israel <i>A Campus-wide, student-nominated, committee chosen award</i>	2002
Teaching Assistant Faculty Award, Technion, Israel <i>A Campus-wide, student-nominated, committee chosen award</i>	2001
Teaching Assistant Award, Technion, Israel <i>A Campus-wide, student-nominated, committee chosen award</i>	2000

Research Honors

Pagano Award for best paper by a UNC postdoctoral fellow, UNC	2012
The Teva Prize for a Young Scientist, Society of BMB, Israel	2003
Participation in the Israel delegation to the Lindau Nobel meeting	2003
Landau Award for Outstanding PhD Students, Israel	2000
The Gutwirth Award for Outstanding PhD Students, Israel	2000

PUBLICATIONS

Research Papers

- ¹Roh-Johnson M., ¹**Shemer G.**, Higgins CD., McClellan JH., Tulu US., Gao L., Betzig E., Kiehart DP., Werts AD., Goldstein B. Triggering a Cell Shape Change by Exploiting Pre-Existing Actomyosin Contractions (2012) **Science** 335(6073):1232-5. [A “Must Read” by The Faculty of 1000]
- Sawyer J., Glass S., Li T., **Shemer G.**, White ND., Starostina NG., Kipreos ET., Jones CD., Goldstein B. Overcoming Redundancy: an RNAi Enhancer Screen for Morphogenesis Genes in *C. elegans* (2011) **Genetics** 188: 549-56
- Suissa M., Hall DH., Treinin M., ²**Shemer G.**, ²Podbilewicz B. The fusogen EFF-1 controls sculpting of mechanosensory dendrites (2010) **Science** 328: 1285–88 [A “Must Read” by The Faculty of 1000]
- Podbilewicz B., Leikina E., Sapir A., Valansi C., Suissa M., **Shemer G.**, Chernomordik LV. The *C. elegans* developmental fusogen EFF-1 mediates homotypic fusion in heterologous cells and in vivo (2006) **Dev Cell** 11: 471-81 [Recommended by The Faculty of 1000; Editor’s choice in Science 314(2006)].
- Cassata G., **Shemer G.**, Morandi P., Donhauser R., Podbilewicz B., Baumeister R. *ceh-16/engrailed* compartmentalizes the epidermis of the roundworm *Caenorhabditis elegans* (2005) **Development** 132: 739-49 [Recommended by The Faculty of 1000]
- ¹**Shemer G.**, ¹ Suissa M, Kolotuev I., Nguyen KCQ., Hall DH., Podbilewicz B. EFF-1 is sufficient to initiate and execute tissue-specific cell fusion in *C. elegans*. (2004) **Curr Biol** 14 :1587-1591 [Recommended by The Faculty of 1000; Previewed in Curr. Biol. 15 (2005); Editor’s choice in Science 305(2004)]
- Shemer G.** and Podbilewicz B. LIN –39/Hox triggers cell division and represses EFF-1/Fusogen-dependent vulval cell fusion (2002) **Genes&Development** 16: 3136-3141 [Recommended by The Faculty of 1000]
- ¹Mohler WA., ¹**Shemer G.**, del Campo JJ., Valansi C., Opoku-Serebuoh E., Scranton V., Assaf N., White JG., Podbilewicz B. The type I membrane protein EFF-1 is essential for developmental cell fusion (2002) **Dev Cell** 2: 355-62 [A “Must Read” by The Faculty of 1000; Previewed in Curr. Biol. 12 (2002)]
- Shemer G.**, Kishore R. and Podbilewicz B. Ring formation drives invagination of the vulva in *C. elegans*: Ras, cell fusion and cell migration determine structural fates (2000) **Dev Biol** 221: 233-248
- Drori S., Sprecher H., **Shemer G.**, Jansen G., Goldman ID., Assaraf YG. Characterization of a human alternatively spliced truncated reduced folate carrier increasing folate accumulation in parental leukemia cells (2000) **Eur J Biochem** 267:690-702

1 denotes authors that contributed equally to this work

2 denotes co-corresponding senior authors

Review papers

Sawyer JM., Harrell JR., **Shemer G.**, Sullivan-Brown J., Roh-Johnson M., Goldstein B. Apical constriction: a cell shape change that can drive morphogenesis (2010) *Dev Biol* 341: 5-19

Shemer G. and Podbilewicz B. The story of cell fusion: big lessons from little worms (2003) *BioEssays* 25: 672-682

