



## Miriam B. Goodman

Professor of Molecular and Cellular Physiology

Molecular & Cellular Physiology

### CONTACT INFORMATION

- **Alternate Contact**

Rachelle Riley - Administrative Assistant

**Email** rachelle.riley@stanford.edu

**Tel** 6507254900

### 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

- Excellence in Diversity and Inclusion, Stanford University School of Medicine (2015)
- Excellence in Graduate Teaching, Stanford University School of Medicine (2014)
- Michael and Kate Barany Award for Young Investigators, Biophysical Society (2014)
- Excellence in Graduate Teaching, Stanford University School of Medicine (2011)
- Klingenstein Fellow in Neuroscience, The Klingenstein Fund (2005-2008)
- McKnight Scholar Award, McKnight Endowment (2005-2008)
- Prize in Neurobiology, Eppendorf & Science (2004)
- Terman Fellow, Stanford University (2002-2005)
- 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, Journal of Neuroscience (2018 - present)
- Reviewing Editor, eNeuro (2017 - present)
- Editorial Board Member, Institute of Physics/Biophysical Society eBooks (2016 - present)
- Editorial Board Member, Section on Ion Channels & Transporters, Biophysical Journal (2013 - 2018)
- Editorial Advisory Board, Journal of General Physiology (2011 - present)
- 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

#### 2018-19

- DataLucence::Images: BIOS 254 (Aut)
- Diversity and Inclusion in Science: BIOS 225 (Win)

#### 2017-18

- Diversity and Inclusion in Science: BIOS 225 (Win)
- Promises and Pitfalls: A Critical Evaluation of Neuroscience Techniques: BIOS 255 (Win)

#### 2016-17

- DataLucence::Images: BIOS 254 (Spr)
- Diversity and Inclusion in Science: BIOS 225 (Win)
- Promises and Pitfalls: A Critical Evaluation of Neuroscience Techniques: BIOS 255 (Win)

#### 2015-16

- Foundations in Experimental Biology: BIOS 200 (Aut)
- Genetic Analysis of Behavior: MCP 216, NBIO 216 (Spr)

## STANFORD ADVISEES

### Doctoral Dissertation Reader (AC)

Katie Ching, Adam Nekimken, Michelle Pang

#### Postdoctoral Faculty Sponsor

Dail Chapman, Alakananda Das, Sylvia Fechner, Ehsan Rezaei, Lingxin Wang

#### Doctoral Dissertation Advisor (AC)

Joy Franco

### GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

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

### Publications

---

#### PUBLICATIONS

- **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
- **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., Fehlauer, 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*

- Kubaneck, 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*  
Fehlauer, 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., Siefe, C., Fischer, S., Mehlenbacher, R. D., Ke, F., 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., Fehlauer, 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): 1965–67
  - **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
  - **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*  
Katta, S., Krieg, M., Goodman, M. B.  
2015; 31: 347–71
  - **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  $\beta$ -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  $\beta$ -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
- **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*  
Ramot, 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*  
Ramot, 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*  
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.  
2007; 27 (51): 14089-14098
- **Dissecting a circuit for olfactory behaviour in *Caenorhabditis elegans*** *NATURE*  
Chalasan, S. H., Chronis, N., Tsunozaki, M., Gray, J. M., Ramot, D., Goodman, M. B., Bargmann, C. I.  
2007; 450 (7166): 63-?
- **Analysis of nematode mechanics by piezoresistive displacement clamp** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Park, S., Goodman, M. B., Pruitt, B. L.  
2007; 104 (44): 17376-17381
- **Gain-of-function mutations in the MEC-4 DEG/ENaC sensory mechanotransduction channel alter gating and drug blockade** *JOURNAL OF GENERAL PHYSIOLOGY*  
Brown, A. L., Fernandez-Illescas, S. M., Liao, Z., Goodman, M. B.  
2007; 129 (2): 161-173
- **Mechanosensation.** *WormBook : the online review of C. elegans biology*  
Goodman, M. B.  
2006: 1-14
- **The MEC-4 DEG/ENaC channel of *Caenorhabditis elegans* touch receptor neurons transduces mechanical signals** *NATURE NEUROSCIENCE*  
O'Hagan, R., Chalfie, M., Goodman, M. B.  
2005; 8 (1): 43-50
- **Measurement of mechanical properties of *Caenorhabditis elegans* with a piezoresistive microcantilever system** *3rd IEEE/EMBS Special Topic Conference on Microtechnology in Medicine and Biology*  
Park, S. J., Goodman, M. B., Pruitt, B. L.  
IEEE.2005: 400-403
- **Molecules and mechanisms of mechanotransduction** *34th Annual Meeting of the Society-for-Neuroscience*  
Goodman, M. B., Lumpkin, E. A., Ricci, A., Tracey, W. D., Kernan, M., Nicolson, T.  
SOC NEUROSCIENCE.2004: 9220-22
- **Deconstructing C-elegans sensory mechanotransduction** *SCIENCE*  
Goodman, M. B.  
2004; 306 (5695): 427-428
- **Eppendorf essay winner. Deconstructing C. elegans sensory mechanotransduction.** *Science (New York, N.Y.)*  
Goodman, M. B.  
2004; 306 (5695): 427-28
- **Sensation is painless** *TRENDS IN NEUROSCIENCES*  
Goodman, M. B.  
2003; 26 (12): 643-645
- **Transducing touch in *Caenorhabditis elegans*** *ANNUAL REVIEW OF PHYSIOLOGY*  
Goodman, M. B., Schwarz, E. M.  
2003; 65: 429-452
- **The mechanosensory protein MEC-6 is a subunit of the C-elegans touch-cell degenerin channel** *NATURE*  
Chelur, D. S., Ernstrom, G. G., Goodman, M. B., Yao, C. A., Chen, L., O'Hagan, R., Chalfie, M.  
2002; 420 (6916): 669-673



