




Miriam B. Goodman

Mrs. George A. Winzer Professor of Cell Biology

Molecular & Cellular Physiology

 Curriculum Vitae available Online

CONTACT INFORMATION

• Administrative Contact

Sabina Mori-Sloane - Administrative Assistant

Email sabinams@stanford.edu

Bio

ACADEMIC APPOINTMENTS

- Professor, Molecular & Cellular Physiology
- Member, Bio-X
- Member, Wu Tsai Neurosciences Institute

ADMINISTRATIVE APPOINTMENTS

- Chair, Molecular and Cellular Physiology, (2017- present)
- Associate Chair, Molecular and Cellular Physiology, (2010-2013)
- Chair, Stanford Neuroscience Institute (SNI) Interdisciplinary Scholars Program, (2014- present)
- Deputy Director, Stanford Neuroscience Institute, (2013-2017)

HONORS AND AWARDS

- Landis Award for Outstanding Mentoring, National Institutes of Neurological Disorders and Stroke, NIH (2019)
- Excellence in Diversity and Inclusion, Stanford University School of Medicine (2015)
- Excellence in Graduate Teaching, Stanford University School of Medicine (2011, 2014)
- Michael and Kate Barany Award for Young Investigators, Biophysical Society (2014)
- Klingenstein Fellow in Neuroscience, The Klingenstein Fund (2005-2008)
- McKnight Scholar Award, McKnight Endowment (2005-2008)
- Prize in Neurobiology, Eppendorf & Science (2004)
- Alfred P. Sloan Fellow, Alfred P. Sloan Foundation (2002-2004)
- Baxter Fellow, Donald B. and Delia E. Baxter Foundation (2002)
- Terman Fellow, Stanford University (2002)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Reviewing Editor, eNeuro (2017 - present)
- Editorial Board Member, Institute of Physics/Biophysical Society eBooks (2016 - 2020)

- Editorial Board Member, Section on Ion Channels & Transporters, Biophysical Journal (2013 - 2018)
- Editorial Advisory Board, Journal of General Physiology (2011 - 2018)
- Academic Editor, PLoS Genetics (2009 - 2013)

PROFESSIONAL EDUCATION

- Ph.D., The University of Chicago , Neurobiology (1995)
- Sc.B., Brown University , Biochemistry (1986)

LINKS

- Goodman Lab Site: <http://med.stanford.edu/goodmanlab.html>

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

We study the molecular events that give rise to the sensation of touch and temperature using *C. elegans* nematodes as a model system. To do this, we use a combination of quantitative behavioral analysis, genetics, in vivo electrophysiology, and heterologous expression of ion channels. We also collaborate with Pruitt's group in Mechanical Engineering (<http://microsystems.stanford.edu>) to develop and fabricate novel devices for the study of sensory transduction.

Teaching

COURSES

2023-24

- DataLucence::Images: BIOS 254 (Aut)
- Diversity and Inclusion in STEMM: BIOS 225 (Spr)

2022-23

- Designing Your Life: Empowering Emerging Scientists: BIOS 302 (Win)
- Diversity and Inclusion in STEMM: BIOS 225 (Spr)

2021-22

- Designing Your Life: Empowering Emerging Scientists: BIOS 302 (Aut)

2020-21

- Diversity and Inclusion in Science: BIOS 225 (Spr)

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Madeline Cooper, Lydia Hamburg, Andres Iglesias-Thome, Ilana Zucker-Scharff

Postdoctoral Faculty Sponsor

Hongfei Ji, Theresa Logan-Garbisch, Manuel Ruiz

Doctoral Dissertation Advisor (AC)

Caroline Arellano-Garcia, Wagner Nors, Lucero Rogel, Lexy Strom

Doctoral Dissertation Co-Advisor (AC)

Jason Casar

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Biophysics (Phd Program)
- Molecular and Cellular Physiology (Phd Program)
- Neurosciences (Phd Program)

