Miao Zhang, Ph.D.

Associate Professor
Department of Biomedical and Pharmaceutical Sciences
Chapman University, School of Pharmacy
Irvine, CA 92618

A motivated pharmacologist with specialties in structural biology, electrophysiology and chemical biology; intensive experience in the research of Ca^{2+} signaling and ion channels; extensive knowledge in pharmacology; and a passion for pharmaceutical and biomedical research.

Professional Experience

Chapman University, School of Pharmacy Irvine, CA.

Associate Professor (Tenured) 2022-
Assistant Professor (Tenure track) 2015-2022
Searching for novel small molecule drugs for SK Ca^{2+}–activated K^+ channels
Investigating the regulation of SK channels by posttranslational modification
Chair: Reza Mehvar

Virginia Commonwealth University, Richmond, VA. 2012-2014
Research Assistant Professor, Department of Physiology and Biophysics
Searching for novel small molecule drugs for SK Ca^{2+}–activated K^+ channels
Investigating the regulation of channel-phospholipids interactions by posttranslational modification
the structural basis for GIRK channels activation by G proteins
Chair: Diomedes E. Logothetis

Thomas Jefferson University, Philadelphia, PA. 2007-2012
Research Fellow, Department of Molecular Physiology and Biophysics
Investigating the pharmacological modulation of SK channels by small molecules
the structural basis for small molecule modulators of SK channels
the structural basis for calmodulin as a dynamic Ca^{2+} sensor
Supervisor: Ji-Fang Zhang

Graduate School of Pharmaceutical sciences, Kyoto University, Japan. 2006-2007
Graduate School of Medicine, Tohoku University, Japan. 2003-2006
Investigating the role of Calumin, TRIC channels, Sarcalumenin in intracellular Ca^{2+} stores

Graduate School of Medicine, Akita University, Japan. 2002-2003

Investigating the role of PTEN, a tumor suppressor gene in mast cells

Graduate School of Medicine, Shinshu University, Japan. 2001-2002

Investigating the pharmacology of purinergic and adrenergic receptors

Education

Graduate School of Pharmaceutical sciences, Kyoto University, Japan. 2006-2007

Graduate School of Medicine, Tohoku University, Japan. 2003-2006

Thesis: Calumin, a novel Ca^{2+}-binding transmembrane protein on the endoplasmic reticulum.

Advisor: Hiroshi Takeshima

Ph.D., Pharmaceutical Sciences, 2007

Graduate School of Pharmacy, Hebei Medical University, China. 1998-2001

Thesis: Distribution of functional $P2X_1$ receptor in rabbit isolated regional arteries

Advisor: Lei-Ming Ren

M.S., Pharmacology, 2001

School of Pharmacy, Hebei Medical University, China. 1994-1998

B.S., Pharmacy (Honors), 1998

Teaching Experience

Chapman University School of Pharmacy, Irvine, CA

PHRM540, Integrated Therapeutics of Nephrology, Electrolytes and Nutrients, 3 credit hours 2016-present

Students: Pharm.D. candidates

Role: co-coordinator and instructor

Topic: Pathophysiology and Pharmacology, 24.5 contact hours

Teaching evaluation average: 4.7/5.0

PHRM531, Integrated Therapeutics of Psychiatry and Neurology, 5 credit hours 2016-present

Students: Pharm.D. candidates

Role: instructor

Topic: Pharmacology, 15 contact hours

Teaching evaluation average: 4.6/5.0

PHS641/793, Research Seminars, 1 credit hour 2015-present

Students: M.S. and Ph.D. candidates

Role: coordinator

Topic: Research Seminars, 14 contact hours
Teaching evaluation average: 4.3/5.0

PHS612, Selected topics in Pharmaceutical Sciences, 4 credit hours 2018-present
Students: M.S. and Ph.D. candidates
Role: instructor
Topic: Ion channel pharmacology, 8 contact hours
Teaching evaluation average: 4.7/5.0

Graduate School, Virginia Commonwealth University, Richmond, VA. 2014
Appointed to graduate school faculty

Jefferson Medical College, Thomas Jefferson University, Philadelphia, PA 2009-2012
Primarily involved in training of MS graduate student

Graduate School of Medicine, Tohoku University, Japan. 2004-2006
Teaching assistant for undergraduate student

Graduate School of Medicine, Akita University, Japan. 2002-2003
Teaching assistant for undergraduate student

School of Pharmacy, Hebei Medical University, China. 2000-2001
Teaching assistant for undergraduate student

Research Specialties

Chemical Biology, Pharmacology/Physiology, Electrophysiology, Structural Biology, Molecular Biology, Transgenic Mouse Models

Original Research Articles

*Corresponding Author; Trainee names under my supervision are shown in *Italic* font.

