

Curriculum Vitae
Eric R. Gross MD, PhD

Personal Information:

Stanford University
Department of Anesthesiology, Perioperative and Pain Medicine
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Education:

Year	Degree	Institution	Field/Discipline	Honor/Award
2007	MD	Medical College of Wisconsin		
2005	PhD	Medical College of Wisconsin	Pharmacology	
2000	MS	Marquette University	Biomedical Engineering	
1997	BS	Marquette University	Biomedical Engineering	Magna Cum Laude

Residency and Fellowship Training:

Year(s)	Title	Specialty/Discipline	Place of Training
2011-2012	Fellowship Training	Anesthesia Research	Stanford University
2008-2011	Residency Training	Anesthesiology	Stanford University
2007-2008	Transitional Year Intern	Medicine Focus	St. Joseph, Milwaukee

Licensure and Certification:

Year	Type of License or Certification	Registration #	State Issuing
2008-Pres	Medical License	A105620	California
2008-Pres	DEA License		
2013	Anesthesiology Board Certification	50941	
2018	ACLS Recertification		

Academic Appointments:

Year(s)	Academic Title	Institution
2014-Pres	Assistant Professor (Tenure Track)	Stanford University
2012-2014	Instructor	Stanford University
2007-2008	Adjunct Instructor	Medical College of Wisconsin
2003-2005	Adjunct Faculty	Carroll University, Waukesha, WI

Clinical Teaching Responsibilities:

Year(s)	Role	Institution/Organization
2014-Pres	Resident Libero Lectures (~2-4x per year)	Stanford University

2014-2020 Co-director, Anesthesia for Interventional Cardiology and Out of Operating Room Resident Rotation Stanford University

2011-Pres Resident Supervision During Patient Care Stanford University

Other Teaching Experience:

Date(s)	Course/Lecture Name	Institution
2018	MED287/Precision Medicine for Anesthesia	Stanford University
2017-Pres	ANES199/Lab-based independent study	Stanford University
2015-Pres	BIOX199/Lab-based independent study	Stanford University
2014	HHD223/Local Anesthetics	Stanford University
2013-Pres	ANES215/Co-Director, Neuroscience Journal Club	Stanford University
2004-2005	Pharmacology, Small Group Leader	Medical College of Wisconsin
2003-2006	Pharmacology, Medical Student Tutor	Medical College of Wisconsin
2003-2005	Pharmacology Instructor For Nursing, Physical Therapy Masters Students	Carroll College
1995-1997	Physics 001/002 Teaching Assistant	Marquette University

Students / Trainees:

Name	Relationship	Yr Trained	Current Title	Current Institution
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Present:

Feng Xiao	Research Advisor	2019-	Visiting Scholar	Stanford University
Freeborn Rwere	Research Advisor	2019-	Instructor	Stanford University
Vanessa Zambelli	Research Advisor	2019-	Visiting Scholar	Stanford University
Didi Goodnough	Research Advisor	2019-	Resident	Stanford University
Xuan Yu	Postdoc Advisor	2018-	Postdoc Fellow	Stanford University

Alumni:

Joe White	Research Advisor	2019-2020	Med Student	Georgetown U
Shu-Fang He	Research Advisor	2017-2020	Research Assistant	Anhui, China
Ri Chen	Research Advisor	2017-2020	Undergrad Student	Stanford University
Sunwoo Kang	Research Advisor	2017-2020	Undergrad Student	Stanford University
Xiacong Zeng	Research Advisor	2017-2019	Assistant Professor	Guangxi Medical U
Annabel Chen	Research Advisor	2015-2019	Medical Student	Stanford University
Stacy McAllister	Research Advisor	2015-2019	Assistant Professor	Emory University
Pritam Sinharoy	Postdoc Advisor	2016-2018	Postdoc Scholar	AstraZeneca
Yun Wu	Research Advisor	2016-2018	Assistant Professor	Second Affiliated Hospital, Anhui, China
Nir Qvit	Research Advisor	2015-2017	Assistant Professor	Bar-Ilan, Israel
Helen Heymann	Research Advisor	2016-2017	Anesthesia Resident	Stanford University
Nana Wagner	Research Advisor	2015-2017	Assistant Professor	Muenster, Germany
Hanit Piplani	Research Advisor	2015-2017	Postdoc Scholar	Cedars-Sinai
Leonie Wijarmars	Research Advisor	2015	Surgery Resident	Leiden, Netherlands

Yao Lu	Research Advisor	2015-2016	Assistant Professor	First Affiliated Hospital, Anhui, China
Andre Pinesett	Research Advisor	2012-2015	Anesthesia Resident	UCSD
Anil Panigrahi	Clinical Advisor	2012-2015	Assistant Professor	Stanford University
Bryce Small	Research Advisor	2013-2015	Medical Student	Johns Hopkins
Sarah MacInnes	Research Advisor	2014	Staff Scientist	MyoKardia
Travis Urban	Research Advisor	2012-2013	Neurology Resident	Stanford University
Zhuldyz Zhanzak	APS Advisor	Summer 2018	Graduate Student	Emory University
Raymond Liu	FAER Advisor	Summer 2018	Medical Student	U of Pennsylvania
Julia Kultchytka	APS advisor	Summer 2017	Undergrad Student	LA City College
Michael Do	Research Advisor	Summer 2014	Anesthesia Attending	UCSF
Brian Perez	USRP Co-Advisor	Summer 2013	Graduate Student	Stanford University
Uma Avula	Research Advisor	Summer 2013	Medical Student	Indiana University

Trainee Grants and Awards:

- 2020: Freeborn Rwere, CARE Stanford Seed Grant (\$10,000)
- 2020: Xuan Yu, TRDRP Postdoctoral Fellowship Grant (\$207,000)
- 2018: Pritam Sinharoy, TRDRP Postdoctoral Award Recipient (\$223,074)
- 2018: Raymond Liu, FAER Medical Student Anesthesia Research Fellowship (\$4,000)
- 2018: Zhuldyz Zhanzak, American Physiological Society Undergraduate Awardee (\$4,300)
- 2018: Pritam Sinharoy, Stanford University Cardiovascular Institute travel award (\$750)
- 2018: Pritam Sinharoy, AJP Cardiovascular Trainee Award at Experimental Biology (\$800)
- 2017: Stacy McAllister, K99/R00 recipient from NICHD (\$252,000)
- 2017: Stacy McAllister, Selected trainee to attend the North American Pain School
- 2017: Annabel Chen, Stanford Biology Major Grant (\$6,500)
- 2017: Juliia Kulchytka, American Physiological Society Undergraduate Awardee (\$4,300)
- 2016: Yao Lu, Finalist for IARS Scholar Award, IARS/AUA annual meeting
- 2016: Nana Wagner, Resident Travel Award AUA annual meeting (\$1,000)
- 2016: Annabel Chen, Stanford Bio-X USRP Fellowship (\$6,500)
- 2016: Helen Heymann, FAER Medical Student Year-Long Fellowship (\$60,000)
- 2015: Nana Wagner, DFG (German NIH equivalent) Fellowship (\$166,000)
- 2015: Stacy McAllister, NIGMS T32 fellowship, Henzl-Gabor Young Women in Science Award
- 2015: Leonie Wijermars, Dutch Kidney Foundation Research Grants (totaling €25,000)
- 2015: Bryce Small, NHLBI Diversity Supplement Award HL1092120S1 (\$28,000)
- 2014: Michael Do, FAER Best Outcomes Research Project, ASA Annual Meeting
- 2014: Michael Do, FAER Medical Student Anesthesia Research Fellowship
- 2014: Sarah MacInnes, AHA Travel Award to AHA BCVS Meeting, July 2014 (\$750)
- 2013: Andre Pinesett, Society of Physician Scholars Research Grant (\$5,000)
- 2013: Uma Avula, FAER Medical Student Anesthesia Research Fellowship (\$4,000)

Hospital or Affiliated Institution Appointments:

Year(s)	Title	Hospital/Affiliated Institution
2014-Pres	Assistant Professor, University Tenure Line	Stanford University
2011-2014	Instructor	Stanford University

Major Administrative Responsibilities or Committee Assignments:

Year(s)	Title	Institution (local, national, government, foundation)
2016-Pres	Member Research Executive Committee, Department of Anesthesiology, Perioperative and Pain Medicine	Stanford University
2012-Pres	Director, Anesthesia Research Seminar Series Research and Development	Stanford University
2013-Pres	Co-Director, Neuroscience Scholarly Concentration Program for Medical Scholars	Stanford University
2009-2016	Member, Pharmacy and Therapeutics Committee	Stanford University

Other Professional Positions:

Year(s)	Position/Title	Institution/Company
2018-2020	Member, ASA committee on Research	American Association of Anesthesiologists
2018-2020	Vice-Chair, ASA subcommittee on abstract review, Experimental Circulation	American Association of Anesthesiologists
2016-Pres	Member, IARS IMRA grant study section	International Anesthesia Research Society
2015-Pres	Steering Committee Member	International ALDH2 STAR consortium
2018, 2019	Grant reviewer	FWF Austrian Science Fund
2009-2014	Member, Society of Physician Scholars	Stanford University

Professional Societies:

Year(s)	Role	Society
2018-Pres.	Member	American Society for Experimental Pharmacology and Therapeutics (ASPET)
2016-Pres.	Member	American Physiological Society
2015-Pres.	Member	Association of University Anesthesiologists
2013-Pres.	Member	International Society for Heart Research (ISHR)
2007- Pres.	Member	International Anesthesia Research Society (IARS)
2006- Pres.	Member	American Society of Anesthesiology (ASA)
2003- Pres.	Member	American Heart Association, Basic Cardiovascular Science

Reviewer for Scientific Journals:

Year(s)	Role	Journal
2019-	Editorial board	Scientific Reports
2018-	Editorial advisory board	J. Pharmacology and Experimental Therapeutics
2018-	<i>ad hoc</i> reviewer	Journal of Clinical Investigation
2018-	<i>ad hoc</i> reviewer	Annals of Internal Medicine
2017-	<i>ad hoc</i> reviewer	British Journal of Anesthesiology
2017-	<i>ad hoc</i> reviewer	Journal of Molecular and Cellular Cardiology
2014-2018	<i>ad hoc</i> reviewer	J. Pharmacology Experimental Therapeutics
2013-Pres	<i>ad hoc</i> reviewer	British Journal of Pharmacology
2013-Pres	<i>ad hoc</i> reviewer	Basic Research in Cardiology
2013-Pres	<i>ad hoc</i> reviewer	Anesthesiology

Post-Degree Honors and Awards:

Year(s)	Honor/Award	Grantor
2019	Invited Visiting Professor, Anesthesiology	University of California San Francisco
2019	Keynote Lecture, Anesthesiology	Ruijin Hospital, Shanghai, China
2018	Top 10% of reviewers	<i>Anesthesiology</i>
2017	Invited Visiting Professor, Anesthesiology	Washington University, St. Louis
2017	3 rd place research presentation	California Society of Anesthesiologists
2016	NIGMS early career MIRA award recipient	NIH, NIGMS
2016	Top 10% of reviewers	<i>Anesthesiology</i>
2015	Best Poster Presentation, Basic Science	Academic University Anesthesiologists
2015	Top 10% of reviewers	<i>Anesthesiology</i>
2014	Stanford CVI Retreat, Poster Award, 2 nd	Stanford University
2013	'Best of Meeting' Award Winner	International Anesthesia Research Society
2013	'Best of Category' Abstract Award Winner	International Anesthesia Research Society
2012	Best Anesthesia Abstract Research Award	Stanford University
2011	Resident Research Award	Stanford University
2010	NYSSA Research Award, 1 st place	New York Society of Anesthesiologists
2010	Kosaka Award Finalist	International Anesthesia Research Society
2010	1 st Place Award, Research	Western Anesthesia Resident Conference
2010	3 rd Place Award, Research	Cal. Society of Anesthesiologists
2008	FAER Scholar- ASA National Meeting	FAER
2005	Graduate Student Travel Award	ASPET
2005	Young Investigator Award, Runner-Up	International Society For Heart Research
2005	Summer Institute for Medical Students	Betty Ford Center
2004	Professional Opportunity Award, Cardiac	Proctor and Gamble
2004	2 nd Place, Cardiovascular Student Paper	ASPET
2004	World Congress Travel Award	ISHR-XVIII
2003	3 rd Place, Cardiovascular Student Paper	ASPET
2003	New Investigator Award	AHA Basic Science Council

Other Study and Research Opportunities:

Current:

Title: Precision medicine for Asian Americans requiring anesthesia
Source: NIH, NIGMS MIRA R35, GM119522
Role: Principal Investigator
Dates: August 2016- June 2021
Amount: \$1,854,903