Publications

PUBLICATIONS

- **An efficient behavioral screening platform classifies natural products and other chemical cues according to their chemosensory valence in *C. elegans*.** *bioRxiv : the preprint server for biology*
Fryer, E., Guha, S., Rogel-Hernandez, L. E., Logan-Garbisch, T., Farah, H., Rezaei, E., Mollhoff, I. N., Nekimken, A. L., Xu, A., Fechner, S., Druckmann, S., Clandinin, T. R., Rhee, et al
2023
- **Mechanosensitive membrane proteins: Usual and unusual suspects in mediating mechanotransduction.** *The Journal of general physiology*
Goodman, M. B., Haswell, E. S., Vásquez, V.
2023; 155 (3)
- **Visualizing Neurons Under Tension In Vivo with Optogenetic Molecular Force Sensors.** *Methods in molecular biology (Clifton, N.J.)*
Sanfeliu-Cerdán, N., Lin, L. C., Dunn, A. R., Goodman, M. B., Krieg, M.
2023; 2600: 239-266
- **Image-based axon model highlights heterogeneity in initiation of damage.** *Biophysical journal*
Wang, L. M., Goodman, M. B., Kuhl, E.
2022
- **Engineering Bright and Mechanosensitive Alkaline-Earth Rare-Earth Upconverting Nanoparticles.** *The journal of physical chemistry letters*
McLellan, C. A., Siefe, C., Casar, J. R., Peng, C. S., Fischer, S., Lay, A., Parakh, A., Ke, F., Gu, X. W., Mao, W., Chu, S., Goodman, M. B., Dionne, et al
2022: 1547-1553
- **Reciprocal Interactions Between TGF-beta Signaling and Collagens - Insights from *C. elegans*.** *Developmental dynamics : an official publication of the American Association of Anatomists*
Goodman, M. B., Savage-Dunn, C.
2021
- **DEG/ENaC/ASIC channels vary in their sensitivity to anti-hypertensive and non-steroidal anti-inflammatory drugs.** *The Journal of general physiology*
Fechner, S., D'Alessandro, I., Wang, L., Tower, C., Tao, L., Goodman, M. B.
2021; 153 (4)
- **Nanoscale Structure and Mechanics of Skin in a *C. elegans* Model of Touch Sensation**
Rezaeil, E., Savage-Dunn, C., Goodman, M. B.
CELL PRESS.2021: 234A–235A
- **Expansion microscopy of *C. elegans*.** *eLife*
Yu, C. J., Barry, N. C., Wassie, A. T., Sinha, A., Bhattacharya, A., Asano, S., Zhang, C., Chen, F., Hobert, O., Goodman, M. B., Haspel, G., Boyden, E. S.
2020; 9
- **The plant terpenoid carvone is a chemotaxis repellent for *C. elegans*.** *microPublication. Biology*
Ellington, C., Hayden, A., LaGrange, Z., Luccioni, M., Osman, M., Ramlan, L., Vogt, M., Guha, S., Goodman, M., O'Connell, L.
2020; 2020
- **Touch-induced Mechanical Strain in Somatosensory Neurons is Independent of Extracellular Matrix Mutations in *C. elegans*.** *Molecular biology of the cell*
Nekimken, A. L., Pruitt, B. L., Goodman, M. B.
2020: mbcE20010049
- **Alkaline-earth Rare-earth Upconverting Nanoparticles as Bio-compatible Mechanical Force Sensors**
McLellan, C. A., Siefe, C. P., Fischer, S., Casar, J. R., Swearer, D. F., Goodman, M. B., Dionne, J. A., IEEE