1. *Nam YW,* Pala R, *El-Sayed NS,* Larin-Henriquez D, Amirrad F, *Yang G, Rahman MA, Orfali R, Downey M,* Parang K, Nauli SM *, Zhang, M *. Subtype-selective positive modulation of $K_{Ca}2.3$ channels increases cilia length. **ACS Chemical Biology**. 2022 Aug 19;17(8):2344-2354.
   Impact factor: 4.634. Q1: Molecular medicine, Medicine, Biochemistry.
2. *Orfali R, Nam YW,* Nguyen HM, *Rahman MA, Yang G,* Cui M, Wulff H, Zhang M *. Channelopathy-causing mutations in the $S_{45}A/S_{45}B$ and HA/HB helices of $K_{Ca}2.3$ and $K_{Ca}3.1$ channels alter their apparent Ca^{2+} sensitivity. **Cell Calcium.** 2022 Jan 8;102:102538.
   Impact factor: 6.817. Q1: Molecular Biology, Cell Biology, Physiology.

3. *El-Sayed NS, Nam YW,* Egorova PA, Nguyen HM, *Orfali R, Rahman MA, Yang G,* Wulff H, Bezprozvanny I *, Parang K *, Zhang M *. Structure-activity relationship study of subtype-selective positive modulators of $K_{Ca}2$ channels. **Journal of Medicinal Chemistry**. 2022 Jan 13;65(1):303-322.
   Impact factor: 7.446. Q1: Medicinal chemistry.
4. *Nam YW,* Meng Cui, *El-Sayed NS, Orfali R, Nguyen M, Yang G, Rahman MA, Lee J,* Zhang M *. Subtype-selective positive modulation of $K_{Ca}2$ channels depends on the HA/HB helices. **British Journal of Pharmacology.** 2022 Feb;179(3):460-472.
   Impact factor: 8.739. Q1: Pharmacology.
5. *Nam YW,* Kong D, *Wang D, Orfali R,* Sherpa RT, Totonchy J, Nauli SM, Zhang M *. Differential regulation of SK channel subtypes by phosphorylation. **Cell Calcium.** 2021 Mar;94:102346.
   Impact factor: 6.817. Q1: Molecular Biology, Cell Biology, Physiology.
6. *Nam YW,* Cui M, *Orfali R, Viegas A, Nguyen M,* Mohammed EHM, Zoghebi KA, Rahighi S, Parang K, Zhang M *. Hydrophobic interactions between the HA helix and S4-S5 linker modulate apparent Ca^{2+} sensitivity of SK2 channels. **Acta Physiologica (Oxf).** 2021 Jan;231(1):e13552.
   (Editorial: Vitello R, Kerff, F, Liegeois JF. Deciphering the molecular mechanism of SK2 channel activation by intracellular calcium to develop therapeutic agents. Acta Physiologica (Oxf). 2021 Jan;231(1):e13574)
   Impact factor: 6.311. Q1: Physiology.
7. Alfuraih S, Barbarino A, Ross C, Shamloo K, Zhang M, Sharma A *. Effect of high glucose on ocular surface epithelial cell barrier and tight junction proteins. **Investigative Ophthalmology & Visual Science**. 2020 Sep;61(3).
   Impact factor: 4.799. Q1: Ophthalmology.
8. *Nam YW,* Baskoylu SN, Gazgalis D, *Orfali R,* Cui M, Hart AC, Zhang M *. A V-to-F substitution in SK2 channels causes Ca^{2+} hypersensitivity and improves locomotion in a *C. elegans* ALS model. **Scientific Reports.** 2018 Jul 16;8(1):10749.
   Impact factor: 4.379. Q1: Multidisciplinary.
9. *Nam YW, Orfali R,* Liu T, Yu K, Cui M, Wulff H, Zhang M *. Structural insights into the potency of SK channel positive modulators. **Scientific Reports.** 2017 Dec 7;7(1):17178.
   Impact factor: 4.379. Q1: Multidisciplinary.
10. Brown BM, Shim H, Zhang M, Yarov-Yarovoy V, Wulff H *. Structural determinants for the selectivity of the positive $K_{Ca}3.1$ gating modulator 5- methylnaphtho[2,1-d]oxazol-2-amine (SKA-121). **Molecular Pharmacology.** July 31, 2017, mol.117.109421.
    Impact factor: 4.436. Q1: Molecular Medicine, Pharmacology.
11. Zhang M *, Meng XY, Zhang JF, Cui M, Logothetis DE *. Molecular overlap in the regulation of SK channels by small molecules and phosphoinositides. **Science Advances.** 2015 Jul e1500008.
    Impact factor: 14.136. Q1: Multidisciplinary.
12. Zhang M, Meng XY, Cui M, Pascal JM, Logothetis DE, Zhang JF *. Selective phosphorylation modulates the PIP2 sensitivity of the CaM-SK channel complex. **Nature Chemical Biology.** 2014 Sep 10(9):753-9.
    Impact factor: 15.040. Q1: Cell Biology, Molecular Biology.