Title: E-cigarette aerosol effects on the cardiovascular system in rodents
Source: NIH/NHLBI R01, HL144388
Role: Principal Investigator
Dates: September 2018- August 2022
Amount: \$1,904,680

Pending:

None

Completed or Declined:

Title: Role of the phosphatidylinositol-3 kinase pathway in delayed cardioprotection
Source: American Heart Association, Northland Affiliate
Role: Principal Investigator, Pre-Doctoral Fellowship
Dates: July 1, 2003 - June 30, 2005

Title: Role of the TRPV1 receptor in myocardial salvage from ischemia-reperfusion injury
Source: American Heart Association
Role: Principal Investigator, Fellow to Faculty Transition Award
Dates: Awarded July 1, 2011, Declined due to receiving K99/R00 Award

Title: Ethnic Differences of In-hospital Morbidity and Mortality
Source: Stanford Society of Physician Scholars
Role: Co-Investigator with Andre Pinesett
Dates: June 2013-July 1 214
Amount: \$5,000

Title: Role of the TRPV1 receptor in myocardial salvage from ischemia-reperfusion injury
Source: NIH, NHLBI
Role: Principal Investigator, K99, HL109212
Dates: July 15 2011- June 30 2014
Amount: \$266,382

Title: Role of the TRPV1 receptor in myocardial salvage from ischemia-reperfusion injury
Source: NIH, NHLBI
Role: Principal Investigator, Diversity Supplemental Award

Dates: Jan 2015- Dec 30 2015
Amount: \$28,118

Title: Presence of ALDH2 Inhibitors In Drugs Measured By Mass Spectrometry
Source: Stanford SUMs Seed Grant
Role: Principal Investigator
Dates: Jan 2015-Dec 2015
Amount: \$5,000

Title: Reducing Reactive Aldehyde Levels to Treat Endometriosis-Associated Pain
Source: Women and Sex Differences in Medicine Center, Stanford University
Role: Co-PI
Dates: January 2016 – October 2016
Amount: \$20,000

Title: Developing an endothelial cell resistant to hyperglycemia-induced endothelial cell dysfunction
Source: Stanford Cardiovascular Institute and Diabetes Resource Center
Role: Principal Investigator
Dates: September 2016- August 2017
Amount: \$12,500

Title: Reducing reactive aldehyde levels to treat endometriosis
Source: Endometriosis Foundation of America
Role: Principal Investigator
Dates: March 2017 – February 2018
Amount: \$12,500

Title: Role of the TRPV1 receptor in myocardial salvage from ischemia-reperfusion injury
Source: NIH, NHLBI, R00, HL109212
Role: Principal Investigator
Dates: July 1 2014- June 30 2018
Amount: \$746,997

Title: E-cigarette chemical effects on endothelial cell function
Source: University of California Tobacco Related Disease Research Program
Role: Principal Investigator
Dates: July 1 2017-June 30 2019
Amount: \$383,962

Title: MIRA award equipment grant supplement
Source: NIH, NIGMS MIRA R35, GM119522
Role: Principal Investigator
Dates: August 2019- June 2020
Amount: \$149,989

Title: Functional Consequences of Novel Aldehyde Dehydrogenase Variants on Reducing Reactive Aldehyde Metabolism in Humans
Source: Stanford ChEM-H
Role: co-Investigator
Dates: March 2018 – October 2019
Amount: \$24,500 + 0.2 FTE clinical research coordinator

Research Metrics:

Number of Peer-Reviewed Original Articles: 39
Number of Peer-Reviewed Review Articles: 10
Research Gate Impact Score: 40.36 (score is >97.5% of all researchers)
Scopus H Factor: 31 (31 publications cited greater than 31 times)
Total Citations: 3,071 from 2,361 documents
Most Referenced Original Article: 334 times (Circ. Research, 2004 PMID: 14976126)

Bibliography:

Recent Manuscripts Under submission/In Press:

1. White JR, Rwere F, Zeng X, McNeil L, Zhou K, Angst MS, Chen C, Mochly-Rosen D, **Gross ER**. Phenotyping genetic differences in aldehyde dehydrogenase 2 after an alcohol challenge in humans. Medrxiv, June, 2020, <https://doi.org/10.1101/2020.06.26.20137513>
2. Wu Y, Chen AW, Goodnough CL, Lu Y, Zhang Y, **Gross ER**. IcyHot analgesic topical cream limits cardiac injury in rodents. Translational Research, Accepted, June, 2020 PMC in progress
3. Otto M, Bucher C, Liu W, Müller M, Schmidt T, Kardell M, Driessen MN, Rossaint J, **Gross ER**, Wagner N. 12(S)-HETE mediates diabetes induced endothelial dysfunction by activating intracellular endothelial cell TRPV1. Journal of Clinical Investigation, Accepted, June 2020 PMC in progress
4. Wagner NM, Driessen MN, Zambelli VO, and **Gross ER**. Peptide Therapeutic Use in Anesthesiology. in Qvit N, Peptide and Peptidomimetic Therapeutics, Chapter 26, Elsevier, Accepted, June 2020

Peer-Reviewed Original Articles:

1. Jiang S, Bastov D, Bharadwaj A, **Gross ER**. Asian Flush. Ann Intern Med, Web Exclusive 2019 Aug 13. doi: 10.7326/G18-0025. PMID: 31404928; PMC:7244231.
2. Cayla NS, Dagne BA, Wu Y, Lu Y, Rodriguez L, Davies DL, **Gross ER**, Heifets BD, Davies MF, MacIver B, Bertaccini EJ. A new anesthetic based on a novel chemical core. Proceedings of the National Academy of Sciences, Jul 30;116(31):15706-15715, 2019.
3. Wejermars L, Shaapenherder A, George T, Sinharoy P, **Gross ER**. Association of impaired reactive aldehyde metabolism with delayed graft function in human kidney transplantation. Oxidative Medicine and Cellular Longevity, 3704129, 2018.