IEEE.2020

- **Opportunities and challenges in achieving co-management in marine protected areas in East Africa: a comparative case study** *Journal of the Indian Ocean Region*
O'Leary, J. K., Goodman, M., Tuda, A., Machumu, M., West, L.
2020
- **Parallel Processing of Two Mechanosensory Modalities by a Single Neuron in C.elegans.** *Developmental cell*
Tao, L., Porto, D., Li, Z., Fechner, S., Lee, S. A., Goodman, M. B., Xu, X. Z., Lu, H., Shen, K.
2019
- **Progressive recruitment of distal MEC-4 channels determines touch response strength in C. elegans.** *The Journal of general physiology*
Katta, S., Sanzeni, A., Das, A., Vergassola, M., Goodman, M. B.
2019
- **Somatosensory neurons integrate the geometry of skin deformation and mechanotransduction channels to shape touch sensing.** *eLife*
Sanzeni, A., Katta, S., Petzold, B., Pruitt, B. L., Goodman, M. B., Vergassola, M.
2019; 8
- **Optically Robust and Biocompatible Mechanosensitive Upconverting Nanoparticles** *ACS CENTRAL SCIENCE*
Lay, A., Sheppard, O. H., Siefe, C., McLellan, C. A., Mehlenbacher, R. D., Fischer, S., Goodman, M. B., Dionne, J. A.
2019; 5 (7): 1211–22
- **Optically Robust and Biocompatible Mechanosensitive Upconverting Nanoparticles.** *ACS central science*
Lay, A., Sheppard, O. H., Siefe, C., McLellan, C. A., Mehlenbacher, R. D., Fischer, S., Goodman, M. B., Dionne, J. A.
2019; 5 (7): 1211-1222
- **How Caenorhabditis elegans Senses Mechanical Stress, Temperature, and Other Physical Stimuli.** *Genetics*
Goodman, M. B., Sengupta, P.
2019; 212 (1): 25–51
- **How Caenorhabditis elegans Senses Mechanical Stress, Temperature, and Other Physical Stimuli** *GENETICS*
Goodman, M. B., Sengupta, P.
2019; 212 (1): 25–51
- **Funders should evaluate projects, not people** *LANCET*
Raymond, J. L., Goodman, M. B.
2019; 393 (10171): 494–95
- **Funders should evaluate projects, not people.** *Lancet (London, England)*
Raymond, J. L., Goodman, M. B.
2019; 393 (10171): 494–95
- **Synaptic Communication upon Gentle Touch.** *Neuron*
Fechner, S., Goodman, M. B.
2018; 100 (6): 1272–74
- **Mechanosensitive upconverting nanoparticles for visualizing mechanical forces in vivo**
Lay, A., Siefe, C., Fischer, S., Mehlenbacher, R., Das, A., Nekimken, A., Ke, F., Mao, W., Pruitt, B., Cohen, B., Alivisatos, P., Goodman, M., Dionne, et al
AMER CHEMICAL SOC.2018
- **The tactile receptive fields of freely moving Caenorhabditis elegans nematodes** *INTEGRATIVE BIOLOGY*
Mazochette, E. A., Nekimken, A. L., Loizeau, F., Whitworth, J., Huynh, B., Goodman, M. B., Pruitt, B. L.
2018; 10 (8): 450–63
- **The tactile receptive fields of freely moving Caenorhabditis elegans nematodes.** *Integrative biology : quantitative biosciences from nano to macro*
Mazochette, E. A., Nekimken, A. L., Loizeau, F., Whitworth, J., Huynh, B., Goodman, M. B., Pruitt, B. L.
2018
- **Immunofluorescence reveals neuron-specific promoter activity in non-neuronal cells.** *microPublication. Biology*
Lear, S. K., Das, A., Goodman, M. B.

