

**David R. Giovannucci, Ph.D.****I. PERSONAL INFORMATION****David Rocco Giovannucci**

610 Farnsworth Road

Waterville, OH 43566

Tel: (419) 878-4903

Email: david.giovannucci@utoledo.edu

**EDUCATION AND TRAINING**

- 1978 Austin Catholic Preparatory High School, Detroit, MI.  
1984 B.S. Biological Sciences, Wayne State University, Detroit, MI.  
1984 B.A. Literature, Wayne State University, Detroit, MI.  
1993 Ph.D. Biological Sciences, Wayne State University, Detroit, MI.  
1998 Postdoc. Physiology. University of Michigan, Ann Arbor, MI

**PRE and POST-DOCTORAL FELLOWSHIPS**

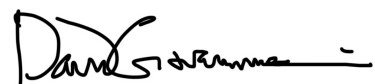
Dates: 1986-88  
Institution: Wayne State University, Detroit, Michigan, Department of Biological Sciences  
Discipline: Biological sciences (Biophysics)  
Sources: Thomas C. Rumble & B. Halley Graduate Fellowships

Dates: 1993-98  
Institution: University of Michigan, Ann Arbor, Michigan, Department of Physiology  
Discipline: Neuroscience  
Sources: National Institutes of Health (Individual Postdoctoral Research Fellowship),  
American Heart Association-Midwest Affiliate (Postdoctoral Research Fellowship Award)

**EMPLOYMENT**

- 1984-1992 Graduate Teaching/Res Assistant, Dept. Biology, Wayne State University, Detroit, MI.  
1992-1993 Lecturer in Life Sciences, Part-time Faculty, Oakland Community College, Southfield, MI.  
1993-1998 Postdoctoral Fellow, Dept. Physiology, University of Michigan, Ann Arbor.  
1998-1999 Assistant Director of Imaging Core Facility, Depts. Physiology and Internal Medicine, University of Michigan Medical School, Ann Arbor, MI.  
1999-2002 Research Assistant Professor, Dept. of Pharmacology and Physiology, University of Rochester Medical Center, Rochester, NY (salaried, full-time, non-tenure track).  
1999-2002 Assistant Director, Real-Time Confocal Core Facility, University of Rochester Medical Center.  
2002-2009 Assistant Professor, Department of Neurosciences (formerly Dept. of Anatomy and Neurobiology), University of Toledo, College of Medicine (formally Medical

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- University of Ohio), Toledo, OH (salaried, full-time, tenure-track).
- 2006-2011 Director and Sackler Scholar, Raymond & Beverly Sackler Laboratory for Neuroendocrine Tumor Research, University of Toledo, College of Medicine, Toledo, OH.
- 2009-2015 Associate Professor (with tenure), Department of Neurosciences, College of Medicine, University of Toledo Health Science Campus. Toledo OH
- 2015-present Professor, Department of Neurosciences, College of Medicine, University of Toledo Health Science Campus. Toledo OH
- 2015-present Adjunct Graduate Faculty, Department of Biological Sciences, Wayne State University, Detroit

### **AWARDS AND COMMENDATIONS**

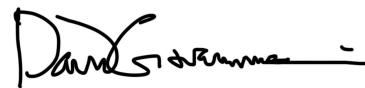
- 2006 University of Toledo College of Medicine New Investigator Award for Research
- 2006-2011 Scholar of The Raymond & Beverly Sackler Foundation
- 2010 College of Medicine Dean's Award for Mentoring
- 2011 Recognition of Service to the Microscopy Society of America as Program Chair, Microscopy & Microanalysis Meeting
- 2011 College of Medicine Graduate Student Mentoring Award
- 2012 Office of Undergraduate Research Recognition Award for Mentoring
- 2014 Certificate of Recognition for Service as Chair of the Graduate Council

## **II. SERVICE**

### **COMMITTEES – THE UNIVERSITY OF TOLEDO**

- 2002-2007 Annual Graduate Student Research Forum (Judge)
- 2003-2007 Member, Cellular and Molecular Neuroscience Program Steering Committee
- 2004-2007 Chair, Health Science Campus Graduate Faculty Committee
- 2004-2011 Member, Health Science Campus Graduate Executive Committee
- 2005-2007 Member, Ph.D. Program Committee
- 2006 Member, Medical Microbiology & Immunology Chair Search Committee
- 2006-present Chair, Advanced Microscopy & Imaging Center Advisory Committee
- 2007 Member, Ph.D. Dissertation Awards Committee
- 2007-2008 Member, College of Medicine Faculty Awards Committee
- 2008 Member, Graduate Council Harmonization Committee
- 2008-present Member, Graduate Admissions Committee
- 2008-present Elected Senate Representative for College of Medicine, University of Toledo Faculty Senate
- 2008-2014 Member of Graduate Council
- 2008-2013 Member of Graduate Council Faculty Membership Committee
- 2009-2011 Member of Departmental Faculty Search Committees

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- 2009-2014 Member of Graduate Council Executive Committee
- 2010-present Member of Medical Student Research Committee
- 2011-present Co-director of Neurosciences Ph.D. Steering Committee
- 2011-present Member of UT Faculty Research Awards Committee
- 2012 Chair, Department of Neurosciences Faculty Search Committee
- 2012-2013 Vice Chair of Graduate Council
- 2013-2014 Chair of Graduate Council
- 2013-2014 Member, University Council
- 2013-2014 Member, University Council Executive Committee
- 2013-2014 Chair, University Council Committee on Graduate and Professional Programs
- 2014 Member, President's Strategic Planning Subgroup for Graduate and Professional Education
- 2016 Program Review Participant, Department of Biological Sciences, Wayne State University, Detroit, MI

#### **REGIONAL, NATIONAL AND INTERNATIONAL PROFESSIONAL SOCIETIES AND ACTIVITIES**

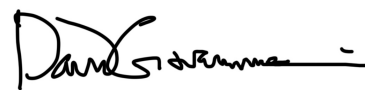
- 1985-1990 Association for Research in Vision and Ophthalmology (Member)
- 1993-2011 Society for Neuroscience (Member)
- 1996-2000 American Association for the Advancement of Science (Member)
- 1997-present The Biophysical Society/Exocytosis Subgroup (Member)
- 2001-2008 American Heart Association/ Basic Cardiovascular Res. Interest Group (Member)
- 2005-present Microscopy Society of America (Member)
- 2007, 2010 Microscopy Society of America (Session Chair)
- 2008-11 Microscopy Society of America (Executive Committee-Ex Officio)
- 2008-present The American Physiological Society (Member)
- 2008-2010 North American Neuroendocrine Tumor Society (Member)
- 2011 Microscopy Society of America (International Meeting Program Chair)

#### **REGIONAL, STATE, AND LOCAL PROFESSIONAL SOCIETIES AND ACTIVITIES**

- 1999-2002 Member, Ontario and Western New York Ion Channel Interest Group
- 2000-2002 Member, New York State Cardiac Electrophysiology Society
- 2007-present Treasurer, Northwest Ohio Microscopy Society
- 2007 Member, University of Toledo College of Medicine Prostate Cancer Focus Group
- 2008 Member, University of Toledo College of Medicine Clinical Investigational A-Fib Group

#### **COMMUNITY SERVICE AND ORGANIZATIONS**

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- 2007 University of Toledo Health Matters (A partnership of University Medical Center, Buckeye CableSystem and The Toledo Blade to promote public health issues)  
"Carcinoid Tumor Research: Studies Could Lead to New Treatments"
- 2007-2008 Seminar speaker and Mentor for IMAGINE/IMAGINE II Program (a Howard Hughes Medical Institute program to facilitate the professional development for high school and junior high school teachers in Ohio.)
- 2012 Microscopy & Microanalysis Meeting Report, Microscopy Today, vol. 21
- 2014 "Spit Happens", published in UT Discovers
- 2014 "New Grant: Salivary Biomarkers for Fatigue", May JCCTR newsletter, published on-line.
- 2014 "Researcher developing method to test saliva for fatigue", Toledo Blade, May, Sec. W, pg.31.
- 2014 "Researcher develops method to test saliva for fatigue", UT News, August 4
- 2012-2014 Judge, Midwest Graduate Research Symposium, a Graduate Student Association run event for presenting research, networking, and fostering intercollegiate friendships and collaborations amongst peer and aspirational institutions to advance research and education. Over 25 different universities typically participate in the MGRS.