13. Mahajan R, Ha J, Zhang M, Kawano T, Kozasa T, Logothetis DE *. A Computational Model Reveals the Action of Gβγ at an Inter-Subunit Cleft to Activate GIRK1 Channels. **Science Signaling.** 2013 Aug 13; 6 ra69. (Selected as Cover for the issue)
    Impact factor: 8.192. Q1: Cell Biology, Molecular Biology, Biochemistry.
14. Zhang M, Pascal JM, Zhang JF *. Unstructured to structured transition of an intrinsically disordered protein fragment in coupling Ca^{2+}-sensing and SK channel activation. **Proc Natl Acad Sci USA.** 2013 Mar 19;110(12):4828-33.
    Impact factor: 11.205. Q1: Multidisciplinary.
15. Zhang M, Pascal JM, Schumann M, Armens RS, Zhang JF *. Identification of the functional binding pocket for compounds targeting small-conductance Ca^{2+}-activated potassium channels. **Nature Communications.** 2012 Aug 28;3:1021.
    Impact factor: 14.919. Q1: Multidisciplinary.
16. Zhang M, Abrams C, Wang L, Gizzi A, He L, Lin R, Chen Y, Loll PJ, Pascal JM, Zhang JF *. Structural basis for calmodulin as a dynamic calcium sensor. **Structure (Cell Press).** 2012 May 9;20(5):911-23.
    Impact factor: 5.006. Q1: Molecular Biology, Structural Biology.
17. Zhang M, Yamazaki T, Yazawa M, Treves S, Nishi M, Murai M, Shibata E, Zorzato F, and Takeshima H *. Calumin, a novel Ca^{2+}-binding protein on the endoplasmic reticulum. **Cell Calcium.** 2007 Jul;42(1):83-90.
    Impact factor: 6.817. Q1: Molecular Biology, Cell Biology, Physiology.
18. Yazawa M, Ferrante C, Feng J, Mio K, Ogura T, Zhang M, Lin PH, Pan Z, Komazaki S, Kato K, Nishi M, Zhao X, Weisleder N, Sato C, Ma J, Takeshima H *. TRIC channels are essential for Ca^{2+} handling in intracellular stores. **Nature.** 2007 Jul 5;448(7149):78-82.
    Impact factor: 49.962. Q1: Multidisciplinary.
19. Yoshida M, Minamisawa S, Shimura M, Komazaki S, Kume H, Zhang M, Matsumura K, Nishi M, Saito M, Saeki Y, Ishikawa Y, Yanagisawa T, Takeshima H *. Impaired Ca^{2+} store functions in skeletal and cardiac muscle cells from sarcalumenin-deficient mice. **J Biol Chem.** 2005 Feb 4;280(5):3500-6.
    Impact factor: 5.157. Q1: Molecular Biology, Cell Biology, Biochemistry.
20. Zhang M, Zhao D, Wang MY, Ren LM *. Effect of urethane on insulin level in rats. **Chin J Pharmacol Toxicol.** 2003; 17(5).
    Impact factor: 0.08. Q4: Pharmacology.
21. Ren LM *, Zhang M. Distribution of functional $P2X_1$ receptor in rabbit isolated regional arteries. **Acta Pharmacol Sin.** 2002; 23(8):721-726.
    Impact factor: 6.150. Q1: Pharmacology.
22. Ren LM *, Zhang M, Yuan ZF, Zhu ZN, Shi CX. Influence of stretch on α1 receptor agonist phenylephrine regulated vasoconstriction in rabbit regional arteries. **Chin J Pharmacol Toxicol.** 2002; 16(4): 255-260.
    Impact factor: 0.08. Q4: Pharmacology.