4. Heymann HM, Wu Y, Lu Y, Qvit N, Gross GJ, **Gross ER**. Transient Receptor Potential Vanilloid 1 Inhibitors Block Laparotomy- and Opioid-induced Infarct Size Reduction in Rats. British Journal of Pharmacology, 174(24):4826-4835, 2017
5. Lu Y, Piplani H, McAllister SL, Hurt CM, **Gross ER**. TRPA1 activation within the cardiac myocyte limits ischemia-reperfusion injury in rodents. Anesthesiology, 125(6):1171-1180, 2016.
6. Hurt CM, Lu Y, Stary CM, Piplani H, Small BA, Urban T, Qvit N, Gross GJ, Mochly-Rosen D, **Gross ER**. TRPV1 regulates mitochondrial membrane potential and myocardial reperfusion injury. Journal of American Heart Association, e003774, 2016.
7. Nakano Y, Ochi H, Onohara Y, Sairaku A, Tokuyama T, Matsumura H, Tomomori S, Amioka M, Hironomobe N, Motoda C, Oda N, Chayama K, Chen CH, **Gross ER**, Mochly-Rosen D, Kihara Y. Genetic variations of aldehyde dehydrogenase 2 and alcohol dehydrogenase 1B are associated with the etiology of atrial fibrillation in Japanese. Journal of Biomedical Sciences, 23(1):89, 2016.
8. McAllister SL, Giourgas BK, Faircloth EK, Leishman E, Bradshaw HB, **Gross ER**. Prostaglandin levels, vaginal innervation, and cyst innervation as peripheral contributors to endometriosis-associated vaginal hyperalgesia in rodents. Molecular Cellular Endocrinology. Aug 11;437:120-129, 2016
9. Small BS, Lu Y, Hsu AK, Gross GJ, **Gross ER**. Morphine reduces myocardial infarct size via heat shock protein 90 in rodents. Biomedical Research International, Special Issue on Anesthesia and Ischemia-Reperfusion Injury, 129612, 2015.
10. Zambelli VO*, **Gross ER***, Chen CH, Guttierrez V, Cury Y, Mochly-Rosen D. Aldehyde dehydrogenase-2 regulates nociception in rodent models of acute inflammatory pain. Science Translational Medicine, 27:6(251):251ra118, 2014. featured on cover, featured in *Science* magazine “in Science” section, featured in *Scientific American Mind* *Contributed equally
11. **Gross ER***, Urban TJ, Hsu AK, Mochly-Rosen D, Gross GJ. Nociceptive-induced Myocardial Remote Conditioning is Mediated by Neuronal Gamma Protein Kinase C. Basic Research in Cardiology. 108(5): 381, 2013. *Corresponding author
12. Gross GJ, Hsu AK, **Gross ER**, Falck JR, Nithipatikom K. Factors Which Mediate Remote Preconditioning of Trauma (RPCT) in the Rat Heart: Central Role of Cytochrome P450 Pathway in Mediating Cardioprotection To Reduce Infarct Size. Journal of Cardiovascular Therapeutics 18(1):38-45, 2013.
13. **Gross ER***, Hsu AK, Gross GJ. Acute Methadone Treatment Reduces Myocardial Infarct Size via the δ Opioid Receptor in Rats During Reperfusion. Anesthesia & Analgesia, 109(5):1395-1402, 2009. *Corresponding author
14. Peart JN, **Gross ER**, Reichelt ME, Hsu A, Headrick JP, Gross GJ. Activation of kappa-opioid receptors at reperfusion affords cardioprotection in both rat and mouse hearts. Basic Research in Cardiology, 103(5):454-63, 2008.
15. **Gross ER**, Hsu AK, Gross GJ. Delayed Cardioprotection Afforded By The Glycogen Synthase Kinase 3 Inhibitor SB216763 Occurs Via A K_{ATP} And MPTP-dependent Mechanism At Reperfusion. American Journal of Physiology: Heart Circ Physiol. 294(3):H1497-500, 2008.
16. **Gross ER**, Hsu AK, Gross GJ. GSK3beta inhibition and K(ATP) channel opening mediate acute opioid-induced cardioprotection at reperfusion. Basic Research in Cardiology, 102(4): 341-9, 2007.

17. Peart JN, **Gross ER**, Headrick JP, Gross GJ. Impaired p38 MAPK/HSP27 signaling underlies aging-related failure in opioid-mediated cardioprotection. Journal of Molecular and Cellular Cardiology. 42(5):972-80, 2007.
18. **Gross ER**, Hsu AK, Gross GJ. Diabetes abolishes morphine-induced cardioprotection via modification of multiple cellular signaling pathways. Diabetes, January, 56(1):127-36, 2007.
19. **Gross ER**, Hsu AK, Gross GJ. The JAK/STAT Pathway is Essential For Opioid-Induced Cardioprotection: JAK2 as a Mediator of STAT3, Akt and GSK3 {beta}. American Journal of Physiology: Heart Circ Physiol. 291(2):H827-34, 2006.
20. **Gross ER**, Peart JN, Hsu AK, Auchampach JA, Gross GJ. Extending the cardioprotective window by a novel delta opioid agonist fentanyl isothiocyanate via the phosphatidylinositol-3 kinase pathway. American Journal of Physiology: Heart Circ Physiol. 288(6):H2744-9, 2005.
21. Patel HH, **Gross ER**, Peart JN, Hsu AK, Gross GJ. The sarcolemmal K_{ATP} channel triggers delayed ischemic preconditioning in rat hearts. American Journal of Physiology: Heart and Circulatory Physiology, 285(1): H445-7, 2005.
22. **Gross ER**. Nithipatikom K. Hsu AK. Peart JN. Falck JR. Campbell WB. Gross GJ. Cytochrome P450 omega hydroxylase inhibition reduces infarct size during reperfusion via the sarcolemmal K_{ATP} channel. Journal of Molecular and Cellular Cardiology, 37(6): 1245-9, 2004.
23. Nithipatikom K. **Gross ER**. Endsley MP. Moore JM. Isbell MA. Falck JR. Campbell WB. Gross GJ. Inhibition of cytochrome P450 omega-hydroxylase. A novel endogenous cardioprotective pathway. Circulation Research, 95(8):e65-71, 2004.
24. Peart JN, **Gross ER**, Gross GJ. Effect of exogenous kappa-opioid receptor activation in a rat model of myocardial infarction. Journal of Cardiovascular Pharmacology, 43(3):410-5, 2004.
25. **Gross ER**, Hsu AK, Gross GJ. Aspirin abolishes while ibuprofen enhances morphine-induced cardioprotection: role of 12-lipoxygenase. Journal of Pharmacology and Experimental Therapeutics, 310(1):185-91, 2004.
26. **Gross ER**, Hsu AK, Gross GJ. Opioid-induced acute cardioprotection occurs by glycogen synthase kinase inhibition. Circulation Research, 94(7): 960-6, 2004.
27. **Gross ER**, Peart JN, Hsu AK, Grover GJ, Gross GJ. K_{ATP} opener-induced cardioprotection: involvement of the sarcolemmal and mitochondrial K_{ATP} channel: Free radicals and MEK1,2. Journal of Molecular and Cellular Cardiology, 35(8): 985-992, 2003.
28. Patel HH, Fryer RM, **Gross ER**, Hsu AK, Isbell M, Nithipatikom K, Jensen R, Gullans SR, Gross GJ. Implication of 12-Lipoxygenase in Opioid-Induced Delayed Cardioprotection by Gene Array, Spectroscopic, and Pharmacological Analysis. Circulation Research, 92(6): 676-682, 2003.
29. **Gross ER**, LaDisa Jr JF, Wienreich D, Kress TT, Olson LE, Hettrick DA, Pagel PS, Warltier DC, Kersten JR. Reactive oxygen species modulate coronary wall shear stress and endothelial function during hyperglycemia. American Journal of Physiology: Heart and Circulatory Physiology, 284(5): H1552-1559, 2003.
30. LaDisa JF, Olson LE, Guler I, **Gross ER**, Kress TT, Hettrick DA, Kersten JR, Warltier DC, Pagel PS. Coronary artery stent implantation alters wall shear stress during maximal vasodilation. Applied Journal of Physiology, 93(6):1939-1946, 2002r.
31. Pritchard KA, Ackerman AW, **Gross ER**, Stepp DW, Shi Y, Fontana JT, Baker JE, Sessa WC. Heat shock protein 90 mediates the balance of nitric oxide and superoxide anion from endothelial nitric-oxide synthase. Journal of Biological Chemistry. 276(21):17621-4, 2001.