### **III. EDUCATION ACTIVITIES**

#### **TEACHING** (*approximately 90 contact hours per year*)

##### **Medical Education**

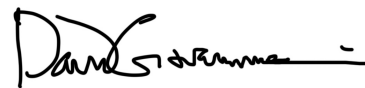
- 2004-present Human Structure and Development (ANAT679), College of Medicine, Microanatomy Teaching Staff (1st year medical students, 176 students, lecture & lab, 8 hours).
- 2005-08 Integrative Pathophysiology (INDI777), College of Medicine, Problem Based Learning Facilitator (1st year medical students, ~12 students, small group, 30 hours).

##### **Graduate Education**

###### **PAST**

- 2002-2006 Journal Paper Review in Neurobiology, College of Graduate Studies, Course Director (graduate students, ~10 students, small group, 30 hours).
- 2002-2006 Principles of Cellular and Molecular Neurobiology, College of Graduate Studies, Teaching Staff (graduate students, ~10 students, lecture, 4 hours).
- 2004-2007 Grant Writing Course, College of Graduate Studies, Teaching Staff (graduate students, ~10 students, small group, 30 hours).
- 2007-2009 Journal Review in Biomedical Sciences (BMSP 6370/8370), College of Graduate Studies, Course Co-Director (1st year graduate students, ~20 students, lecture,

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30 hours).

2007-2010 Systems Pathophysiology I (BSMP 6310/8310), College of Graduate Studies, Teaching Staff (graduate students, ~20 students, lecture, 2 hours).

#### CURRENT

2002-present Introduction to Biomedical Research/Mentored Research (BMSP 6390/8390), College of Graduate Studies, Lab Rotation Mentor (graduate students, 2-3 students, small group and lab, 32 hours).

2004-present Microscopy Techniques I: Basic & Advanced Light Microscopy (INDI6790/8790), College of Graduate Studies, Teaching Staff: Lectures on Confocal, multi-photon microscopy and optical super-resolution techniques (graduate students, 2-5 students, lecture & lab, 2 hours).

2007-present Current Problems and Research Approaches in Cell Membranes (BMSP 6360/8360), College of Graduate Studies, Teaching Staff: Lecture on Presynaptic Mechanisms; Advanced Microscopy Methods: FRET, FRAP and FLIM (graduate students, ~17 students, lecture, 4 hours).

2007-present Methods in Biomedical Sciences (BMSP 6380/8380), College of Graduate Studies, Teaching Staff: Lecture on Live Cell Imaging (graduate students, ~17 students, lecture, 2 hours).

2007-present Medical Student Summer Research (INDI 5050) (medical students, 1-2 students, small group & lab, 40 hours).

2007-present Scholarly Project (INDI 6980) (MSBS students, 1-2 students, small group & lab, 32 hours).

2010-present Systems Pathophysiology II (BSMP 6310/8310), College of Graduate Studies, Module Director and Teaching Staff: Lectures on Neural Plasticity (graduate students, 3-6 students, lecture, 4 hours).

2010-present Recent Advances: Neuroscience Journal Review (NSND 6370/8500), College of Graduate Studies, Course Director and Teaching Staff: Discuss recent scientific literature (graduate students, ~9 students, small group & discussion, 28 hours).

2015-present Biomarker Discovery and Individualized Medicine Course (BRIM 6200/8200), College of Medicine, Teaching staff: Lecture on Sjogren's syndrome salivary biomarkers (masters/certificate students, 4 students, lecture, 2 hours).

#### **ADVISING/MENTORING**

##### **Visiting Professor – Host Advisor**

**Riaz Nasim M.D., Ph.D.** (09/2009-12/2009)

S. Amjad Hussain Visiting Fellow

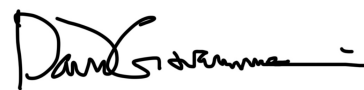
Chair of Pharmacology, Khyber Medical School, Peshawar, Pakistan

##### **Post-Doctoral Fellows – Major Advisor**

**David A. Turner, Ph.D.** (2002-2004)

Forensic Toxicologist, Department of Defense, Brooks City-Base, San Antonio, TX

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**Tetyana Zhelay, Ph.D.** (2006-2011)

Post-doctoral Fellow in Department of Neuroscience, Cell Biology and Physiology, Wright State University, Dayton OH.

**Christian G. Peters, Ph.D.** (2007-2009)

Scientist II at Cerulean Pharma, Cambridge, MA; Research Fellow in Medicine in Division of Hemostasis & Thrombosis, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA.

**Sumit Bhattacharya, Ph.D.** (2014-2016) Sumit is currently Program Manager, Neuroscience Initiative at the University of Utah.

**Doctoral Students – Major Advisor**Past students**Christian G. Peters, Ph.D.**

Cellular and Molecular Biology Program (2003-2007)

Currently Scientist II at Cerulean Pharma, Cambridge, MA and a Research Fellow in Division of Hemostasis & Thrombosis, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA.

**Christine A. Brink, Ph.D.**

Neurosciences and Neurological Diseases Program (2003-2007)

Applications Support Scientist for Bitplane AG, Zurich, Switzerland.

**Sasi Arunachalam, Ph.D.**

Neurosciences and Neurological Diseases Program (2005-2010)

Research Scientist Caymen Biochemicals, Ann Arbor, MI, (2010-2014), Postdoctoral fellow at Oklahoma Medical Research Foundation, Immunobiology and Cancer Program (2014-present).

**Sumit Bhattacharya, Ph.D.**

Neurosciences and Neurological Diseases Program (2007-2012)

Postdoctoral Fellow Schepens Eye Research Institute, Harvard Medical School, Boston, MA, (2012-2014), Program Manager, Neuroscience Initiative at the University of Utah (2016-present).

**Priyodarshan Goswamee, Ph.D.**

Neurosciences and Neurological Diseases Program (2009-2015)

Postdoctoral Fellow in Department of Neurosciences, Medical University of South Carolina, Charleston, SC. (2015-present)

Current students**John Imbery**

Neurosciences and Neurological Diseases Program (2014-present)

**Joseph Lee**

MD-Ph.D. Program, Neurosciences and Neurological Diseases Program (2015-present)

**Masters Students – Major Advisor**

**Hala Al-Jiboury, MSBS** (2007-08)

**Khetisuda Suvarnasuddhi, MSBS** (2008-09)

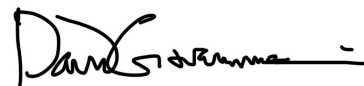
**Jibran Durrani, MSBS** (2007-09)

**Shadi Zahedi, MS** (2007-10)

**Douglas Verrill, MSBS** (2009-10)

**Sai Gadde, MSBS**, (2010-11, co-mentored with Dr. Jennifer Hill)

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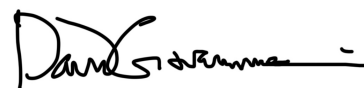


**Kristopher Carbone, MSBS** (2010-11)  
**Suhkmit Khan, MSBS**(2012-13)  
**Zachary Sullivan, MSBS**(2013-14)  
**Tamar Pounardjian, MSBS** (2014-15)  
**Keinan Taja** (2015-16)  
**Azwar Iqbal** (2015-16)