Complete List of Published work in MyBibliography:
https://www.ncbi.nlm.nih.gov/myncbi/miao.zhang.1/bibliography/public/

Invited Reviews

1. *Nam YW, Downey M, Rahman MA,* Cui M, Zhang M *. Channelopathy of small- and intermediate-conductance Ca^{2+}-activated K^+ channels. **Acta Pharmacologica Sinica.** 2022 Jun 17;
   Impact factor: 6.15. Q1: Pharmacology.
2. Cui M, Qin G, Yu K, Bowers MS, Zhang M *. Targeting the Small- and Intermediate-Conductance Ca^{2+}-Activated Potassium Channels: The Drug-Binding Pocket at the Channel/Calmodulin Interface. **Neurosignals**. 2014; 22:65-78.
   Impact factor: 6.143. Q2: Neurology.
3. Logothetis DE *, Petrou VI, Zhang M, Mahajan R, Meng XY, Adney SK, Cui M, Baki, L. Phosphoinositide control of membrane protein function: a frontier led by studies on ion channels. **Annu Rev Physiol**. 2015; 77:10.1-10.24.
   Impact factor: 16.106. Q1: Physiology.

Invited Talks & Meetings

1. Structure-function studies of Small-Conductance Ca^{2+}-Activated Potassium Channels. **University of Texas Southwestern Medical Center**. Dallas, TX. April 26th, 2022.
2. Ion channels and drug discovery. **Chapman University Schmid College of Science and Technology**. Orange, CA. November 19th, 2019.
3. Allosteric modulation of SK channels. **University of California, Davis. Davis, CA.** April 17th, 2018.
4. **AHA/ASA Research Leaders Academy**. San Antonio, TX. July 24-26th, 2016.
5. Targeting the Small-Conductance Ca^{2+}-Activated Potassium Channels. **University of Texas Southwestern Medical Center**. Dallas, TX. April 13th, 2015.

Conference Presentations

1. *Rahman MA, Nam Y-W, Yang G, Downey M*, *Orfali R,* Cui M, Zhang M *. Structure-function studies of loss-of-function $K_{Ca}2.2$ mutant channels. **Biophysical Society 67th Annual Meeting,** February 19-23rd, 2023. San Diego, CA.
2. *Orfali R, Nam Y-W, Rahman MA, Downey M*, *Yang G,* Zhang M *. Genetic Mutations of $K_{Ca}2.3$ and $K_{Ca}3.1$ Channels Affect Calcium Sensitivity. **Society for Neuroscience Annual Meeting,** November 12-16th, 2022. San Diego, CA.
3. *El-Sayed NS, Nam YW,* Egorova PA, Nguyen HM, *Orfali R, Rahman MA, Yang G,* Wulff H, Bezprozvanny I *, Parang K *, Zhang M *. Structure-activity relationship study of subtype-selective positive modulators of $K_{Ca}2$ channels. **Gordon Conference Ca^{2+} Signaling,** June 23rd, 2022. Ventura, CA.
4. *Nam YW,* Cui M, *Orfali R, Rahman MA, Yang G,* Zhang M *. Positive modulation of SK channels by CyPPA depends on the HA/HB helices. **Biophysical Society 66th Annual Meeting,** February, 2022. San Francisco, CA.