32. Kersten JR, Montgomery MW, Ghassemi T, **Gross ER**, Toller WG, Pagel PS, Warltier DC. Diabetes and hyperglycemia impair activation of mitochondrial K(ATP) channels. American Journal of Physiology - Heart & Circulatory Physiology. 280(4):H1744-50, 2001.
33. **Gross ER**, Gare M, Toller WG, Kersten JR, Warltier DC, Pagel PS. Ethanol enhances the functional recovery of stunned myocardium independent of K(ATP) channels in dogs. Anesthesia & Analgesia. 92(2):299-305, 2001.
34. Pagel PS, Toller WG, **Gross ER**, Gare M, Kersten JR, Warltier DC. K(ATP) channels mediate the beneficial effects of chronic ethanol ingestion. American Journal of Physiology: Heart & Circulatory Physiology. 279(5):H2574-9, 2000.
35. Toller WG, **Gross ER**, Kersten JR, Pagel PS, Gross GJ, Warltier DC. Sarcolemmal and mitochondrial adenosine triphosphate- dependent potassium channels: mechanism of desflurane-induced cardioprotection. Anesthesiology. 92(6):1731-9, 2000.
36. Toller WG, Kersten JR, **Gross ER**, Pagel PS, Warltier DC. Isoflurane preconditions myocardium against infarction via activation of inhibitory guanine nucleotide binding proteins. Anesthesiology. 92(5):1400-7, 2000.
37. Kersten JR, Toller WG, **Gross ER**, Pagel PS, Warltier DC. Diabetes abolishes ischemic preconditioning: role of glucose, insulin, and osmolality. American Journal of Physiology: Heart & Circulatory Physiology. 278(4):H1218-24, 2000.

Peer-reviewed Review articles:

1. Heymann HM, Gardner AM, **Gross ER**. Aldehyde-induced DNA and protein adducts as biomarker tools for alcohol use disorder. Trends in Molecular Medicine, 24 (2): 144-155, 2018.
2. Qvit N, Rubin SJ, Urban TJ, Mochly-Rosen D, **Gross ER**. Peptidomimetic therapeutics: scientific approaches and opportunities. Drug Discovery Today, S1359-6446(16)30419-6, 2016.
3. McAllister SL, Sun K, **Gross ER**. Developing precision medicine for people of East Asian descent. Journal of Biomedical Sciences, 23(1):80, 2016.
4. **Gross ER**, Zambelli VO, Chen C, Mochly-Rosen D. A personalized medicine approach for Asian Americans with the aldehyde dehydrogenase 2*2 variant. Annual Review of Pharmacology and Toxicology. 55:107-27, 2015.
5. Chen CH, Ferreria, J, **Gross ER**, Mochly-Rosen D. Targeting Aldehyde Dehydrogenase 2 - New Therapeutic Opportunities. Physiologic Reviews. 94: 1-34, 2014.
6. **Gross ER**, Gross GJ. Ischemic Preconditioning And Myocardial Infarction: An Update and Perspective. Drug Discovery Today: Disease Mechanisms 4(3):165-174, 2007.
7. **Gross ER**, Gross GJ. Pharmacological Therapeutics For Cardiac Reperfusion Injury. Expert Opinion on Emerging Drugs 12(3): 367-88, 2007.
8. **Gross ER**, Gross GJ. Ligand triggers of classical preconditioning and postconditioning. Cardiovascular Research 70(2):212-21, 2006.
9. Gross GJ, Falck JR, **Gross ER**, Isbell M, Moore J, Nithipatikom K. Cytochrome P450 and arachidonic acid metabolites: Role in myocardial ischemia/reperfusion injury revisited. Cardiovascular Research. 68(1):18-25, 2005.
10. Peart JN, **Gross ER**, Gross GJ. Opioid-induced preconditioning: recent advances and future perspectives. Vascular Pharmacology. 42(5-6):211-8, 2005.

Peer Reviewed Letters/Correspondence:

1. Chen CH, Ferriera JCB, Mochly-Rosen D, Gross ER. Tobacco cigarette use as an acetaldehyde source in the alcohol and vascular disease study. Lancet, Accepted July 29, 2019.
2. Bozi LHM, Campos JC, **Gross ER**, Ferreira JCB. Mitochondrial Unfolded Protein Response (UPRmt) Activation in Cardiac Diseases: Opportunities and Challenges. J Am Coll Cardiol, 2019 Aug 20;74(7):1011-1012. PMID: 31416520; PMC: 7201305.
3. Ferreira JCB, Mori M, **Gross ER**. Mitochondrial quality and quality control mechanisms in health and disease. Oxidative Medicine and Cellular Longevity, #5406751, 2019.
4. Wu Y, Heymann HM, **Gross ER**. Non-opioid analgesic use and concerns for impaired organ protection. British Journal of Anesthesia, 120 (2): 403-405, 2018.
5. Wagner NM, Lu Y, **Gross ER**. Remote Ischemic Preconditioning and Cardiac Surgery. New England Journal of Medicine, 374(5):490, 2016.
6. Wagner NM, **Gross ER**, Patel HH. A slick way volatile anesthetic reduce myocardial injury. Anesthesiology, 124 (5):968-8, 2016.
7. Zambelli VO, Chen CH, **Gross ER**. Reactive aldehydes: an initial path to develop pain control. Annals of Translational Medicine, 258, 2015.
8. Pai-Cole S, **Gross ER**. Happy Birthday GIK: Insulin, Presents and Cake. Anesthesiology, 123(2):249-50, 2015.