**Graduate Students – Faculty Advisory Committee Member** (2002-present)

**Rebecca Pierson**, Neurosciences and Neurological Disorders/MD-Ph.D. Program  
**David Kennedy**, Dept. of Medicine, (**Graduated, Ph.D.**)  
**Kun Xiang**, Cell and Molecular Neuroscience Program (**Graduated, Ph.D.**)  
**Adriane Sumner**, Neurosciences and Neurological Disorders Program (**Graduated, Ph.D.**)  
**Jiang Tian**, Molecular Basis of Disease Program (**Graduated, Ph.D.**)  
**Xiaodong Xiang**, Cell and Molecular Neuroscience Program (**Graduated, Ph.D.**)  
**Man Liang**, Molecular and Cell Biology Program (**Graduated, Ph.D.**)  
**Jun Song**, Cellular and Molecular Neuroscience Program (**Graduated, Ph.D.**)  
**Aditi Nadkarni**, Cancer Biology Program (**Graduated, Ph.D.**)  
**Guofu Shen**, Neurosciences and Neurological Disorders Program (**Graduated, Ph.D.**)  
**Selwyn Jayakar**, Neurosciences and Neurological Disorders Program (**Graduated, Ph.D.**)  
**Seema Dhindaw**, Cardiovascular and Metabolic Disorders Program (**Graduated, MS**)  
**Jagannath Saikumar**, Cardiovascular and Metabolic Disorders Program (**Graduated, MS**)  
**Joshua Vieth**, Infection, Immunity and Transplantation Program (**Graduated, Ph.D.**)  
**Shalini Gupta**, Cardiovascular and Metabolic Disorders Program (**Graduated, Ph.D.**)  
**Aaron Kellogg**, Cardiovascular and Metabolic Disorders Program (**Graduated, Ph.D.**)  
**Aymen Shatnawi**, Cancer Biology Program (**Graduated, Ph.D.**)  
**Yiliang Chen**, Cardiovascular and Metabolic Disorders Program (**Graduated, Ph.D.**)  
**Ying Chen**, Cardiovascular and Metabolic Disorders Program (**Graduated, Ph.D.**)  
**Liping Wang**, Neurosciences and Neurological Disorders Program (**Graduated, Ph.D.**)  
**Garrett Heinrich**, Cardiovascular and Metabolic Disorders Program (**Graduated, Ph.D.**)  
**Ramona Ramdath**, Cancer Biology Program (**Graduated, Ph.D.**)  
**Cory Stebal**, Cardiovascular and Metabolic Disorders Program (**Graduated, MS**)  
**Samuel Wu**, Neurosciences and Neurological Disorders Program (withdrew from program)  
**Vipul Shukla**, Infection, Immunity, and Transplantation Program (**Graduated, MS**)  
**Damien Earl**, Neurosciences and Neurological Disorders Program/MD-Ph.D. (**Graduated, MD-Ph.D.**)  
**Tanoya Harris**, Cardiovascular and Metabolic Disorders Program (**Graduated, Ph.D.**)  
**Edward Toland**, Cardiovascular and Metabolic Disorders Program (**Graduated, Ph.D.**)  
**Haymanti Bhanot**, Cancer Biology Program (**Graduated, Ph.D.**)  
**Yeshavanth Siddegowda**, Cardiovasculat and Metabolic Disorders Program (**Graduated, Ph.D.**)

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**Kathryn Smedlund**, Cardiovascular and Metabolic Disorders Program (**Graduated, Ph.D.**)

**Jean-Yves Tano**, Cardiovascular and Metabolic Disorders Program (**Graduated, Ph.D.**)

**Sadeesh Ramakrishnan**, Cardiovascular and Metabolic Disorders Program (**Graduated, Ph.D.**)

**Sanjeevani Arora**, Cancer Biology Program (**Graduated, Ph.D.**)

**Anita Saxena**, Cardiovascular and Metabolic Disorders Program (**Graduated, Ph.D.**)

**Xingjian Jin**, Cardiovascular and Metabolic Disorders Program (**Graduated, Ph.D.**)

**Laura Halpin**, Neurosciences and Neurological Disorders Program, MD/PhD Program

**Xiaoliang Qui**, Cardiovascular and Metabolic Disorders Program (**Graduated, Ph.D.**)

**Himangi Marathe**, Cancer Biology Program (**Graduated, Ph.D.**)

**Christopher Trabbic**, Pharmacy Program (**Graduated, Ph.D.**)

**Robert Lee**, Cardiovascular and Metabolic Disorders Program (**Graduated, Ph.D.**)

**Sumeet Solanki**, Cardiovascular and Metabolic Disorders Program

**Qiqi Ye**, Cardiovascular and Metabolic Disorders Program (**Graduated, Ph.D.**)

**Latrice Faulkner**, Cardiovascular and Metabolic Disorders Program (**Graduated, Ph.D.**)

**Branden Stansley**, Neurosciences and Neurological Disorders Program (**Graduated, Ph.D.**)

**Vishruiti Makani**, Neurosciences and Neurological Disorders Program (**Graduated, Ph.D.**)

**Eric Starr**, Neurosciences and Neurological Disorders Program

**Simona Ghanem**, Cardiovascular and Metabolic Disorders Program

**Prince Ampem**, Cardiovascular and Metabolic Disorders Program

**Akshada Sawant**, Cancer Biology Program (**Graduated, Ph.D.**)

**Mengjie Wang**, Cardiovascular and Metabolic Disorders Program

**Prabhatchandra Ravindranath Dube**, Cardiovascular and Metabolic Disorders Program

**Xiaoming Fan**, Cardiovascular and Metabolic Disorders Program

**Erin Semple**, Cardiovascular and Metabolic Disorders Program, MD/PhD Program

**Cara DeAngelis**, Infection, Immunity, and Transplantation Program

#### **Graduate Students – External Advisor**

**MinJie Tong**, University of Toledo College of Engineering, Bioengineering Program (**Graduated, Ph.D.**)

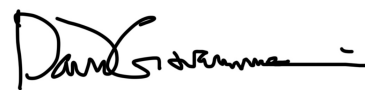
**Jian Zhou**, University of Toledo College of Engineering, Bioengineering Program (**Graduated, Ph.D.**)

**Qu Chao**, Biological Sciences, University of Toledo (**Graduated, Ph.D.**)

**Ramadan Ali**, Medicinal Chemistry, University of Toledo College of Pharmacy (**Graduated, Ph.D.**)

**Anish Chakraborty**, Medicinal Chemistry, University of Toledo College of Pharmacy

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**Sujan Chandra Das**, Medicinal Chemistry, University of Toledo College of Pharmacy  
(Graduated Ph.D.)

**Timnit Asfaha**, Medicinal Chemistry, University of Toledo College of Pharmacy (Graduated Ph.D.)

**Michael Schmidtke**, Biological Sciences Program, Department of Biological Sciences, Wayne State University, Detroit, MI

**Niraj Gupta**, University of Toledo College of Engineering, Bioengineering Program

#### **Medical Students – Faculty Advisor For Summer Research ,**

2008	<b>Kyle Schuyler</b>
2013	<b>Xin Chen</b>
2014	<b>Daniel Hoffman</b>
2014	<b>Sura Khuder</b>
2016	<b>Samuel Miller</b>

#### **Undergraduate Students – Faculty Advisor For Summer Research**

2003-04	<b>Daniel Miller</b> (Summer Undergraduate Research Fellowship)
2003	<b>Sonia Hovsepian</b> (Summer Undergraduate Research Fellowship)
2006-07	<b>Stefanie Brown</b> (Summer Undergraduate Research Fellowship)
2008	<b>Hoangha Dao</b> (Summer Undergraduate Research Program)
2009	<b>Cory Schleppi</b> (Bioengineering Co-op Program)
2010	<b>Susann Moenchgesang</b> , Deutscher Akademischer Austauschdienst (DAAD) RISE Program, German Academic Exchange Service
2012	<b>Saurabh Mehta</b> , UTM Shadow Program
2012	<b>Lauren Eccles</b> , UTM Shadow Program
2014	<b>Amanda Weiss</b> (Summer Undergraduate Research Fellowship)
2015	<b>Aryianne Crawford</b> (Undergraduate Researcher)
2015-16	<b>Zachary Holtzapple</b> (Undergraduate Researcher)
2015	<b>Jasmine Kennedy Bey</b> (Undergraduate Researcher)

