BIOGRAPHICAL SKETCH

NAME/ADDRESS	POSITION TITLE
Asheebo Rojas 870 Creek Cove Way Loganville, GA 30052 Phone: (404) 384-1933 Fax: (404) 727-0365 Email: arojas@pharm.emory.edu	Post-Doctoral Fellow

EDUCATION

INSTITUTION AND LOCATION	DEGREE (*if applicable*)	YEAR(s)	FIELD OF STUDY
Valdosta State University, Valdosta, Georgia, 31698	B.S.	1995-1999	Biology
Georgia State University, Atlanta, Georgia, 30303	M.S.	2000-2001	Biology
Georgia State University, Atlanta, Georgia, 30303	Ph.D	2001-2007	Cellular and Molecular Biology & Physiology

Professional Experience:

2007-Current	**Post-Doctoral Fellow**, Department of Pharmacology, Emory University (SOM)
2000-2007	**Graduate Research Assistant,** Biology Department, Georgia State University
2001-2007	**Ph.D. Student/candidate,** Biology Department, Georgia State University
2000-2005	**Teacher Assistant/Lecturer,** Biology Department, Georgia State University

Honors and Awards:

2009	**CounterACT Travel Award**, CounterACT Network Research Symposium, National Institute of Health, NINDS
2003-2005	**President of the Biology Graduate Student Association (BGSA)**, Biology Department, Georgia State University
2005	**Graduate Leadership Award**, Biology Department, Georgia State University
2004	**Graduate Leadership Award**, Biology Department, Georgia State University
2003	**Outstanding Instruction in Biology**, Biology Department, Georgia State University
2003	**Graduate Leadership Award**, Biology Department, Georgia State University
2002	**Chair's Special Award**, Biology Department, Georgia State University
2001	**Outstanding Instruction in Biology**, Biology Department, Georgia State University
1998 – 1999	**President / Co-founder of NSBE** (National Society of Black Engineers), Valdosta State University Chapter, Valdosta, GA
1997 – 1999	**Treasurer/Co-founder of FGAMP** (Florida Georgia Alliance for Minority Participation in Science) Valdosta State University Chapter, Valdosta, GA

Laboratory Research Positions:

2000-2001 Georgia State University

Graduate Research Assistant with Dr. Chun Jiang. K_{ATP} Channel Gating by Protons: A Proposed Mechanism.

2001-2007 Georgia State University

Graduate Research Assistant with Dr. Chun Jiang. Kir Channels in Central CO_2 Chemoreception: Analysis with a Functional Genomics Approach.

2007-Current Emory University School of Medicine

Post-Doctoral Fellow with Dr. Raymond Dingledine. Modulation of Glutamate Receptor Function by Prostanoid Receptors: Implications in Epilepsy.

Journal Publications (Peer-reviewed):

1. Piao H, Cui N, Xu H, Mao J, **Rojas A**, Wang R, Abdulkadir L, Li L, Wu J, & Jiang C (2001). Requirement of multiple protein domains and residues for gating K($_{ATP}$) channels by intracellular pH. *J Biol Chem* **276**, 36673-36680.

2. Cui N, Giwa LR, Xu H, **Rojas A**, Abdulkadir L, & Jiang C (2001). Modulation of the heteromeric Kir4.1-Kir5.1 channels by P(CO($_2$)) at physiological levels. *J Cell Physiol* **189**, 229-236.

3. Cui N, Wu J, Xu H, Wang R, **Rojas A**, Piao H, Mao J, Abdulkadir L, Li L, & Jiang C (2003). A threonine residue (Thr71) at the intracellular end of the M1 helix plays a critical role in the gating of Kir6.2 channels by intracellular ATP and protons. *J Membr Biol* **192**, 111-122.

4. Wu J, Piao H, **Rojas A**, Wang R, Wang Y, Cui N, Shi Y, Chen F, & Jiang C (2004). Critical protein domains and amino acid residues for gating the KIR6.2 channel by intracellular ATP. *J Cell Physiol* **198**, 73-81.

5. Mao J, Wang X, Chen F, Wang R, **Rojas A**, Shi Y, Piao H, & Jiang C (2004). Molecular basis for the inhibition of G protein-coupled inward rectifier K($^+$) channels by protein kinase C. *Proc Natl Acad Sci U S A* **101**, 1087-1092.

6. Li L, **Rojas A**, Wu J, & Jiang C (2004). Disruption of glucose sensing and insulin secretion by ribozyme Kir6.2-gene targeting in insulin-secreting cells. *Endocrinology* **145**, 4408-4414.

7. ***Rojas A**, Wang R, Wu J, Piao H, Adams CY, Xu H, Shi Y, Wang Y, & Jiang C (2005). Determinant role of membrane helices in K_{ATP} channel gating. *J Membr Biol* **204**, 1-10.