2018; 2018

- **Loss of CaMKI function disrupts salt aversive learning in *C. elegans*.** *The Journal of neuroscience : the official journal of the Society for Neuroscience*
Lim, J. P., Fehlaue, H., Das, A., Saro, G., Glauser, D. A., Brunet, A., Goodman, M. B.
2018
- **The extraordinary AFD thermosensor of *C. elegans*** *PFLUGERS ARCHIV-EUROPEAN JOURNAL OF PHYSIOLOGY*
Goodman, M. B., Sengupta, P.
2018; 470 (5): 839–49
- **Ultrasound Elicits Behavioral Responses through Mechanical Effects on Neurons and Ion Channels in a Simple Nervous System** *JOURNAL OF NEUROSCIENCE*
Kubane, J., Shukla, P., Das, A., Baccus, S. A., Goodman, M. B.
2018; 38 (12): 3081–91
- **Using a Microfluidics Device for Mechanical Stimulation and High Resolution Imaging of *C. elegans*** *JOVE-JOURNAL OF VISUALIZED EXPERIMENTS*
Fehlaue, H., Nekimken, A. L., Kim, A. A., Pruitt, B. L., Goodman, M. B., Krieg, M.
2018
- **Bright, Mechanosensitive Upconversion with Cubic-Phase Heteroepitaxial Core-Shell Nanoparticles.** *Nano letters*
Lay, A. n., Siefe, C. n., Fischer, S. n., Mehlenbacher, R. D., Ke, F. n., Mao, W. L., Alivisatos, A. P., Goodman, M. B., Dionne, J. A.
2018
- **Forces applied during classical touch assays for *Caenorhabditis elegans*** *PLOS ONE*
Nekimken, A. L., Mazzochette, E. A., Goodman, M. B., Pruitt, B. L.
2017; 12 (5)
- **Pneumatic stimulation of *C. elegans* mechanoreceptor neurons in a microfluidic trap.** *Lab on a chip*
Nekimken, A. L., Fehlaue, H., Kim, A. A., Manosalvas-Kjono, S. N., Ladpli, P., Memon, F., Gopisetty, D., Sanchez, V., Goodman, M. B., Pruitt, B. L., Krieg, M.
2017
- **Genetic defects in beta-spectrin and tau sensitize *C. elegans* axons to movement-induced damage via torque-tension coupling** *ELIFE*
Krieg, M., Stuehmer, J., Cueva, J. G., Fetter, R., Spilker, K., Cremers, D., Shen, K., Dunn, A. R., Goodman, M. B.
2017; 6
- **Molecules empowering animals to sense and respond to temperature in changing environments** *CURRENT OPINION IN NEUROBIOLOGY*
Glauser, D. A., Goodman, M. B.
2016; 41: 92-98
- **The tubulin repertoire of *Caenorhabditis elegans* sensory neurons and its context-dependent role in process outgrowth** *MOLECULAR BIOLOGY OF THE CELL*
Lockhead, D., Schwarz, E. M., O'Hagan, R., Bellotti, S., Krieg, M., Barr, M. M., Dunn, A. R., Sternberg, P. W., Goodman, M. B.
2016; 27 (23): 3717-3728
- **Grabbing brain activity on the go.** *Proceedings of the National Academy of Sciences of the United States of America*
Clandinin, T. R., Goodman, M. B.
2016; 113 (8): 1965-7
- **Tissue mechanics govern the rapidly adapting and symmetrical response to touch** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Eastwood, A. L., Sanzeni, A., Petzold, B. C., Park, S., Vergassola, M., Pruitt, B. L., Goodman, M. B.
2015; 112 (50): E6955-E6963
- **Feeling force: physical and physiological principles enabling sensory mechanotransduction.** *Annual review of cell and developmental biology*
Katta, S., Krieg, M., Goodman, M. B.
2015; 31: 347-71
- **Mechanical systems biology of *C. elegans* touch sensation.** *BioEssays*
Krieg, M., Dunn, A. R., Goodman, M. B.
2015; 37 (3): 335-344