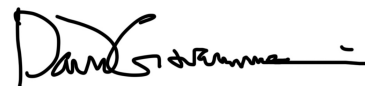
#### **Other – Faculty Advisor For High School Student Summer Research**

2003	<b>Arun Ragothaman</b> , St. John's High School, Toledo, OH
2010	<b>Saurabh Mehta</b> , St. John's High School, Toledo, OH

#### **IV. SCHOLARSHIP**

#### **EDITORIAL BOARDS**

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2010-2014 International Journal of Physiology, Pathophysiology and Pharmacology,  
Editorial Board

2011-2013 ISRN Neuroendocrinology, Editorial Board

**JOURNAL PEER REVIEW** (2002-present)

Journal of Neurophysiology  
Journal of Neurochemistry  
Cell Calcium  
Endocrinology  
Journal of Cell Biology  
Neuroscience  
Neurosignals  
Journal of Physiology  
Investigative Ophthalmology and Visual Science  
Journal of Biological Chemistry  
Journal of Neuroscience Methods  
Gene Expression: International Journal of Cellular Biology & Neuroscience  
Journal of Cellular Physiology  
Cell and Tissue Research  
Journal of Tissue Engineering and Regenerative Medicine  
European Journal of Physiology (Pflüger's Archiv)  
American Journal of Physiology- Cell Physiology  
BMC Endocrine Disorders  
AJP: Gastrointestinal and Liver Physiology

**STUDY SECTIONS, REVIEW PANELS**

2005 MUO Bioinformatics Program Pilot Grant Study Section (Intramural)

2006 External Reviewer Research Incentive Grant Program, Bowling Green State University, OH.

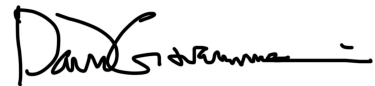
2006-07 American Heart Association Study Section 5C (Ohio Valley/Southern US Affiliate)

2006-07 US Civilian Research and Development Foundation, Cooperative Grants Program

2008 American Heart Association (Region1: Cell Transport, Physiology & Metabolism)

2015 Participant (Invited), External Review of Biological Sciences Program, Wayne

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State University, Detroit, MI

2015 External Reviewer, Promotion and Tenure Committee, University of Michigan, Ann Arbor, MI

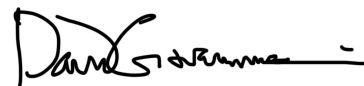
2016 External Reviewer, Promotion and Tenure Committee, WSU, Detroit, MI

### **INVITED LECTURES, SEMINARS, SYMPOSIA, VISITING PROFESSORSHIPS**

1989 Department of Biology, Purdue University, West Lafayette, IN.  
 1997 Department of Pharmacology Channel Club, University of Michigan Medical School.  
 1997 Department of Biological Sciences, Wayne State University, Detroit, MI.  
 1998 Department of Pharmacology and Physiology, University of Rochester, Rochester, NY.  
 1998 Department of Physiology, University of Michigan Medical School, Ann Arbor, MI  
 2000 Department of Neuroscience, University of Rochester, Rochester, NY.  
 2001 School of Life Sciences (formally Dept. of Biological Sciences), University of Nevada at Las Vegas, Las Vegas, NV.  
 2001 Department of Pharmacology, SUNY Upstate Medical School, Syracuse, NY.  
 2001 Department of Pharmacology, University of Virginia, Charlottesville, VA.  
 2003 Department of Bioengineering, University of Toledo, Toledo, OH.  
 2003 Department of Pharmacology and Toxicology, Wright State University, Dayton, OH.  
 2006 Department of Pharmacology, College of Pharmacy, University of Toledo.  
 2006 Microscopy & Microanalysis Meeting, Chicago, IL (Invited Platform Talk)  
 2007 Microscopy & Microanalysis Meeting, Ft. Lauderdale, FL.  
 2008 Departments of Neuroscience and Integrative Medicine, NEOUCOM, Akron, OH.  
 2010 The North American Neuroendocrine Tumor Society, Santa Fe, NM (Invited)  
 2011 Microscopy & Microanalysis Meeting, Nashville, TN (Invited)  
 2011 Salivary Glands & Exocrine Biology, Galveston, TX (Invited)  
 2011 Carcinoid and Neuroendocrine Tumor Scientific Forum, Boston, MA (Invited)  
 2012 Department of Medicinal Chemistry, College of Pharmacy, University of Toledo  
 2013 Alliance for Human Effectiveness and Advancement (AHEAD) Workshop, Dayton, OH. (Invited)  
 2013 FASEB Conference, NAD Metabolism and Signalling, Chicago, IL. (Invited)  
 2013 Department of Biology, Oakland University, Rochester Hills, MI  
 2014 Department of Biology, Wayne State University, Detroit, MI  
 2014 BRIM Translation Connection Conference, University of Toledo  
 2014 FASEB Conference, Calcium Signaling, Nassau, Bahamas  
 2015 Department of Chemistry/Center for Photochemical Studies, Bowling Green State University, Bowling Green Ohio.

### **INVITED/SPECIAL PRESENTATIONS AT NATIONAL AND INTERNATIONAL**

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**MEETINGS**

2005 4th World Congress on Cellular and Molecular Biology, Poitiers, France  
2006 Stensen III Symposium: Biology of the Salivary Gland, Okazaki, Japan  
2013 International Symposium on Metabolic Research and Disease, Center for  
Metabolic Function Regulation, Wonkwang University, Iksan, Korea

**MAJOR RESEARCH INTERESTS**

Work in our lab uses a variety of electrophysiological, optical and biochemical methods to define the cellular and molecular mechanisms that underlie the cytosolic calcium signals that control peptide and protein secretion. The exocytotic secretion of neuropeptide has profound consequences for neuronal function, cardiovascular homeostasis and GI tract regulation in health and disease. Our lab is also advancing the use of biomarkers in saliva and serum as indicators of human performance or pathophysiology. This work has significance for human health concerns neurodegenerative diseases, GI cancer, hypertension and dry mouth. Work in our lab has been supported by government, military and private funding.

**PAST RESEARCH SUPPORT**

*Principal Investigator unless otherwise indicated*

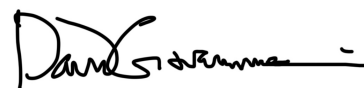
Title: Rab3 and the control of vasopressin secretion at neurohypophysial nerve endings  
Agency: American Heart Association  
Dates: 07/01/1995-06/30/1996  
Role: Postdoctoral Fellowship  
TDC: \$25,000

Title: Imaging zymogen granule exocytosis and membrane retrieval with high temporal and spatial resolution  
Agency: University of Michigan Gastrointestinal Peptide Center  
Dates: 01/01/1996-12/31/1998  
Role: Principal Investigator  
TDC: \$25,000

Title: Regulatory control of vasopressin secretion by mitochondria at nerve terminals (Scientist Development Grant)  
Agency: American Heart Association (National)  
Dates: 01/01/2001-12/31/2005  
Role: Principal Investigator  
TDC: \$236,000

Title:  $[Ca^{2+}]_i$  and secretory dynamics in Parotid Acinar Cells (RO1)  
Agency: National Institutes of Health  
Dates: 05/01/2002-03/31/2012  
Role: Principal Investigator, subcontract  
TDC: \$427,558

David R. Giovannucci, Ph.D.