8. Jiang C, **Rojas A**, Wang R, & Wang X (2005). CO_2 central chemosensitivity: why are there so many sensing molecules? *Respir Physiol Neurobiol* **145**, 115-126.

9. ***Rojas A**, Wu J, Wang R, & Jiang C (2007). Gating of the ATP-sensitive K^+ channel by a pore-lining phenylalanine residue. *Biochim Biophys Acta* **1768**, 39-51.

10. Su J, Yang L, Zhang X, **Rojas A**, Shi Y, & Jiang C (2007). High CO_2 chemosensitivity versus wide sensing spectrum: a paradoxical problem and its solutions in cultured brainstem neurons. *J Physiol*

578, 831-841.

11. ***Rojas A**, Cui N, Su J, Yang L, Muhumuza JP & Jiang C (2007). Protein kinase C dependent inhibition of the heteromeric Kir4.1-Kir5.1 channel. *Biochim Biophys Acta*, **1768**(9): 2030-2042.

12. Jiang C, Su J, & **Rojas A** (2007). Central CO_2 chemoreception: How can it be done without the perfect receptors? *Physiology News*, **68**, 23-25.

13. Shi, Y., Wu, Q., Cui, N., Shi, W., Yang, Y, Zhang, X., **Rojas, A**., Ha, B.T. and Jiang, C (2007). PKA phosphorylation on SUR2B subunit underscores vascular KATP channel activation by β adrenergic receptors. *Am J Physiol Regul Integr Comp Physiol*, **293**(3), R1205-1214.

14. ***Rojas A**, Su J, Yang L, Lee M, Cui N, Zhang X, Fountain D & Jiang C (2008). Modulation of the Heteromeric Kir4.1-Kir5.1 Channel by Multiple Neurotransmitters via $G_{\alpha q}$-coupled Receptor. *J Cell Physiol*, **214**(1):84-95.

15. ***Rojas A**, Su J, Zhang X, Lee M, Chowdhury M & Jiang C (2008). Identification of the heteromeric Kir4.1-Kir5.1 channel in brainstem neurons. Submitted.

16. Mott DD, **Rojas A**, Fisher JL, Dingledine RJ, Benveniste M (2010). Subunit specific desensitization of heteromeric kainate receptors. *J Physiol, in press*.

17. Jiang J, Ganesh T, Du Y, Thepchatri P, **Rojas A**, Lewis I, Kurtkaya S, Li L, Qui M, Serrano G, Shaw R, Sun A, Dingledine R (2010). Neuroprotection by selective allosteric potentiators of the EP2 prostaglandin receptor. *Proc Natl Acad Sci U S A* **107**(5):2307-12.

18. ***Rojas A**, Wetherington JP, Serrano G, Shaw RN & Dingledine R (2010). Activation of group I metabotropic glutamate receptors potentiates heteromeric kainate receptors. *In preparation*.

Meeting/Published Abstracts:

1. Piao H, Cui N, **Rojas A,** & Jiang C. Requirement of multiple protein domains for gating K_{ATP} channels by intracellular protons. *Annual Meeting of Society for Neuroscience* E-60: 812.5. 2001.
2. Cui N, Xu H, **Rojas A,** & Jiang C. Modulation of Kir4.1-Kir5.1 channels by hyper- and hypocapnia. *Annual Meeting of Society for Neuroscience* PP-10: 632.4. 2001.
3. Wang R, **Rojas A**, Cui N, & Jiang C. Gating of Kir6.2 channel by interactions of two amino acid residues at the inner mouth of the ion-conductive pore. *Annual Meeting of Society for Neuroscience* D-44: 438.18. 2002.
4. ***Rojas A**, Wu J, Wang R, Wallace T, Chen F, & Jiang C. Phe168 at the Narrowest Part of the on-conductive Pore is involved in Kir6.2 Channel Gating by Intracellular Protons. *Annual Meeting of Biophysics* B268: 394. 2003.
5. Wang R, **Rojas A**, Wu J, & Jiang C. Kir6.2 channel gating may be determined by the relative distance between the TM1 and TM2 helices. *Annual Meeting of Society for Neuroscience* F4: 53.19. 2003.
6. ***Rojas A**,Wu J, Wang R, & Jiang C. Kir6.2 Channel Gating May Involve a Spatial Hindrance Effect at the Inner Ion-conductive Pore**.** *Annual Meeting of Society for Neuroscience* E33: 368.13. 2003.