5. Yu W, Park SH, Zhang M, *El-Sayed NS,* Parang K, *Nam YW,* Zhang M *. Evaluation of positive allosteric modulators of SK2 channels using QPatch. **Society for Neuroscience Global Connectome,** January 11-13th, 2021. Online.
6. *Nam YW, Aldakhil T, Wang D, Viegas A,* Zhang M *. Differential roles of SK channel subtypes in vascular endothelial cells. **Biophysical Society 64th Annual Meeting,** February, 2020. San Diego, CA.
7. Sharifi B, Rahighi S, *Nam YW,* Fong S, Zhang M, Yang S *. Development of novel Apurinic/Apyrimidinic endonuclease/redox-factor 1 inhibitors for human melanoma. **8th International Congress on Cancer Metastasis,** October, 2019. San Francisco, CA.
8. *Nam YW, Vu H, Lee R, Wong P, Aldakhil T, Viegas A,* Zhang M *. SK channel in the vascular endothelial cells. **American Heart Association BCVS Conference,** July, 2019. Boston, MA.
9. *Nam YW,* Baskoylu SN, *Vu H, Lee R, Wong P,* Hart AC, Zhang M *. A mutation SK channel rescued locomotion defects *C. elegans* ALS model. **Biophysical Society 63rd Annual Meeting,** March, 2019. Baltimore, MD.
10. *Viegas A, Nam YW,* Baskoylu SN, *Orfali R,* Hart AC, Zhang M *. A mutant SK channel that is hypersensitive to Ca^{2+}. **Society for Neuroscience Annual Meeting,** November 6th, 2018. San Diego, CA.
11. *Orfali R, Nam YW, Viegas A,* Zhang M *. Structure-activity relationship studies of SK channel modulation. **Experimental Biology Meeting,** April, 2018. San Diego, CA.
12. *Nam YW,* Baskoylu SN, Cui M, *Orfali R,* Hart AC, Zhang M *. A Mutant SK2 Channel Hypersensitive to Ca^{2+}. **Ataxia Investigators Meeting,** April, 2018. Philadelphia, PA.
13. *Nam YW,* Baskoylu SN, Cui M, *Orfali R,* Hart AC, Zhang M *. A mutation in the intrinsically disordered fragment of SK2 channel confers Ca^{2+} hypersensitivity. **Biophysical Society 62nd Annual Meeting,** February, 2018. San Francisco, CA.
14. *Nam YW, Orfali R, Viegas A,* Zhang M *. Structure-activity relationship studies of SK channel positive allosteric modulators. **Society for Neuroscience Annual Meeting,** November, 2017. Washington, DC.
15. *Siwiecki S, Nam YW, Whitmore BJ, Orfali R*, Zhang M *. Mutagenesis study on the Ca^{2+} sensitivity of SK2 channels. **Experimental Biology 2017**, April 25th, 2017. Chicago, IL.
16. *Nam YW, Whitmore BJ, Orfali R,* Zhang M *. Mutagenesis study on the Ca^{2+} sensitivity of SK2 channels. **Biophysical Society 61th Annual Meeting**, February 12th, 2017. New Orleans, LA.
17. *Whitmore BJ, Nam YW, Orfali R,* Zhang M *. Allosteric Modulation of SK Channels. **Society for Neuroscience Annual Meeting,** November 2016, San Diego, CA.
18. Zhang M *, *Nam YW, Ali S, Alexander T, Stephen Chiang*. Allosteric Modulation of SK Channels. **Experimental Biology 2016,** April 2016, San Diego, CA.
19. *Nam YW, Sara Ali, Chiang S, Alexander T,* Zhang M *. Positive Allosteric Modulation of SK Channels by Riluzole. **Biophysical Society 60th Annual Meeting,** February 2016, Los Angles, CA (Platform Oral Presentation)
20. *Alexander T, Sara Ali, Chiang S*, Zhang M *. Structural basis for the positive modulation of SK2 channel by riluzole. **Society for Neuroscience Annual Meeting,** October 2015, Chicago, IL.