Title: Imaging Center (Multi-photon Microscope)  
Agency: Department of Health and Human Services  
Dates: 9/1/2005-8/31/2007  
Role: Principal Investigator/Program Director  
TDC: \$683,342

Title: Calcium Influx Mechanisms in Neuroendocrine and Carcinoid Tumor Cells  
Agency: The Raymond and Beverly Sackler Foundation  
Dates: 05/15/2006-05/14/2011 (*including renewal for final two years of award*)  
Role: Principal Investigator, Sackler Scholar and Director of the Raymond and Beverly Sackler Laboratory for Neuroendocrine Tumor Research  
TDC: \$850,000

Title: Post-hypoxic Regulation of GABAA Receptor Function (RO1)  
Agency: National Institutes of Health  
Dates: 01/01/2005-12/31/2010  
Role: Consultant, (PI: Greenfield)  
TDC: \$1,084,280

Title: Neurosteroid Mechanisms in Catamenial epilepsy (TRSA)  
Agency: University of Toledo College of Medicine  
Dates: 01/01/2006-12/31/2008  
Role: Co-investigator (PI: Greenfield)  
TDC: \$100,000

Title: Na,K ATPase as an Integrator of the Calcium Signaling Machinery (RO1)  
Agency: National Institutes of Health  
Dates: 01/01/2007-12/31/2012  
Role: Co-investigator, (PI: Xie)  
TDC: \$750,000

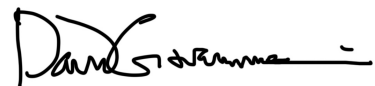
Title: Control of ANP exocytosis from atrial myocytes (GIA)  
Agency: American Heart Association  
Dates: 07/01/2007-06/31/2009  
Role: Principal Investigator  
TDC: \$110,000

Title: Role of brain L-type voltage-gate calcium channels in benzodiazepine dependence  
Agency: National Institutes of Health, Individual MD/PhD Predoctoral Fellowship Award  
Dates: 04/01/2009-3/31/2014  
Role: Co-Sponsor (Applicant: Damien Earl, Sponsor, E.I. Tietz)  
Amount: \$23,006 TDC

### **CURRENT RESEARCH SUPPORT**

Title: Chemobiologic Approach to NAADP Signaling  
Agency: NIH-Institute of General Medicine

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Dates: 06/01/2012 – 05/31/2015  
Role: Co-Investigator (PI, Slama)  
TDC: \$323,828

Title: Salivary Biomarkers of Fatigue  
Agency: Air Force Office of Scientific Research  
Dates: 07/01/2013 – 06/30/2016  
Role: Principal Investigator  
TDC: \$1,000,000

Title: Novel Calcium Signaling Pathways in Salivary Gland (R21)  
Agency: NIH-Institute of Dental and Craniofacial Research  
Dates: 12/01/2013 – 11/30/2015  
Role: Principal Investigator  
TDC: \$275,000

Title: High Resolution Mass Spectrometer for Biomarker Discovery  
Agency: Department of Defense, DURIP  
Dates: 09/19/14-09/18/15  
Role: Co-PI (PI, Isailovic)  
TDC: \$764,586

Title: Resp18 a novel genetic determinant of blood pressure and renal failure  
Agency: American Heart Association - Great Rivers Affiliate  
Dates: 07/01/2016 -- 06/30/2019  
Role: Co-investigator (PI, Kumarasamy)  
TDC: \$280,000

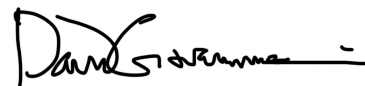
## **BIBLIOGRAPHY**

### ***BASIC RESEARCH:***

#### **Articles Published in Peer-reviewed Scientific Journals**

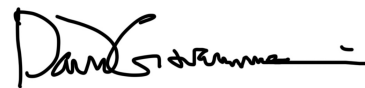
1. **Giovannucci DR** & Stuenkel EL. (1995) Glutamate receptor agonists modulate  $[Ca^{2+}]_i$  in isolated rat melanotopes. *Neuroendocrinology* 62, 111-122.
2. **Giovannucci DR** & Stuenkel EL. (1995) An NMDA receptor on isolated secretory nerve endings. *Brain Research* 702, 246-250.
3. **Giovannucci DR** & Stuenkel EL. (1997) Regulation of secretory granule recruitment and exocytosis at rat neurohypophysial nerve endings. *Journal of Physiology* 498.3, 735-751.
4. Rusin KI, **Giovannucci DR**, Stuenkel EL & Moises HC. (1997) k-Opioid receptor activation modulates  $Ca^{2+}$  currents and secretion in isolated neuroendocrine nerve terminals. *Journal of Neuroscience* 17(17): 6565-6574.

David R. Giovannucci, Ph.D.



5. **Giovannucci DR**, Yule, D.I. & Stuenkel EL (1998) Optical measurement of stimulus-evoked membrane turnover in single pancreatic acinar cells. *American Journal of Physiology*. (3 Pt 1):C732-9.
6. **Giovannucci DR** & Stephenson RS. (1999) Identification and distribution of dietary precursors of the *Drosophila* visual pigment chromophore: analysis of carotenoids in wild type and *ninaD* mutants by HPLC. *Vision Research* 39(2):219-29.
7. Fletcher AI, Shuang R, **Giovannucci DR**, Zhang L, Bittner M, & Stuenkel EL (1999) Regulation of exocytosis by cyclin-dependent kinase 5 via phosphorylation of Munc18. *Journal of Biological Chemistry* 274(7):4027-35.
8. **Giovannucci DR**, Hlubek MD, & Stuenkel EL. (1999) Mitochondria Regulate the  $\text{Ca}^{2+}$ -exocytosis Relationship of Bovine Adrenal Chromaffin Cells. *Journal of Neuroscience* 19(21): 9261-9270.
9. **Giovannucci DR**, Sneyd J, Groblewski GE & Yule DI. (2000) Modulation of  $\text{InsP}_3$  receptor properties by phosphorylation. *J Korean Med. Sci.* S55-6.
10. **Giovannucci DR**, Sneyd J, Groblewski GE & Yule DI. (2000) Targeted phosphorylation of the inositol trisphosphate receptor selectively inhibits localized  $\text{Ca}^{2+}$  release and shapes oscillatory  $\text{Ca}^{2+}$  signals. *Journal of Biological Chemistry* 275: 33704–33711.
11. Straub S\*, **Giovannucci DR\*** & Yule, DI. (2000) Calcium wave propagation in pancreatic acinar cells: functional interaction of inositol trisphosphate receptors, ryanodine receptors, and mitochondria. *Journal of General Physiology* 116 :547–559.
12. Beutner G, Sharma VK, **Giovannucci DR**, Yule DI, & Sheu S-S. (2001) Identification of a ryanodine receptor in rat heart mitochondria. *Journal of Biological Chemistry* 276(24): 21482-8.
13. Bruce JIE, Shuttleworth TJ, **Giovannucci DR** & Yule DI. (2002) Phosphorylation of inositol 1,4,5-trisphosphate receptors: a mechanism for the synergistic effects of cAMP on  $\text{Ca}^{2+}$  signaling. *Journal of Biological Chemistry* 277(2), 1340-1348.
14. **Giovannucci DR**, Bruce JIE, Straub SV, Arreola J, Shuttleworth TJ & Yule DI. Cytosolic  $\text{Ca}^{2+}$  and  $\text{Ca}^{2+}$ -activated  $\text{Cl}^-$  current dynamics: insights from two functionally distinct exocrine cells. *Journal of Physiology* (2002) 540.2: 469-484.
15. Straub SV, **Giovannucci DR**, Bruce JI & Yule DI. A role for phosphorylation of inositol 1,4,5-trisphosphate receptors in defining calcium signals induced by Peptide agonists in pancreatic acinar cells. (2002) *Journal of Biological Chemistry*, 277(35): 31949-56.
16. Sneyd J, Tsaneva-Atanasova K, Bruce JI, Straub SV, **Giovannucci DR**, Yule DI. (2003) A model of calcium waves in pancreatic and parotid acinar cells. *Biophysical Journal* 85(3):1392-405.
17. Soldo BL\*, **Giovannucci DR\***, Stuenkel EL, Moises HC. (2004)  $\text{Ca}^{2+}$  and frequency dependence of exocytosis in isolated somata of magnocellular supraoptic neurones of the rat hypothalamus. *Journal of Physiology*. 16;555(Pt 3):699-711.