7. ***Rojas A,** Cui N, & Jiang C. Inhibition of Heteromeric Kir4.1-Kir5.1 by Protein Kinase C. *Annual Meeting of Experimental Biology* 18: LB374. 2004.
8. ***Rojas A,** Baro DJ, & Jiang C. Modulation of the Heteromeric Kir4.1-Kir5.1 channel by Substance P. *Annual Meeting of Society for Neuroscience* I4: 845.3. 2004.
9. Mao J, Wang R, Chen F, Shi Y, Wang X, **Rojas A**, & Jiang C. Inhibition of G-protein Coupled Inward Rectifier K^+ Channels by Protein Kinase C. *Annual Meeting of Biophysics* B377: 2280. 2004.
10. ***Rojas A,** Fountain D, Baro DJ, & Jiang C. Inhibition of the Heteromeric Kir4.1-Kir5.1 channel by $G_{\alpha q}$ coupled receptor activation. *Annual Meeting of Experimental Biology* 19: A647. 2005.
11. Su J, Yang L, Liu S, **Rojas A**, & Jiang C. Enhancement of CO_2 chemosensitivity of cultured brainstem neurons by Pre- and Postsynaptic mechanisms studied in microelectrode arrays. *Annual Meeting of Society for Neuroscience* CC24: 636.15. 2005.
12. ***Rojas A**, Shaw RN, & Dingledine R. EP2 receptor activation opposes neuropathologies associated with status epilepticus. *Annual Meeting of Society for Neuroscience* Y13: 448.2. 2008.
13. Dingledine RJ, **Rojas A**, Shaw RN, Lewis I, Thepchatri P, Snyder J, & Du Y. Development of an allosteric potentiator of the EP2 receptor for prostaglandin E2. *Annual Meeting of Society for Neuroscience*, Y14: 448.3. 2008.
14. ***Rojas A**, Shaw RN, & Dingledine R. EP2 receptor activation opposes neuropathologies associated with status epilepticus. *Annual symposium of the CounterACT Research Network*, NA20. 2009.
15. Shaw RN, **Rojas A**, Lelutiu N, Dingledine R. EP2 receptor activation reduces neuropathologies associated with status epilepticus. *Annual Meeting of Society for Neuroscience*, O30: 538.10. 2009.
16. Jiang J, Ganesh T, Du Y, Thepchatri P, **Rojas A**, Lewis I, Kurtkaya S, Li L, Qui M, Shaw RN, Sun A, Dingledine RJ. Development of novel selective allosteric potentiator for prostaglandin receptor EP2. *Annual Meeting of Society for Neuroscience*, 031: 538.11. 2009.
17. ***Rojas A**, Shaw RN, & Dingledine R. Modulation of heteromeric kainate receptor function by prostanoid receptors. *Annual Meeting of Society for Neuroscience*, C7: 715.17. 2009.

Meetings/Seminar presentations:

1. ***Rojas A**. CO_2 Central Chemoreception: The Role of the Heteromeric Kir4.1-Kir5.1 channel. Georgia State University Seminar Series, Atlanta, Ga, September 9, 2005.
2. ***Rojas A**. Elucidation of the role played by Kir channels in central CO_2 chemoreception. Georgia State University Seminar Series, Atlanta, Ga, October 27, 2006.
3. ***Rojas A**. Brainstem neuronal expression of the heteromeric Kir4.1-Kir5.1 and channel modulation by respiratory neurotransmitters. *Annual Meeting of Society for Neuroscience*, Atlanta, Ga, October 16, 2006. 308.12.
4. ***Rojas A**. EP2 receptor activation oppose neuropathologies associated with status epilepticus. Emory University, Neurology Data Club, Atlanta, Ga, April 23, 2009.

Teaching and related experience:

2000-2002 Lecturer/Teacher Assistant, Introduction to Biology Laboratory (BIOL 1107), GSU

2002-2005 Lecturer, Human Physiology Laboratory (BIOL 2250/3250/7250), GSU

2003-2005 Laboratory Coordinator, Human Physiology Laboratory (BIOL 2250/3250/7250), GSU

Grants:

2001-2005 Recipient of an NIH Minority Fellowship, National Institute of Health, NIH 1RO1-HL058410-05 Supplement, 03/01/01-02/28/05

2008-2009 Recipient of an Emory Training Grant in Translational Research in Neurology, National Institute of Health, NINDS T32- NS007480, 08/17/08-06/30/09.

2009-current Recipient of an Emory Training Grant in The Neurobiology of Drug Abuse, National Institute of Health, NIDA T32- DA15040, 07/1/09-6/30/10.

Membership in professional & scientific societies:

2001-current American Physiological Society

2002-current American Chemical Society

2009-current Society for Neuroscience

Techniques learned and Used in Research Work:

1. Electrophysiological methods including patch-clamp, two electrode voltage clamp, extra-cellular recording, microelectrode arrays (MEA) technique.
2. Standard molecular biological methods including: PCR, mutagenesis, DNA isolation and purification, cloning, protein isolation and purification, and in vitro phosphorylation, etc.
3. Cell culture (primary neurons, Human Embryonic Kidney cells, *Xenopu*s oocytes)
4. Histological methods including tissue processing and sectioning, immunocytochemistry (fluorescence and chromogen) and *in situ* hybridization.
5. Confocal and Electron microscopy techniques.
6. Protein modelling and prediction.
7. Generation of ribozymes (interference RNAs).

References:

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