Book Chapters:

1. Sinharoy P, McAllister SL, Vasu M, **Gross ER**. Environmental aldehyde sources and implications for exposure. In Ren J, *Aldehyde dehydrogenases: from alcohol metabolism to human health and precision medicine*. Adv Exp Med Biol, 1193:35-52, 2019.
2. **Gross ER**. Cerebral Ischemia Pathophysiology: Global vs Focal, Glucose, Brain Trauma or Tumor Effects. In Chu LF, *START-PREP Online Course*, published online 12/19/2013, Topic #180, 1-9.
3. **Gross ER**. Pharmacology, Gases and Vapors: Effects on CV. In Chu LF, *START-PREP Online Course*, published online 8/28/2013, topic #97, 1-12.
4. **Gross ER**. Cun T. Anticholinesterases. In Chu LF, *Manual of Clinical Anesthesiology*. Wolters Kluwer, 2012, 1275.

Abstracts and Posters Presented at Meetings:

1. He S, Sinharoy P, **Gross ER**. CRISPR/Cas9 Editing of the TRPV1 C-terminus in Mice Causes Resistance to Cellular Stress and Mitochondrial Dysfunction Under Noxious Insults. The Association of University Anesthesiologists Annual Meeting, May 14-15, 2020.
2. Rwere F, White J, Chen CH, Mochly-Rosen D, **Gross ER**. Characterization of a human ALDH2 mutant that causes alcohol flushing in non-east Asians. The FASEB Journal, <https://doi.org/10.1096/fasebj.2020.34.s1.09088>
3. Kang S, White JR, **Gross ER**. Using Breath Metabolic Profiling to Identify Genetic Variants in Alcohol Metabolism, The FASEB Journal, 34, <https://doi.org/10.1096/fasebj.2020.34.s1.05815>, 2020
4. Zambelli V, Tawfik V, **Gross ER**. Aldehyde Dehydrogenase-2 Regulates Morphine-Induced Tolerance. Keystone Symposia Conference – Pain: Aligning the Target, Keystone, Colorado, February 2-5, 2020.

5. He S, Sinharoy P, **Gross ER**. Engineering rodent TRPV1 to mimic chicken TRPV1 reduces capsaicin-induced calcium influx in H9C2 cells. American Heart Association BCVS Scientific Sessions, 2019 Circulation Research, 2019;125(suppl 1). https://doi.org/10.1161/res.125.suppl_1.299
6. Gardner AM, Sinharoy P, **Gross ER**. Isoflurane, unlike propofol, increases reactive aldehyde metabolism in both wild type mitochondrial aldehyde dehydrogenase 2 (ALDH2) and ALDH2*2 rodents, AUA Annual Meeting, Chicago, Illinois, May, 2018
7. McAllister SL, Sinharoy P, Vasu M, Mochly-Rosen D, **Gross ER**. Targeting reactive aldehyde detoxification in endometriosis as a treatment strategy and a diagnostic biomarker. National Institutes of Health 13th annual Pain Consortium Meeting, May 31, 2018.
8. Bharadwaj A, **Gross ER**. Targeted preoperative interventions of life style choices for those with an aldehyde metabolism deficiency, USCF/Stanford Anesthesiology Conference, May, 2018.
9. McAllister SM, Sinharoy P, **Gross ER**. Endometriosis-Associated Vaginal Hyperalgesia Is Mediated by the Balance of Reactive Aldehyde Production and Metabolism, Experimental Biology, April, 2018
10. Sinharoy P, McAllister SM, **Gross ER**. E-Cigarette Vapor Elevates Heart Rate in Mice with Limited Reactive Aldehyde Metabolism, Experimental Biology, April, 2018
11. Cayla NS, Dagne BA, Davies MF, Wu Y, **Gross ER**, MacIver MB, Bertaccini EJ. Teasing apart the desired effects of anesthetics from unwanted side-effects at GABA_A receptors, International Society of Anesthetic Pharmacology, Boston, Massachusetts, October 2017. *Awarded best in show for meeting
12. Wu Y, Lu Y, **Gross ER**. Topical Application of IcyHot Reduces Myocardial Infarct Size in Rodents by a TRPA1-dependent Mechanism, American Heart Association BCVS annual meeting, Portland, Oregon, July, 2017
13. Heymann H, Wu Y, Lu Y, Qvit N, Gross GJ, **Gross ER**. Transient Receptor Potential Vanilloid 1 Inhibitors Block Laparotomy- and Opioid-induced Infarct Size Reduction in Rats. ISHR annual meeting, New Orleans, Louisiana, June 2017
14. McAllister SL, Faircloth EK, Leishman E, Bradshaw HB, **Gross ER**, Berkley KB. Endocannabinoids and endometriosis-associated vaginal hyperalgesia in a rat model. 13th annual world endometriosis foundation meeting, Vancouver, British Columbia, 2017.
15. Heymann H, Wagner NM, Hurt CM, **Gross ER**. 12-HETE as a novel biomarker of endothelial cell dysfunction in diabetes mellitus and hyperglycemia. AUA annual meeting, Washington DC, May 2017.
16. Lu Y, Piplani H, McAllister S, Hurt CM, **Gross ER**. TRPA1 Activation Reduces Myocardial Injury In Rodents, IARS Annual Meeting, San Francisco, May, 2016
17. Wagner NM, McAllister S, Hurt CM, **Gross ER**. Mitochondrial TRPV1 regulates endothelial dysfunction in diabetes mellitus, AUA Annual Meeting San Francisco, May, 2016
18. McAllister SM, Zambelli VO, **Gross ER**. Breaking the TRPV1-calcineurin interaction as a novel means for pain control. Experimental Biology, April 2016
19. Hurt CM, Small BA, **Gross ER**. Selective inhibition of the calcineurin interaction site of TRPV1 reduces myocardial infarct size by reducing myocardial calcium influx. Association of University Anesthesiologists Annual Meeting, Nashville, TN, April 2015.
20. **Gross ER**, Qvit N, Gross GJ, Mochly-Rosen D. Inhibition of the Calcineurin Interaction Site on TRPV1 Reduces Myocardial Infarct Size in Rats. American Heart Association Annual Meeting, Chicago, IL November 2014.