David R. Giovannucci, Ph.D.



18. Bruce JI, **Giovannucci DR**, Blinder G, Shuttleworth TJ, Yule DI. (2004) Modulation of  $[Ca^{2+}]_i$  signaling dynamics and metabolism by perinuclear mitochondria in mouse parotid acinar cells. *Journal of Biological Chemistry* 279(13):12909-17.
19. Yuan Z, Cai T, Tian J, Ivanov AV, **Giovannucci DR**, Xie Z. (2005) Na/K-ATPase Tethers Phospholipase C and IP3 Receptor into a Calcium-regulatory Complex. *Molecular Biology of the Cell*, 16(9): 4034-45.
20. Chen Y, Warner JD, Yule DI, **Giovannucci DR**. (2005) Spatiotemporal Analysis of Exocytosis in Mouse Parotid Acinar Cells. *American Journal of Physiology (Cell Physiology)* 289(5): C1209-19.
21. Mignen O, Brink C, Enfissi A, Nadkarni A, Shuttleworth TJ, **Giovannucci DR**, Capiod, T. (2005) Carboxyamidotriazole-induced inhibition of mitochondrial calcium import blocks capacitative calcium entry and cell proliferation in HEK 293 cells. *Journal of Cell Science*, 118(23): 5615-23.
22. Peters CG, Miller DF, **Giovannucci DR**. (2006) Identification, localization and interaction of SNARE proteins in atrial cardiac myocytes, *Journal of Molecular and Cellular Cardiology* 40(3): 361-374.
23. Hendershot TJ, Liu H, Sarkar AA, **Giovannucci DR**, Clouthier DE, Abe M, Howard MJ. (2007) Expression of Hand2 is sufficient for neurogenesis and cell type-specific gene expression in the enteric nervous system. *Developmental Dynamics* 236(1):93-105.
24. Chen Y, Cai T, Yang C, Turner DA, **Giovannucci DR**, and Xie Z. (2008) Regulation of inositol 1,4,5-trisphosphate receptor-mediated calcium release by the Na/K-ATPase in cultured renal epithelial cells. *Journal of Biological Chemistry* 11;283(2):1128-36.
25. Ding H-F, Shi H, Cui H, Alam G, Gunning W, Nestor N, **Giovannucci D**, Zhang M. (2008) Nestin expression defines both glial and neuronal progenitors in postnatal sympathetic ganglia. *Journal of Comparative Neurology*, 508(6): 867-878.
26. Warner JD, Peters CG, Saunders R, Wong J-H, Betzenhauser MJ, Gunning III WT, Yule DI & **Giovannucci DR**. (2008) Visualizing form and function in organotypic slices of the adult mouse parotid gland. *American Journal of Physiology (Gastrointestinal and Liver Physiology)*, 295(3):G629-40.
27. Xiang X, Earl DE, Davis KM, **Giovannucci DR**, Greenfield LJ, and Tietz EI. (2008) Chronic benzodiazepine administration potentiates high voltage-activated calcium currents in hippocampal CA1 neurons *J Pharmacol Exp Ther*. 2008 Dec;327(3):872-83.
28. Fedorova L, Raju V, El-Okdi N, Shidyak A, Kennedy D, **Giovannucci D**, Bagrov A, Fedorova O, Shapiro J, and Malhotra D. Cardiotoxic Steroid Hormone Marinobufagenin Induces Renal Fibrosis. Implication of Epithelial to Mesenchymal Transition. *Am J Physiol Renal Physiol*. 2009 Apr;296(4):F922-34.



29. Arunachalam S, Zhelay T, **Giovannucci DR**. Molecular and functional characterization of non voltage-operated Ca entry in gastrointestinal neuroendocrine tumor cells. *Int J Physiol Pathophysiol Pharmacol*. 2010 May 19;2(2):125-136.
30. Gopalakrishnan K, Saikumar J, Peters CG, Kumarasamy S, Farms P, Yerga-Woolwine S, Toland EJ, Schnackel W, **Giovannucci DR**, Joe B. Defining a rat blood pressure quantitative trait locus to a <81.8 kb congenic segment: comprehensive sequencing and renal transcriptome analysis. *Physiol Genomics*. 2010 Oct;42A(2):153-61.
31. Saxena A, Banasavadi-Siddegowda YK, Fan Y, Bhattacharya S, Roy G, **Giovannucci DR**, Frizzell RA, Wang X. Human heat shock protein 105/110 kDa (Hsp105/110) regulates biogenesis and quality control of misfolded cystic fibrosis transmembrane conductance regulator at multiple levels. *J Biol Chem*. (2012) 287(23):19158-70.
32. Banasavadi-Siddegowda YK, Mai J, Fan Y, Bhattacharya S, **Giovannucci DR**, Sanchez ER, Fischer G, Wang X. FKBP38 peptidylprolyl isomerase promotes the folding of cystic fibrosis transmembrane conductance regulator in the endoplasmic reticulum. *J Biol Chem*. (2011) 286(50):43071-80.
33. Bhattacharya S, Verrill DS, Carbone KM, Brown S, Yule DI, **Giovannucci DR**. Distinct contributions by ionotropic purinoceptor subtypes to ATP-evoked calcium signals in mouse parotid acinar cells. *J Physiol*. (2012) 590(Pt 11):2721-37.
34. Bai Y, Morgan EE, **Giovannucci DR**, Pierre SV, Philipson KD, Askari A, Liu L. Different roles of the cardiac Na<sup>+</sup>/Ca<sup>2+</sup>-exchanger in ouabain-induced inotropy, cell signaling, and hypertrophy. (2012) *Am J Physiol Heart Circ Physiol*. 304(3):H427-35.
35. Ali RA, Zhelay T, Trabbic CJ, Walseth TF, Slama JT, **Giovannucci DR\*\***, Wall KA\*\*. Activity of nicotinic acid substituted nicotinic acid adenine dinucleotide phosphate (NAADP) analogs in a human cell line: difference in specificity between human and sea urchin NAADP receptors. *Cell Calcium* (2014) 55(2):93-103.
36. Goswamee P, **Giovannucci DR**. Gastro-enteropancreatic tumor cell dynamics in liver microvasculature. *Microscopy and Microanalysis* (2015), 21(3):655-65.
37. Bhattacharya S, Imbery JF, Ampem PT, **Giovannucci DR**. Crosstalk between purinergic receptors and canonical signaling pathways in the mouse salivary gland. *Cell Calcium* (2015), 58(6):589-97.
38. Ghanem SS, Heinrich G, Lester SG, Pfeiffer V, Bhattacharya S, Patel PR, DeAngelis AM, Dai T, Ramakrishnan SK, Smiley ZN, Jung DY, Lee Y, Kitamura T, Ergun S, Kulkarni RN, Kim JK, **Giovannucci DR**, Najjar SM. Increased Glucose-induced Secretion of Glucagon-like Peptide-1 in Mice Lacking the Carcino-Embryonic Antigen-related Cell Adhesion Molecule 2. *J Biol Chem* (2015), 291(2):980-8.
39. Ali RA, Camick C, Wiles K, Walseth TF, Slama JT, Bhattacharya S, **Giovannucci DR**, Wall KA. Nicotinic acid adenine dinucleotide phosphate plays a critical role in naive and effector murine T cells but not natural regulatory T cells. *Journal of Biological Chemistry* (2016) published ahead of print.