- **FBN-1, a fibrillin-related protein, is required for resistance of the epidermis to mechanical deformation during *C. elegans* embryogenesis.** *eLife*
Kelley, M., Yochem, J., Krieg, M., Calixto, A., Heiman, M. G., Kuzmanov, A., Meli, V., Chalfie, M., Goodman, M. B., Shaham, S., Frand, A., Fay, D. S.
2015; 4
- **Feeling Force: Physical and Physiological Principles Enabling Sensory Mechanotransduction** *ANNUAL REVIEW OF CELL AND DEVELOPMENTAL BIOLOGY, VOL 31*
Katta, S., Krieg, M., Goodman, M. B.
2015; 31: 347-371
- **CaMKI-Dependent Regulation of Sensory Gene Expression Mediates Experience-Dependent Plasticity in the Operating Range of a Thermosensory Neuron** *NEURON*
Yu, Y. V., Bell, H. W., Glauser, D. A., Van Hooser, S. D., Goodman, M. B., Sengupta, P.
2014; 84 (5): 919-926
- **The Balance between Cytoplasmic and Nuclear CaM Kinase-1 Signaling Controls the Operating Range of Noxious Heat Avoidance** *NEURON*
Schild, L. C., Zbinden, L., Bell, H. W., Yu, Y. V., Sengupta, P., Goodman, M. B., Glauser, D. A.
2014; 84 (5): 983-996
- **Sensory biology: it takes Piezo2 to tango.** *Current biology*
Vásquez, V., Scherrer, G., Goodman, M. B.
2014; 24 (12): R566-9
- **Mechanical control of the sense of touch by β -spectrin.** *Nature cell biology*
Krieg, M., Dunn, A. R., Goodman, M. B.
2014; 16 (3): 224-233
- **Mechanical control of the sense of touch by β -spectrin.** *Nature cell biology*
Krieg, M., Dunn, A. R., Goodman, M. B.
2014; 16 (3): 224-233
- **Bidirectional thermotaxis in *Caenorhabditis elegans* is mediated by distinct sensorimotor strategies driven by the AFD thermosensory neurons** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Luo, L., Cook, N., Venkatachalam, V., Martinez-Velazquez, L. A., Zhang, X., Calvo, A. C., Hawk, J., MacInnis, B. L., Frank, M., Ng, J. H., Klein, M., Gershow, M., Hammarlund, et al
2014; 111 (7): 2776-2781
- **Phospholipids that Contain Polyunsaturated Fatty Acids Enhance Neuronal Cell Mechanics and Touch Sensation.** *Cell reports*
Vásquez, V., Krieg, M., Lockhead, D., Goodman, M. B.
2014; 6 (1): 70-80
- **PTRN-1, a microtubule minus end-binding CAMSAP homolog, promotes microtubule function in *Caenorhabditis elegans* neurons.** *eLife*
Richardson, C. E., Spilker, K. A., Cueva, J. G., Perrino, J., Goodman, M. B., Shen, K.
2014; 3
- **PTRN-1, a microtubule minus end-binding CAMSAP homolog, promotes microtubule function in *Caenorhabditis elegans* neurons.** *eLife*
Richardson, C. E., Spilker, K. A., Cueva, J. G., Perrino, J., Goodman, M. B., Shen, K.
2014; 3: e01498
- **Thermotaxis navigation behavior.** *WormBook : the online review of C. elegans biology*
Goodman, M. B., Klein, M., Lasse, S., Luo, L., Mori, I., Samuel, A., Sengupta, P., Wang, D.
2014: 1-10
- **Assaying mechanosensation.** *WormBook : the online review of C. elegans biology*
Chalfie, M.
2014: 1-13
- **GCY-8, PDE-2, and NCS-1 are critical elements of the cGMP-dependent thermotransduction cascade in the AFD neurons responsible for *C. elegans* thermotaxis** *JOURNAL OF GENERAL PHYSIOLOGY*
Wang, D., O'Halloran, D., Goodman, M. B.
2013; 142 (4): 437-449