21. Do M, Kadry, B, Pinesett AJ, **Gross ER**. Taking the Blinders Off Big Data: How Accurate Are We With Assessing Postoperative Myocardial Infarction? Anesthesiology Annual Meeting New Orleans, LA October 2014.
22. Pinesett AJ, Kadry B, Mochly-Rosen D, **Gross ER**. Type of Non-Cardiac Surgery and Ethnicity Effect Incidence and Severity of Post-operative Myocardial Infarction, Anesthesiology Annual Meeting San Francisco, CA October 2013.
23. **Gross ER**, Urban TJ, Hsu AK, Qvit N, Gross GJ, Mochly-Rosen D. TRPV1 Mediates Remote and Direct Cardioprotection. AHA BCVS Meeting, Las Vegas, NV July 2013.
24. **Gross ER**, Urban TJ, Hsu AK, Mochly-Rosen D, Gross GJ. Neuronal Gamma Protein Kinase C Mediates Remote Cardioprotection In Rats, IARS Annual Meeting San Diego, CA May 2013.
25. Zambelli VO. Chen CH. Gutierrez VP. **Gross ER**. Cury Y. Mochly-Rosen, D. Aldehyde dehydrogenase-2 activity regulates while the East Asian mutation exacerbates acute inflammatory pain in rodents. IASP World Congress, Milan, Italy, 2012.
26. **Gross ER**. Hsu AK, Urban TJ. Mochly-Rosen D. Gross GJ. Gamma PKC mediates remote incision-induced cardioprotection. American Heart Association Myocardial Ischemia Section, Los Angeles, CA, November 2012.
27. **Gross ER**. Mochly-Rosen D. Anesthesiologists: The Primary Profession Which Delivers Peptide Therapeutics In The Clinic? Peptide Therapeutics Symposium, Saulk Institute, San Diego, CA, October 20-21st, 2011.
28. **Gross ER**. Hsu AK, Gross GJ, Mochly-Rosen D. Acute capsaicin treatment reduces myocardial infarct size in rats via transient receptor potential vanilloid 1 activation. IARS March, 2010, Honolulu, Hawaii
29. **Gross ER**, Hsu AK, Gross GJ. Acute Methadone Treatment Reduces Infarct Size In Rats During Reperfusion And Is Rat Strain Specific. IARS, 2008.
30. **Gross ER**, Hsu AK, Gross GJ. Opioid-induced cardioprotection involves cross-talk between K_{ATP} channels and the phosphatidylinositol-3 kinase pathways. FASEB, 2005.
31. **Gross ER**, Hsu AK, Gross GJ. Heat shock proteins HSP70 and HSP90 confer acute cardioprotection afforded by morphine. FASEB, 2005.
32. Peart JP, **Gross ER**, Spencer W, Hsu AK, Gross GJ. Kappa-opioids confer cardioprotection when activated upon reperfusion. FASEB, 2005.
33. Peart JP, **Gross ER**, Gross GJ. Delta-opioid receptor activation fails to provide cardioprotection in aged hearts. FASEB, 2005.
34. **Gross ER**. Hsu AK, Gross GJ. The JAK/STAT signaling pathway is essential for opioid-induced cardioprotection: role of JAK2 as a mediator of STAT3 and the phosphatidylinositol-3 kinase pathway. AHA Scientific Sessions. Circulation Vol 110, #17, 313 October 26, 2004.
35. Gross GJ. **Gross ER**. Moore J. Peart JN. Endsley MP, Isbell M, Falck JR, Nithipatikom K. Inhibition of endogenous 20-HETE formation, an omega-hydroxylase cytochrome P450 metabolite of arachidonic acid, is cardioprotective in a canine infarct model. AHA Scientific Sessions. Circulation Vol 110, #17, 511 October 26, 2004.
36. **Gross ER**. Peart JN. Hsu AK. Auchampach JA. Gross GJ. Cardioprotection by the novel delta opioid FIT persists for 5 days after administration and occurs via phosphatidylinositol-3 kinase. AHA Scientific Sessions. Vol 110, #17, 512 October 26, 2004.
37. Peart JN. Gross ER. Gross GJ. Adenosine A1 and opioid receptor cross talk in the isolated murine heart. JMCC, 37(1): A73.

38. **Gross ER.** Peart JN. Hsu AK. Auchampach JA. Gross GJ. The delta opioid agonist FIT is protective 48-120 hours after administration via PI3k. *JMCC*, 37(1): A74.
39. **Gross ER.** Hsu AK. Gross GJ. Streptozotocin (STZ)-induced diabetes (DB) abolishes morphine and ischemic preconditioning(IPC)-induced infarct size (IS) reduction upstream of glycogen synthase kinase (GSK). *FASEB*, 642.2: Vol 18(5), 2004, March 22.
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42. **Gross ER.** Hsu AK. Gross GJ. Opioid-Induced Cardioprotection Occurs Via Glycogen Synthase Kinase (GSK) Inhibition By Phosphatidylinositol-3 Kinase And Target of Rapamycin Dependent Pathways. *AHA Scientific Sessions. Circulation.* 595: Vol 108, #17 2003, October 28.
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45. **Gross ER.** Hsu AK. Gross GJ. Morphine-Induced Cardioprotection Requires Activation of Phosphatidylinositol-3 Kinase and Target of Rapamycin. *FASEB.* 151.2: Vol 17(4), 2003, March 14.
46. **Gross ER.** Hsu AK. Grover GJ. Gross GJ. Mechanisms of KATP Opener-Induced Delayed Cardioprotection. *FASEB.* 151.13: Vol 17, #4 2003, March 14.
47. Ladisa Jr. J. Olson LE. Guler I. **Gross ER.** Hettrick DA. Kersten JR. Warltier DC. Pagel PS. Coronary Artery Stent Implantation Alters Wall Shear Stress During Maximal Vasodilation. *IEEE/BMES Conference*, 2002.
48. Pritchard KA. **Gross ER.** Ackerman AW. Stepp DW. Fontana J. Sessa WC. Heatshock protein 90 regulates endothelial nitric oxide synthase generation of nitric oxide and superoxide anion. *FASEB.* 638.9: Vol 15, #5, 2001 March 8.
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51. Pagel PS. Toller WG. **Gross ER.** Kersten JR. Warltier DC. Chronic intermittent consumption of low doses of ethanol reduces experimental infarct size by KATP channel activation in dogs. *Anesthesiology.* Volume 93, A-682, 2000.
52. Pagel PS. Toller WG. Kersten JR. **Gross ER.** Warltier DC. Sarcolemmal adenosine triphosphate-sensitive potassium (KATP) channels mediate desflurane-induced myocardial protection in dogs. *Anesthesia and Analgesia.* Volume 90, Number 2S, S-81, 2000.