40. cAMP-dependent recruitment of acidic organelles for Ca<sup>2+</sup> signaling in the salivary gland. Imbery JF, Bhattacharya S, Khuder S, Weiss A, Goswamee P, Iqbal AK, **Giovannucci DR**. *Am J Physiol Cell Physiol*. (2016) 1;311(5):C697-C709.
41. Salivary protein changes in response to acute stress in medical residents performing advanced clinical simulations: a pilot proteomics study. Marvin RK, Saepoo MB, Ye S, White DB, Liu R, Hensley K, Rega P, Kazan V, **Giovannucci DR**, Isailovic D. *Biomarkers*. (2017) 5:1-35.

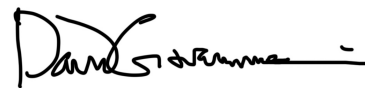
\*contributed equally and should be considered co-first authors

\*\*should be considered co-senior authors

### **Published Abstracts, Preliminary Communications, and Panel Discussions**

1. **Giovannucci DR** & Stephenson, RS. Effect of ninaD246 mutant on vitamin A metabolism in *Drosophila* eye. Invest. Ophthalmol. Visual Sci. 27 (suppl.):191, 1986.
2. **Giovannucci DR** & Stephenson, RS. Analysis by HPLC of *Drosophila* mutations affecting vitamin A metabolism. Invest. Ophthalmol. Visual Sci. 28 (suppl.): 253, 1987.
3. **Giovannucci DR** & Stephenson, RS. The *Drosophila* visual mutation affects vitamin A uptake. Invest. Ophthalmol. Visual Sci. 29 (suppl.): 388, 1988.
4. **Giovannucci DR** & Stephenson, RS. The ninaD mutation interferes with carotenoid metabolism in *Drosophila* larva or pupa. Cold Spring Harbor Symposium on Molecular Neurobiology of *Drosophila*, 1989.
5. Gibson, B., **Giovannucci DR**, & Stephenson, RS. Screening for *Drosophila* mutations affecting vitamin A metabolism. MARC/MBRS Symposium Proceedings, 1992.
6. **Giovannucci DR** & Stuenkel EL. (1994) Glutamate receptors on nerve on nerve endings and neuroendocrine cells of rat pituitary. Society for Neuroscience Abstracts 20, 490.
7. **Giovannucci DR**, Jurgutis P & Stuenkel EL. (1995) Exocytosis at single nerve endings: relationship to calcium and effects of toxins. Neuropharmacology III, 59.
8. **Giovannucci DR** & Stuenkel EL. (1995) Intracellular Ca<sup>2+</sup> and exocytosis at single nerve endings. Society for Neuroscience Abstracts. 21, 334.
9. Rusin KR, **Giovannucci DR**, Moises HC & Stuenkel EL. (1995) Kappa-opioid receptor activation modulates Ca<sup>2+</sup> currents and secretion in isolated neuroendocrine nerve terminals. Society for Neuroscience Abstracts 21, 1092.
10. **Giovannucci DR** & Stuenkel EL. (1996) Modulation of vasopressin secretion by Ca<sup>2+</sup> and secretory proteins at single nerve endings. American Heart Association Cardiovascular Research Forum 26, 11.
11. **Giovannucci DR** & Stuenkel EL. (1996) Ruthenium Red potentiates exocytosis at single nerve endings. Society for Neuroscience 22, 782.

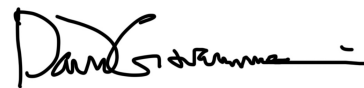
David R. Giovannucci, Ph.D.



12. Rusin KR, **Giovannucci DR**, Stuenkel EL & Moises HC (1996) Kappa-opioids modulate secretion via inhibition of N-, L- and P/Q-type  $\text{Ca}^{++}$  currents in rat neuroendocrine nerve terminals. Society for Neuroscience Abstracts 22, 1987.
13. **Giovannucci DR** & Stuenkel EL (1997) Control of secretory granule membrane retrieval following exocytotic activity. Society for Neuroscience Abstracts 23.
14. Stuenkel EL, Shuang R-Q, Zhang L, Fletcher A, Pevsner J, **Giovannucci DR** & Turner D (1997) Regulation of nSEC1p/syntaxin interaction by cyclin dependent kinase 5 at nerve endings. Society for Neuroscience Abstracts 23.
15. Rusin KI, **Giovannucci DR**, Stuenkel EL & Moises HC (1997) Contribution of N- and L-type  $\text{Ca}^{++}$  channels to initiation and opioid modulation of secretion in neuroendocrine nerve terminals. Society for Neuroscience Abstracts 23.
16. Soldo BL, **Giovannucci DR**, Stuenkel EL & Moises, HC (1997) Opioid modulation of secretion from magnocellular supraoptic neurons of the rat hypothalamus. Society for Neuroscience Abstracts 23.
17. **Giovannucci DR** & Stuenkel EL (1998) Mitochondria, Calcium, and the regulation of secretion, Biophysical Journal: A96.
18. **Giovannucci DR** & Stuenkel, EL (1998) Calcium currents and secretory activity evoked by action potential waveforms at nerve endings. Society for Neuroscience Abstracts.
19. **Giovannucci DR** & Stuenkel, EL (1998) A physiological role for mitochondria in the control of secretion in chromaffin cells. Society for Neuroscience Abstracts.
20. Soldo, BL, **Giovannucci DR**, & Stuenkel, EL (1998) Opioid modulation of calcium current and secretion in isolated supraoptic magnocellular neurons. Society for Neuroscience Abstracts.
21. **Giovannucci DR**, Sneyd J, Groblewski GE & Yule DI. (1999) Localized phosphorylation of  $\text{InsP}_3$  receptors by PKA modulates intracellular  $\text{Ca}^{2+}$  release. Biophysical J.
22. Yule DI, Straub S & **Giovannucci DR**. (1999)  $\text{Ca}^{2+}$  clearance in acinar cells after flash photolysis of caged compounds. Biophysical J.
23. **Giovannucci DR**. (2000) Glucose and cAMP-dependent regulation of exocytosis in an insulin-secreting cell line. Society for Neuroscience Abstracts.
24. **Giovannucci DR**, Bruce JE & Yule DI. (2001) Cytosolic  $\text{Ca}^{2+}$  and  $\text{Ca}^{2+}$ -activated  $\text{Cl}^-$  channel dynamics: a comparative study of two functionally distinct exocrine secretory cell types. Biophysical J.
25. Sheu SS, Beutner G, Sharma VK, **Giovannucci D** et al. (2001) A ryanodine receptor is involved in calcium uptake in rat heart mitochondria Circulation 104 (17): 241 Suppl.

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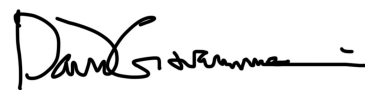
David R. Giovannucci, Ph.D.