Shemer G. and Podbilewicz B. Fusomorphogenesis: cell fusion in organ formation. (2000) *Dev Dyn* 218: 30-51 [Recommended by The Faculty of 1000]

TEACHING ACTIVITIES

Instructor

Biology 252, Human Anatomy and Physiology 2009- current
(250 students each semester)
Department of Biology, University of North Carolina, Chapel Hill

Biology 202, Molecular Biology and Genetics 2009- current
(250 students every other semester)
Department of Biology, University of North Carolina, Chapel Hill

Biology 445, Cancer Biology 2009- current
(35 students every other semester)
Department of Biology, University of North Carolina, Chapel Hill

Biology 395H, Honors Research in Biology 2010- current
(15-18 students each semester)
Department of Biology, University of North Carolina, Chapel Hill

Biology 296, Directed Reading 2010
(1student)
Department of Biology, University of North Carolina, Chapel Hill

Biology 205, Cell and Developmental Biology 2008
(200 students)
Department of Biology, University of North Carolina, Chapel Hill

Biology 069, Developmental Biology 2004
(50 students)
Department of Biology, Technion, Israel

LEADERSHIP IN TEACHING

AAU STEM project	2014-current
Mentoring research faculty in implementing evidence-based teaching practices in large courses	
Psychology Department	2014
Designed and conducted a workshop on PeerWise and active learning	
Biology Department	2013
Designed and conducted a workshop with colleagues geared towards implementation of active learning in the classroom	
Faculty Showcase, Center for Faculty Excellence	2012
Presented "Let the Teach themselves- using PeerWise in your class"	
Reinvention Center National Conference, Washington DC	2010
Represented UNC in the Writing To Learn in the STEM discipline workshop	

GRANTS AND FELLOWSHIPS

Human Frontier Science Program (HFSP) Long-term Postdoctoral Fellowship	2005-2008
Cottrell Postdoctoral Fellowship	2005-2007
The Israel Science Foundation Grant, Co-investigator and author of the grant	2004-2005

PROFESSIONAL SERVICE

University Service- Committees

Search committee- University Registrar	2017
Independent Studies Task Force	2017
<i>Revisiting and providing recommendations on the university policy</i>	
QEP 2016 (quality enhancement plan)	2016-current
<i>Leading the undergraduate research team</i>	
UNC Education Policy committee	2012-current
<i>Advisory to the Faculty Council on educational policy issues</i>	
UNC Classroom Innovation committee	2011-current
<i>Set recommendations to optimize classrooms for educational needs</i>	
UNC Transfer Student Success Committee	2010-2013
<i>Set recommendations to promote success of incoming transfer students</i>	
Search committee- Advising Senior Assistant Dean	2012

Other University Service Activities

UNC- Office for Undergraduate Research Advisory Board	2014-current
<i>Provides guidance to the Associate Dean of the OUR</i>	
Faculty Advisor to Carolina Scientific student organization	2014-current
<i>Advise the students who run Carolina Scientific, UNC's premier research magazine</i>	
C-STEP Scholars mentor	2013-current
<i>Serve as a one-on-one mentor for 5 students per year in this program</i>	

Carolina Firsts advocate <i>Provide advocacy for first generation college students</i>	2013-current
Covenant Scholars mentor <i>Serve as a one-on-one mentor for 15 students per year in this program</i>	2012-current
UNC Transfer Student Living-Learning Community Advisory Board <i>Advised on the design and development of the first transfer LLC</i>	2010-2012
UNC Explore Carolina Program <i>Conduct group meetings with prospective science students</i>	2009-current
UNC HHMI-FSC research Advisory Board <i>Advised on the design and development of the summer research program for covenant scholars. Played active role in the annual selection process</i>	2010-2014
Department Service	
Biology Teaching awards Committee (Chair)	2015- current
Undergraduate Research Honors Awards Committee	2015- current
Biology Website <i>Responsible for the undergraduate section of the website</i>	2015- current
Biology Department Undergraduate Studies Committee <i>The group advises the faculty on undergraduate policies. Approves courses</i>	2009-current
Biology Department Advising Committee	2009-current
Biology Department Graduation Committee <i>Help organize event for 500 students and their families, prepare program</i>	2009-current
Faculty sponsor for Undergraduate Research students <i>Sponsor 3-6 students every year. Support their research in non-departmental labs and evaluate their papers</i>	2009-current
Organizer of Biology Academic days <i>Meet and organize departmental lab tours to science prospective students</i>	2010-current
Biology STEM Lecturer search committee	2012, 2014. 2017
Student Services Specialist search committee	2010