53. Pagel PS. **Gross ER.** Kersten JR. Toller WG. Warltier DC. Ethanol enhances the functional recovery of stunned myocardium in dogs. *Anesthesia and Analgesia*, Volume 90, Number 2S, S-80, 2000.
54. Toller WG. Kersten JR. **Gross ER.** Pagel PS. Warltier DC. Isoflurane preconditions myocardium against infarction via activation of Gi proteins. *European Journal of Anesthesia* 2000.
55. **Gross ER.** Hettrick DA. Kersten JR. Pagel PS. Warltier DC. Effects of acute hyperglycemia on in vivo velocity profiles of the left anterior descending coronary artery. *IEEE/BMES Joint Meeting*. 1999 October.
56. Toller WG. **Gross ER.** Kersten JR. Page PS. Warltier DC. Mitochondrial adenosine triphosphate-sensitive potassium (KATP) channels mediate the cardioprotective effect of desflurane. *Anesthesiology*. Volume 91, A-625, 1999.
57. Merker MP. Bongard RD. Daum JM. **Gross ER.** Dawson CA. Reductase activity associated with lung endothelial cell membrane vesicles. *ALA/ATS International Conference*. San Francisco, CA 1997 May 17-21.

Selected Presentations:

1. Precision medicine for Asians requiring anesthesia and analgesia, University of Hong Kong, Hong Kong, China, September 30, 2019
2. Non-invasive quantification of alcohol-induced flushing in humans, 5th Annual ALDH2 STAR Symposium, September 27-28, 2019, Kaohsiung Medical University in Kaoshuing, Taiwan
3. Precision medicine for Asians requiring anesthesia and analgesia, Keynote lecture, Advanced Hemodynamic Monitoring Meeting, Ruijin Hospital, Shanghai, China, September 26, 2019.
4. Precision medicine for Asians requiring anesthesia and analgesia, University of California San Francisco, Department of Anesthesiology Grand Rounds, June 5, 2019
5. The alcohol flushing response: implications for anesthetic management, 15 annual Asian Australasian Congress of Anesthesiologists, Beijing, China, November 5, 2018
6. Monitoring and treatment of reactive aldehydes produced during surgery. *Population Health and Prevention in the Genomics and Big Data Era*, Stanford University, Stanford, California October 18th, 2018
7. The alcohol flushing response: implications for human health and anesthetic management, Department of Genetics, University of Minnesota, March 2, 2018
8. Optimizing reactive aldehyde production and metabolism during surgery, Invited Speaker, 3rd Annual ALDH2 STAR Consortium Symposium, National Taiwan University, Taipei, Taiwan July 29th, 2017.
9. Developing a Precision Medicine Platform for Asian Americans Requiring Anesthesia and Analgesia, Invited Grand Rounds Speaker, Washington University, St Louis, MO, June 14th 2017.
10. Translating basic research into the clinics. Invited keynote speaker, *International Symposium on Drug Discovery in Academia*, Sao Paulo, Brazil, November 19, 2016.
11. Developing precision medicine for East Asians with an ALDH2*2 variant. Invited lecture, Taipei Medical University, ALDH2 deficiency and disease 2nd annual symposium, July 2016.
12. Perioperative heart attacks: incidence, timing and strategies to reduce reperfusion injury. Keynote lecture, *Janghuei International Anesthesia Forum*, Hefei, China, July 2016.
13. How hot sauce and alcohol jump-started my career as an academic anesthesiologist. Invited

- lecture, IARS/AUA combined international meeting, San Francisco, CA, May 2016.
14. Quantification of clinical samples for aldehyde load and ALDH2, Invited lecture, Taipei Medical University, Taiwan, ALDH2 deficiency and disease inaugural symposium, August 2015.
 15. Selective Inhibition of the Calcineurin Interaction Site of TRPV1 Reduces Myocardial Infarct Size by Reducing Mitochondrial Calcium Influx, American University Anesthesiologists Annual Meeting, Nashville, TN, April 2015.
 16. TRPV1 and cardioprotection, joint UCSF/Stanford anesthesiology research meeting. Burlingame, CA, February 2015.
 17. Cardioprotection and Nociception: One and the same? Medical College of Wisconsin Department of Pharmacology, Milwaukee, WI, June 2013.
 18. Gamma PKC mediates remote incision-induced cardioprotection. American Heart Association Myocardial Ischemia Section, Los Angeles, CA, November 2012.
 19. Myocardial Preconditioning: A Nociceptive Response? Anesthesia Grand Rounds, Stanford University, August 2012
 20. Mechanisms of Anesthetic and Analgesic-induced Cardioprotection. Joint UCSF/Stanford University Anesthesiology Meeting, Burlingame, CA, August 2012.
 21. Acute capsaicin treatment reduces myocardial infarct size in rats via transient receptor potential vallinoid 1 activation. Kosaka Award Finalist, IARS, Honolulu, HI, March, 2010.
 22. Streptozotocin-induced diabetes abolishes morphine-induced cardioprotection via modification of multiple cellular signaling pathways and is reversed by glycogen synthase kinase 3 β inhibition. ISHR Young Investigator Competition, New Orleans, LA, May, 2005.
 23. Opioid-induced cardioprotection involves cross-talk between K_{ATP} channels and the phosphatidylinositol-3 kinase pathways. FASEB, San Diego, CA, April, 2005.
 24. G-Protein receptor pathway crosstalk: implications for preconditioning. ISHR World Congress, Brisbane, Australia, August 2004
 25. Opioid-induced cardioprotection occurs via glycogen synthase kinase (GSK) inhibition by phosphatidylinositol-3 kinase and target of rapamycin dependent pathways. AHA Scientific Sessions, Orlando, FL, November 2003.

Provisional Patents:

1. U.S. Provisional Patent Application No.: 62/306,244, Filed: March 10, 2016, Entitled: *Peptide Modulators to Break Specific Calcineurin Protein-protein Interactions*
2. U.S. Provisional Patent Application No.:62/502,310, Filed May 18, 2017, Entitled: *Methods and Compositions for Treating Endometriosis and Endometriosis-Associated Symptoms*