21. Zhang M, Meng XY, Zhang JF, Cui M, Logothetis D *. Molecular overlap in the regulation of SK channels by small molecules and phophoinositides. **Society for Neuroscience Annual Meeting,** November 2014, Washington, DC.
22. Zhang M, Meng XY, Cui M, Zhang JF, Logothetis D *. PIP_2-channel interaction as a critical element in regulation of SK channel activity. **Biophysical Society 58th Annual Meeting,** February 2014, San Francisco, CA
23. Leal-Pinto E, Ha J, Kawano Y, Zhang M, Tang QY, Gomez-Liorente Y, Chavez, J, Ubarretxena I, Logothetis D *. Requirement for an activated G protein (Galpha) subunit for Gbetagamma activation of the purified mammalian GIRK1 channel reconstituted in planar bilayers. **Biophysical Society 58th Annual Meeting,** February 2014, San Francisco, CA
24. Zhang M, Pascal JM, Schumann M, Armens RS, Zhang JF *. Targeting the channel-calmodulin interface of small-conductance Ca2+-activated potassium channels. **Biophysical Society 57th Annual Meeting,** February 6, 2013, Philadelphia, PA (Platform Oral Presentation)
25. Zhang M, Zhang JF *. Fine tuning of calmodulin's affinity for Ca^{2+} by target protein. **Biophysical Society 56th Annual Meeting,** February 2012, San Diego, CA.
26. Zhang M, Abrams C, Wang L, Gizzi A, He L, Lin R, Chen Y, Loll PJ, Pascal JM, Zhang JF *. Structural basis for calmodulin as a dynamic calcium sensor. **Society for Neuroscience Annual Meeting,** November 2011, Washington, DC.
27. Zhang M, Abrams C, Wang L, Gizzi A, He L, Lin R, Chen Y, Loll PJ, Pascal JM, Zhang JF *. Ca^{2+} sensitivity of Small-conductance Ca^{2+}-activated potassium channel (SK2) is regulated by alternative splicing. **Biophysical Society 55th Annual Meeting,** March 2011, Baltimore, MD.
28. Zhang M, Yamazaki T, Yazawa M, Treves S, Nishi M, Murai M, Shibata E, Zorzato F, and Takeshima H *. Calumin, a novel Ca^{2+}-binding transmembrane protein on the endoplasmic reticulum. **Biophysical Society 51st Annual Meeting,** March 2007, Baltimore, MD.
29. Zhang M, Yamazaki T, Yazawa M, Nishi M, and Takeshima H *. Calumin, a novel Ca^{2+}-binding transmembrane protein on the endoplasmic reticulum. **21st Century COE Program Symposium,** January 2007, Kyoto, Japan.

*Corresponding Author; Trainee names under my supervision are shown in *Italic font*.

Extramural Research Support

Active:

NIH (4R33NS101182-03) Zhang/Bezprozvanny (Multi-PI) 12/01/2020-11/30/2023 (NCE)

Development of SK channel modulators as therapeutic agents for ataxia

The goal of this study is to validate lead compounds of subtype-selective SK2/3 channel modulators using biophysical and ex vivo techniques.

Role: Principal Investigator

Completed:

NIH (NINDS IGNITE Grant, 1R21NS101182-01) Zhang/Bezprozvanny (Multi-PI) 12/01/2017-11/30/2020
Development of SK channel modulators as therapeutic agents for ataxia
The goal of this study is to search for subtype-selective SK2/3 channel modulators using structural and biophysical techniques.
Role: Principal Investigator

American Heart Association (13SDG16150007) Zhang (PI) 07/01/2013-06/30/2017
Molecular overlap in the regulation of SK channels by small molecules and phosphoinositides
The goal of this study is to investigate the molecular overlap in the regulation of SK channels by NS309 and phosphoinositides (PIP_2).
Role: Principal Investigator

Ataxion Therapeutics Inc. Zhang (PI) 09/23/2015-09/22/2017
Structure determination of the drug binding pocket for SK2/3 selective modulators
The goal of this study is to determine the structure of SK2/3 selective modulators in complex with their binding pocket in SK2 channel.
Role: Principal Investigator

National Ataxia Foundation Zhang (PI) 01/01/2015-12/31/2015
Structural insights for drug discovery targeting SK2/3 channels for SCA
The goal of this study is to determine the crystal structure of CyPPA in complex with its binding pocket in SK2 channel.
Role: Principal Investigator

Internal Awards at Chapman University

Completed:

Faculty Opportunity Fund from Chapman University 06/01/2020-05/31/2021
Cardiac Cell Death Induced by SK Channel Negative Modulators
The goal of this study is to investigate the protective role of SK channels in the cardiac cells.
Role: Principal Investigator

Faculty Opportunity Fund from Chapman University 06/01/2018-05/31/2019
Protective Role of SK Channels in the Endothelial Cells
The goal of this study is to identify the SK channel subtype that protects the vascular endothelial cells.
Role: Principal Investigator

Scholarly Creativity Activity Grant Award from Chapman University 06/01/2017-05/31/2018
Mutagenesis study of the Ca^{2+} hypersensitivity of the SK2 ion channel

The goal of this study is to reveal the structure-function relationship of the Ca^{2+} sensitivity of SK channels
Role: Principal Investigator

Scholarly Creativity Activity Grant Award from Chapman University 06/01/2015-05/31/2016
Hydrogen sulfate regulates ion channels in vasculature
The goal of this study is to study the regulation of ion channels in blood vessels and its role in blood pressure control.
Role: Principal Investigator

Travel Award from Chapman University ORSPA 05/06/2015
The award supported my travel to NIH regional seminar in Baltimore, MD.