- **MEC-2 regulates C-elegans DEG/ENaC channels needed for mechanosensation** *NATURE*  
Goodman, M. B., Ernstrom, G. G., Chelur, D. S., O'Hagan, R., Yao, C. A., Chalfie, M.  
2002; 415 (6875): 1039-1042
- **Pressure polishing: a method for re-shaping patch pipettes during fire polishing** *JOURNAL OF NEUROSCIENCE METHODS*  
Goodman, M. B., Lockery, S. R.  
2000; 100 (1-2): 13-15
- **Active currents regulate sensitivity and dynamic range in C-elegans neurons** *NEURON*  
Goodman, M. B., Hall, D. H., Avery, L., Lockery, S. R.  
1998; 20 (4): 763-772
- **Tight-seal whole-cell patch clamping of Caenorhabditis elegans neurons** *ION CHANNELS, PT B*  
Lockery, S. R., Goodman, M. B.  
1998; 293: 201-217
- **Variations in the ensemble of potassium currents underlying resonance in turtle hair cells** *JOURNAL OF PHYSIOLOGY-LONDON*  
Goodman, M. B., Art, J. J.  
1996; 497 (2): 395-412
- **Positive feedback by a potassium-selective inward rectifier enhances tuning in vertebrate hair cells** *BIOPHYSICAL JOURNAL*  
Goodman, M. B., Art, J. J.  
1996; 71 (1): 430-442
- **Ionic conductances and hair cell tuning in the turtle cochlea** *Conference on New Directions in Vestibular Research*  
Art, J. J., Goodman, M. B.  
NEW YORK ACAD SCIENCES.1996: 103-122
- **A KINETIC DESCRIPTION OF THE CALCIUM-ACTIVATED POTASSIUM CHANNEL AND ITS APPLICATION TO ELECTRICAL TUNING OF HAIR-CELLS** *PROGRESS IN BIOPHYSICS & MOLECULAR BIOLOGY*  
Wu, Y. C., Art, J. J., Goodman, M. B., Fettiplace, R.  
1995; 63 (2): 131-158
- **RAPID-SCANNING CONFOCAL MICROSCOPY** *METHODS IN CELL BIOLOGY, VOL 38*  
Art, J. J., Goodman, M. B.  
1993; 38: 47-77
- **ACTIVATION OF THE INOSITOL TRISPHOSPHATE 2ND MESSENGER SYSTEM BY CAMP IN A MOUSE FIBROBLAST CELL-LINE** *MOLECULAR AND CELLULAR BIOCHEMISTRY*  
HORN, V. J., Sheehy, P. A., Goodman, M. B., Ambudkar, I. S.  
1991; 101 (1): 43-49
- **INOSITOL TRISPHOSPHATE MEDIATES CLONED MUSCARINIC RECEPTOR-ACTIVATED CONDUCTANCES IN TRANSFECTED MOUSE FIBROBLAST A9 L CELLS** *JOURNAL OF PHYSIOLOGY-LONDON*  
Jones, S. V., Barker, J. L., Goodman, M. B., Brann, M. R.  
1990; 421: 499-519
- **CALCIUM CURRENTS AND FURA-2 SIGNALS IN FLUORESCENCE-ACTIVATED CELL SORTED LACTOTROPHS AND SOMATOTROPHS OF RAT ANTERIOR-PITUITARY** *ENDOCRINOLOGY*  
Lewis, D. L., Goodman, M. B., STJOHN, P. A., Barker, J. L.  
1988; 123 (1): 611-621