26. **Giovannucci DR.** (2001) Real-time analysis of mitochondrial calcium dynamics and secretory output under different stimulatory conditions. *Congres Mondial sur les Hormone Neurohyophysaires (WCNH Bordeaux) Abstracts*, p.63.
27. **Giovannucci DR & Yule DI.** (2002) Real-time analysis of exocytotic activity in single parotid acinar cells. *Biophysical J.* 82 (1): 2998.
28. Turner DA & **Giovannucci DR.** (2002) Mitochondrial control of secretory dynamics. *Cell Biology of the Neuron GRC Abstracts*.
29. Yuan Z, Cai T, Turner D, **Giovannucci D** & Xie Z. (2003) Sodium pump as a signal transducer: proteomic identification of ouabain-activated signaling modules. *Biophysical J.*, 84 (2): 267A-267A.
30. Yuan ZK, Cai T, **Giovannucci D** & Xie ZJ. (2004) Na/K-ATPase moonlights: Identification of a cross-talk with the IP3 receptor. *FASEB Journal* 18 (5): A1025-A1026.
31. Brink C, Nadkarni A, Ragothaman A, Mignen O, Capiod T & **Giovannucci D.** (2004) The role of mitochondrial calcium import in the antiproliferative effect mediated by capacitative calcium entry inhibition. *Biophysical J.* (1): 108A-108A.
32. Brink C & **Giovannucci DR.** (2004) Differential effects of beta-amyloid on mitochondrial function in nerve terminals and glia. *Society for Neuroscience Abstracts*.
33. **Giovannucci DR** & Brink C. (2006) Differential Effects of amyloid-beta treatment on both function and calcium homeostasis at nerve terminals and glia. *Vol. 12, Suppl. 2*, 294.
34. Xiang K, **Giovannucci DR**, Greenfield Jr LJ and Tietz EI (2006) Enhanced calcium entry through L-type voltage-gated calcium channels contributes to AMPA receptor plasticity in hippocampal CA1 neurons after chronic benzodiazepine treatment. *Society for Neuroscience Abstracts*.
35. Peters CG & **Giovannucci DR** (2008) Identification Of SNARE And SNARE-associated Proteins In Cardiac Myocytes (2008) *Biophys. J.* 94: 1287-a.
36. **Giovannucci DR** & Peters CG (2008) Molecular Control of Ca<sup>2+</sup>-evoked exocytosis in atrial Myocytes. *Biophys. J.* 94: 1269.
37. Arunachalam S, Zhelay T, Al-Jiboury H, Koehler K & **Giovannucci DR** (2008) The role of store operated calcium entry (SOCE) in human neuroendocrine tumors. *Biophys. J.* 94: 454.
38. **Giovannucci D**, Brink C, Pierson R, Tietz EI & Greenfield L (2008) Allopregnanolone and GABA evoke calcium currents in cortical neurons. *Society for Neuroscience Meeting Abstracts*
39. **Giovannucci D**, Brink C, Pierson R & Greenfield L (2008) Allopregnanolone and GABA evoke calcium currents in cortical neurons. *American Epilepsy Society Meeting Abstracts*

40. RamakrishnanSK, Peters C, Basrur V, Zanze M, **Giovannucci DR** & Najjar S (2008) CIB: A new player in receptor-mediated insulin endocytosis, Pharmacology Symposia Proceedings, University of Michigan Ann Arbor.
41. Peters CG & **Giovannucci DR** (2009) Ouabain signaling sensitizes  $\text{Ca}^{2+}$  evoked release of natriuretic peptides by a novel mechanism. Heart Rhythm Society Suppl.-not accepted
- 42) Zhelay T, Arunachalam S, Howard MJ & **Giovannucci DR** (2009) Stim and Orai1 mediated calcium entry in gastroentreopancreatic neuroendocrine tumor cell lines. Proceeding of the Society for Neuroscience.
- 43) Arunachalam S, Nasim R & **Giovannucci DR** (2010) Development of an organotypic system to image metastasis in situ. Biophysical Journal 98 (3): 745a.
- 44) Bhattacharya S, Verrill D & **Giovannucci DR** (2011) The role of P2X4 receptors in calcium-mediated exocytosis in parotid acinar cells. Biophysical Journal 100 (3): 258a.
- 45) Zhelay TI, Zahedi S & **Giovannucci DR** (2010) Assessment of an oxidant based strategy to target cancer cells. Biophysical Journal 100 (3): 81a.
- 46) P Goswamee, S Arunachalam, R Nasim, M Howard & **D Giovannucci** (2011) Visualizing Cancer Cell Dynamics in a Liver Slice Model. Microscopy and Microanalysis / Volume 17 / Supplement S2, pp 74 75
- 47) Zahedi S., Zhelay TI. & **Giovannucci DR**. (2011) Assessment of a Mitotoxic and Oxidant-Based Strategy in Carcinoid Cancers, Microscopy and Microanalysis, 17: 192-193.
- 48) Zhelay T, Arunachalam S & **Giovannucci DR**. (2011) Calcium entry and maintenance of oscillatory  $\text{Ca}^{2+}$  signals in a human carcinoid cell line. Pancreas 40 (2): 336.
- 49) Goswamee P, Arunachalam S, Nasim R, Howard, MJ & **Giovannucci DR**. (2011) An organ slice model to evaluate carcinoid tumorigenesis in liver. Pancrease 40 (2): 327.
- 50) Park I-H, Fan Y, Bhattacharya S, Regan, N, Bhasin D, Chettiar S, **Giovannucci D R**, Li P-K, Wang X & Li C. (2012) DEVELOPMENT OF DELTA F508 CORRECTORS BY NBD1 CONFORMATIONAL RESCUE
- 51) Bhattacharya S, Ampem PT, Dartt DA & **Giovannucci DR**. (2013) Modulation of Purinoceptor mediated  $\text{Ca}^{2+}$  signals by  $\beta$ -adrenergic receptor activation in Salivary Glands. Experimental Biology Proceedings.
- 52) **Giovannucci, DR**, Bhattacharya S, Ampem P, Ali R, Wall KA & Slama JT. (2013) A Role for NAADP and Acidic Calcium Stores in Salivary Gland Secretion, FASEB Conference Proceedings.
- 53) Wall KA, Ali R, Zhelay T, Trabbic C, Walseth TF, **Giovannucci D** & Slama JT (2013) Comparison of the Specificity of Human and Sea Urchin NAADP Receptors using Caged NAADP Analogs, FASEB Conference Proceedings

David R. Giovannucci, Ph.D.



- 54) Ali R, Camick C, Slama JT, **Giovannucci DR** & Wall KA. (2014) NAADP evokes calcium signals and plays a critical functional role in differentiated subsets of effector T cells. FASEB Conference Proceedings
- 55) **Giovannucci DR**. Arachidonic acid-regulated calcium entry enhances cell migration. (2014) FASEB Conference Proceedings
- 56) Wang, Y, **Giovannucci, DR.**, Kahaleh, B. (2013) Enhanced Expression Of The Cold-Sensing Receptor-TRPM8 In Scleroderma Endothelial Cells and Skin and Endothelial Dysfunction Following TRPM8 Activation. Arthritis Rheum 2013;65 Suppl 10: p. 668
- 57) Marvin R, Saepoo MB, Tomko J, Hensley K, **Giovannucci D**, Isailovic D. (2014) Mass Spectrometric Investigation of Potential Biomarkers of Cold Stress in Saliva. Proceedings of the American Society for Mass Spectrometry
- 58) Rao TC, Peleman AR, **Giovannucci DR**, Anantharam A. (2015) Synaptotagmin-1 and Synaptotagmin-7 Differ in their Stimulus and Ca<sup>2+</sup>-Dependence of Activation. Biophysical Journal, Vol. 108, Issue 2, p103a
- 59) Imbery J, Khuder S, Weiss A, Slama JT, **Giovannucci, DR**. (2015) Acidic Calcium Stores Contribute to Secretory Activity Following Elevation of Camp in the Salivary Gland. Biophysical Journal, Vol. 108, Issue 2, p104a
- 60) Marvin R, Saepoo MB, Tomko J, Hensley K, **Giovannucci D**, Isailovic D. (2015) Mass Spectrometric Investigation of Phosphorylation of Salivary Proteins in Respect to the Cold Pressor Test, Proceedings of the American Society for Mass Spectrometry.

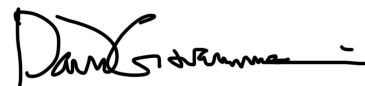
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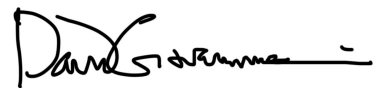
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A handwritten signature in black ink, appearing to read "David Giovannucci", with a long horizontal line extending to the right.