Young Investigator Award from Chapman University 05/07/2015
The award honors faculty who has sought and received external support for their work, as well as those who have demonstrated exceptional scholarship and creative activity in their fields.

Previous Awards

Postdoctoral Travel Award, Thomas Jefferson University, Philadelphia, PA	2011
Japan Student Services Organization (JASSO) Honors Scholarship	2006-2007
Japan Society for the Promotion of Science (JSPS) 21st Century COE Fellowship	2004-2007
Japan Student Services Organization (JASSO) Honors Scholarship	2003-2004
Japan Student Services Organization (JASSO) Scholarship for Short-Term Study	2001-2002
Graduate Honors, Hebei Medical University, China	1998
Scholarships, Hebei Medical University, China	1994-1997

Grant Review

Israel Science Foundation	02/01/2021
Virginia Commonwealth University CCTR Endowment Fund	05/26/2020
American Heart Association Transformational Project Awards Vascular Sciences Committee	03/17/2020
NIH Molecular and Integrative Signaling Transduction (MIST) Study Section	02/19/2020
American Heart Association Transformational Project Awards Vascular Sciences Committee	03/08/2019

Ad hoc Reviewer

Cell death and disease (Nature Publishing group)
Molecular Pharmacology
PLOS ONE
Current Pharmaceutical Biotechnology
Current Topics in Medicinal Chemistry

Acta Pharmacologica Sinica (Nature Publishing group)
Journal of Physiology, Pathophysiology and Pharmacology
International Journal of Molecular Sciences
Current Drug Targets
Neuroscience Bulletins

Editorial Board

Scientific Reports (Nature Publishing group) 2018-present

Research Mentorship

Postdoctoral Fellow Advisee

Young Woo Nam, Chapman University School of Pharmacy, 2015-present
Naglaa Salem El-Sayed, Chapman University School of Pharmacy, 2018-2020

Ph.D. Advisee

Razan Orfali, Chapman University School of Pharmacy, 2020-present
Mohammad Asikur Rahman, Chapman University School of Pharmacy, 2020-present

M.S. Advisee

Razan Orfali, Chapman University School of Pharmacy, 2016-2018

Pharm.D. Capstone Project Advisee

Rachel Lee, Chapman University School of Pharmacy, 2018-2019
Hannah Vu, Chapman University School of Pharmacy, 2018-2019
Pammie Wong, Chapman University School of Pharmacy, 2018-2019
Michele Le, Chapman University School of Pharmacy, 2019-2020
Maria Akhnouka, Chapman University School of Pharmacy, 2019-2020
Kimberly Diep, Chapman University School of Pharmacy, 2019-2020
Lisa Tran, Chapman University School of Pharmacy, 2019-2021
Judy Lee, Chapman University School of Pharmacy, 2020-2021
Young Hur, Chapman University School of Pharmacy, 2021-2022
Misa Nguyen, Chapman University School of Pharmacy, 2021-2022
Lucia Basilio, Chapman University School of Pharmacy, 2021-2022
Elyn Lam, Chapman University School of Pharmacy, 2022-2023
Nadeen Naguib, Chapman University School of Pharmacy, 2022-2023
Nikita Dave, Chapman University School of Pharmacy, 2022-2023

Pharm.D. APPE Rotation Advisee

Michael Phan, Chapman University School of Pharmacy, 2017-2018
Sadaf Toutouni, Chapman University School of Pharmacy, 2017-2018
Aryan Shirazi, Chapman University School of Pharmacy, 2017-2018
Michele Le, Chapman University School of Pharmacy, 2020-2021

Undergraduate Research Advisee
Tia Alexander, Chapman University School of Pharmacy, 2015-2016
Benji Whitmore, Chapman University School of Pharmacy, 2016
Sara Siwiecki, Chapman University School of Pharmacy, 2016
Adam Viegas, Chapman University School of Pharmacy, 2017-2020
Grace Yang, Chapman University School of Pharmacy, 2020-
Myles Downey, Chapman University School of Pharmacy, 2022-

Volunteer Research Advisee
Sara Ali, Saddleback College, 2015-2016
Kristy Harada, Chapman University School of Pharmacy, 2017
Melody Ra, Chapman University School of Pharmacy, 2017
Misa Nguyen, Chapman University School of Pharmacy, 2020

Professional Membership
American Heart Association
Biophysical Society
Society for Neuroscience