- **Identification of 526 Conserved Metazoan Genetic Innovations Exposes a New Role for Cofactor E-like in Neuronal Microtubule Homeostasis** *PLOS GENETICS*
Frederic, M. Y., Lundin, V. F., Whiteside, M. D., Cueva, J. G., Tu, D. K., Kang, S. Y., Singh, H., Baillie, D. L., Hutter, H., Goodman, M. B., Brinkman, F. S., Leroux, M. R.
2013; 9 (10)
- **MEMS-based force-clamp analysis of the role of body stiffness in *C. elegans* touch sensation.** *Integrative biology*
Petzold, B. C., Park, S., Mazzochette, E. A., Goodman, M. B., Pruitt, B. L.
2013; 5 (6): 853-864
- **The doublecortin-related gene *zyg-8* is a microtubule organizer in *Caenorhabditis elegans* neurons** *JOURNAL OF CELL SCIENCE*
Bellanger, J., Cueva, J. G., Baran, R., Tang, G., Goodman, M. B., Debant, A.
2012; 125 (22): 5417-5427
- **Insight into DEG/ENaC Channel Gating from Genetics and Structure** *PHYSIOLOGY*
Eastwood, A. L., Goodman, M. B.
2012; 27 (5): 282-290
- **Posttranslational Acetylation of alpha-Tubulin Constrains Protofilament Number in Native Microtubules** *CURRENT BIOLOGY*
Cueva, J. G., Hsin, J., Huang, K. C., Goodman, M. B.
2012; 22 (12): 1066-1074
- **How We Feel: Ion Channel Partnerships that Detect Mechanical Inputs and Give Rise to Touch and Pain Perception** *NEURON*
Geffeney, S. L., Goodman, M. B.
2012; 74 (4): 609-619
- **Electrophysiological Methods for *Caenorhabditis elegans* Neurobiology** *CAENORHABDITIS ELEGANS: CELL BIOLOGY AND PHYSIOLOGY, SECOND EDITION*
Goodman, M. B., Lindsay, T. H., Lockery, S. R., Richmond, J. E.
2012; 107: 409-436
- **Intragenic alternative splicing coordination is essential for *Caenorhabditis elegans* *slo-1* gene function** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Glauser, D. A., Johnson, B. E., Aldrich, R. W., Goodman, M. B.
2011; 108 (51): 20790-20795
- **Alternatively spliced domains interact to regulate BK potassium channel gating** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Johnson, B. E., Glauser, D. A., Dan-Glauser, E. S., Halling, D. B., Aldrich, R. W., Goodman, M. B.
2011; 108 (51): 20784-20789
- **DEG/ENaC but Not TRP Channels Are the Major Mechanoelectrical Transduction Channels in a *C. elegans* Nociceptor** *NEURON*
Geffeney, S. L., Cueva, J. G., Glauser, D. A., Doll, J. C., Lee, T. H., Montoya, M., Karania, S., Garakani, A. M., Pruitt, B. L., Goodman, M. B.
2011; 71 (5): 845-857
- **The DEG/ENaC Protein MEC-10 Regulates the Transduction Channel Complex in *Caenorhabditis elegans* Touch Receptor Neurons** *JOURNAL OF NEUROSCIENCE*
Arnadottir, J., O'Hagan, R., Chen, Y., Goodman, M. B., Chalfie, M.
2011; 31 (35): 12695-12704
- **Heat Avoidance Is Regulated by Transient Receptor Potential (TRP) Channels and a Neuropeptide Signaling Pathway in *Caenorhabditis elegans*** *GENETICS*
Glauser, D. A., Chen, W. C., Agin, R., MacInnis, B. L., Hellman, A. B., Garrity, P. A., Tan, M., Goodman, M. B.
2011; 188 (1): 91-U150
- ***Caenorhabditis elegans* Body Mechanics Are Regulated by Body Wall Muscle Tone** *BIOPHYSICAL JOURNAL*
Petzold, B. C., Park, S., Ponce, P., Roozeboom, C., Powell, C., Goodman, M. B., Pruitt, B. L.
2011; 100 (8): 1977-1985
- **Piezoresistive cantilever force-clamp system** *REVIEW OF SCIENTIFIC INSTRUMENTS*
Park, S., Petzold, B. C., Goodman, M. B., Pruitt, B. L.

2011; 82 (4)

- **The major alpha-tubulin K40 acetyltransferase alpha TAT1 promotes rapid ciliogenesis and efficient mechanosensation** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Shida, T., Cueva, J. G., Xu, Z., Goodman, M. B., Nachury, M. V.
2010; 107 (50): 21517-21522
- **Running hot and cold: behavioral strategies, neural circuits, and the molecular machinery for thermotaxis in *C. elegans* and *Drosophila*** *GENES & DEVELOPMENT*
Garrity, P. A., Goodman, M. B., Samuel, A. D., Sengupta, P.
2010; 24 (21): 2365-2382
- **An Arf-like Small G Protein, ARL-8, Promotes the Axonal Transport of Presynaptic Cargoes by Suppressing Vesicle Aggregation** *NEURON*
Klassen, M. P., Wu, Y. E., Maeder, C. I., Nakae, I., Cueva, J. G., Lehrman, E. K., Tada, M., Gengyo-Ando, K., Wang, G. J., Goodman, M., Mitani, S., Kontani, K., Katada, et al
2010; 66 (5): 710-723
- **Neuropeptides strike back** *NATURE NEUROSCIENCE*
Glauser, D. A., Goodman, M. B.
2010; 13 (5): 528-529
- **The Dystrophin Complex Controls BK Channel Localization and Muscle Activity in *Caenorhabditis elegans*** *PLOS GENETICS*
Kim, H., Pierce-Shimomura, J. T., Oh, H. J., Johnson, B. E., Goodman, M. B., McIntire, S. L.
2009; 5 (12)
- **SU-8 force sensing pillar arrays for biological measurements** *LAB ON A CHIP*
Doll, J. C., Harjee, N., Klejwa, N., Kwon, R., Coulthard, S. M., Petzold, B., Goodman, M. B., Pruitt, B. L.
2009; 9 (10): 1449-1454
- **The quest for action potentials in *C. elegans* neurons hits a plateau** *NATURE NEUROSCIENCE*
Lockery, S. R., Goodman, M. B.
2009; 12 (4): 377-378
- **PIEZORESISTIVE CANTILEVER-BASED FORCE-CLAMP SYSTEM FOR THE STUDY OF MECHANOTRANSDUCTION IN *C. ELEGANS*** *22nd International Conference on Micro Electro Mechanical Systems (MEMS)*
Park, S., Petzold, B., Goodman, M. B., Pruitt, B. L.
IEEE.2009: 188-191
- **Thermotaxis is a Robust Mechanism for Thermoregulation in *Caenorhabditis elegans* Nematodes** *JOURNAL OF NEUROSCIENCE*
Ramo, D., MacInnis, B. L., Lee, H., Goodman, M. B.
2008; 28 (47): 12546-12557
- **The *C. elegans* EMAP-like protein, ELP-1 is required for touch sensation and associates with microtubules and adhesion complexes** *BMC DEVELOPMENTAL BIOLOGY*
Hueston, J. L., Herren, G. P., Cueva, J. G., Buechner, M., Lundquist, E. A., Goodman, M. B., Suprenant, K. A.
2008; 8
- **Bidirectional temperature-sensing by a single thermosensory neuron in *C. elegans*** *NATURE NEUROSCIENCE*
Ramo, D., MacInnis, B. L., Goodman, M. B.
2008; 11 (8): 908-915
- **Artificial dirt: Microfluidic substrates for nematode neurobiology and behavior** *JOURNAL OF NEUROPHYSIOLOGY*
Lockery, S. R., Lawton, K. J., Doll, J. C., Faumont, S., COULTHARD, S. M., Thiele, T. R., Chronis, N., McCormick, K. E., Goodman, M. B., Pruitt, B. L.
2008; 99 (6): 3136-3143
- **MEC-2 and MEC-6 in the *Caenorhabditis elegans* sensory mechanotransduction complex: Auxiliary Subunits that enable channel activity** *JOURNAL OF GENERAL PHYSIOLOGY*
Brown, A. L., Liao, Z., Goodman, M. B.
2008; 131 (6): 605-616
- **The Parallel Worm Tracker: A Platform for Measuring Average Speed and Drug-Induced Paralysis in Nematodes** *PLOS ONE*

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- Ramot, D., Johnson, B. E., Berry, T. L., Carnell, L., Goodman, M. B.
2008; 3 (5)
- **Patch clamp recording of ion channels expressed in *Xenopus* oocytes.** *Journal of visualized experiments : JoVE*
Brown, A. L., Johnson, B. E., Goodman, M. B.
2008
 - **Making patch-pipettes and sharp electrodes with a programmable puller.** *Journal of visualized experiments : JoVE*
Brown, A. L., Johnson, B. E., Goodman, M. B.
2008
 - **Pressure-polishing pipettes for improved patch-clamp recording.** *Journal of visualized experiments : JoVE*
Johnson, B. E., Brown, A. L., Goodman, M. B.
2008
 - **Nanoscale organization of the MEC-4 DEG/ENaC sensory mechanotransduction channel in *Caenorhabditis elegans* touch receptor neurons** *JOURNAL OF NEUROSCIENCE*
Cueva, J. G., Mulholland, A., Goodman, M. B.
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