

Gregory H. Hockerman Publications

47. Tang, S., Sun, Y., Jarrard, R.J., Krusemark, C.J., and **Hockerman, G.H.** Selective regulation of Ca_v1.3 by disruption of interactions with beta subunit SH3 and GK domains. **In Preparation**
46. **Hockerman, G.H.**, Pratt, E.P.S., Guha, S., LaVigne, E.K., Whitmore, C., Khader, O., McClure, N., Koran, J., Wang, W-H., and Pond, A.L. ERG1a K⁺ channel increases intracellular calcium concentration through modulation of calsequestrin1 in C₂C₁₂ myotubes. **In Preparation**
45. Harvey, K.E., Tang, S., LaVigne, E.K., Pratt, E.S.P., and **Hockerman, G.H.** RyR2 regulates store operated Ca²⁺ entry, phospholipase C activity, and electrical excitability in the insulinoma cell line INS-1. *PLoS ONE* **18**(5): e0285316 (2023). doi: 10.1371/journal.pone.0285316
44. Harvey, K.E., LaVigne, E.K., Saleem, M.D., Salyer, A.E., Pratt, E.S.P., Sample, P.A., Gowher, H., and **Hockerman, G.H.** RYR2/IRBIT regulates insulin gene transcript, insulin content, and secretion in the insulinoma cell line INS-1. *Sci Rep* **12**:7713 (2022). doi: 10.1038/s41598-022-11276-8 **Featured in Pancreatic Cell News (May 17th, 2022)**
43. Zampieri, S. Sandri, M., Cheatwood, J.L., Balaraman, R.P., Anderson, L.B., Cobb, B.A., Latour, C.D., **Hockerman, G.H.**, Kern, H., Sartori, R., Ravara, B., Mergliano, S., Da Dalt, G., Davie, J.K., Kohli, P., Pond, A.L. The ERG1A K⁺ channel is more abundant in the *Rectus abdominus* muscle from cancer patients than that from healthy humans. *Diagnostics* (Basel) **11**:1879 (2021) doi:10.3390/diagnostics11101879
42. Whitmore, C., Pratt, E.S.P., Anderson, L.B., Bradley, K.S., Latour, S.M., Hashmi, M.N., Urazaev, A.K., Weilbacher, R., Davie, J.K., Wang, W-H., **Hockerman, G.H.**, Pond, A.L. The ERG1a potassium channel increases basal intracellular calcium concentration and calpain activity in skeletal muscle. *Skelet Muscle* **10**:1 (2020) doi: 10.1186/s13395-019-0220-3
41. Pratt, E.P.S., Salyer, A.E., Harvey, K.E., **Hockerman, G.H.** Regulation of cAMP accumulation and activity by distinct phosphodiesterase subtypes in INS-1 cells and human pancreatic beta cells. *PLoS ONE* **14**(8):e0215188 (2019) **Featured in Pancreatic Cell News (August 27th, 2019).**
40. Wang, Y., Tang, S., Harvey, K.E., Salyer, A.E., Li, T., Rantz, E.K., Lill, M.A., and **Hockerman, G.H.** Molecular determinants of the differential modulation of Ca_v1.2 and Ca_v1.3 by nifedipine and FPL 64176. *Mol Pharmacol* **94**:973-983 (2018) **A Featured Article of the Sept 2018 issue.**
39. Sowaileh, M., Salyer, A.E., John, J.P., Woods, J.R., **Hockerman, G.H.**, and Colby, D.A. Agonists of the γ -aminobutyric acid type B (GABA_B) receptor derived from β -hydroxy and β -amino difluoromethyl ketones. *Bioorg Med Chem Lett* **28**:2697-2700 (2018)

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38. Sealover, N.R., Felts, B., Kuntz, C.P., Jarrard, R.E., **Hockerman, G.H.**, Henry, L.K., Barker, E.L. The external gate of the serotonin transporter requires a basic/acidic amino acid pair for amphetamine translocation and the induction of substrate efflux. *Biochem Pharmacol* **120**:46-55 (2016)
37. Pratt, E.P.S., Owens, J.L., **Hockerman, G.H.**, and Hu, C.D. Bimolecular fluorescence complementation (BiFC) analysis of protein-protein interactions and assessment of subcellular localization in live cells. *Meth Mol Biol* **1474**:153-170 (2016)
36. Pratt, E.P.S., Salyer, A.E., Guerra, M.L., and **Hockerman, G.H.** Ca²⁺ influx through L-type channels and Ca²⁺-induced Ca²⁺ release regulate cAMP accumulation and EPAC1-dependent ERK1/2 activation in INS-1 cells. *Mol Cell Endocrinol* **419**:60-71 (2016) **Featured in Pancreatic Cell News 6.39 (October 6th, 2015)**
35. Brown, K.M., Roy, K.K., **Hockerman, G.H.**, Doerksen, R.J., and Colby, D.A. Activation of the γ -aminobutyric acid type B (GABA_B) receptor by agonists and positive allosteric modulators. *J Med Chem* **58**:6336-6347 (2015)
34. **Hockerman, G.H.**, Swarrigin, N.M., Hameeed, S., Doran, M., Jaeger, C., Wang, and W-H, Pond, A.L. The *Ubr2* gene is expressed in skeletal muscle atrophy as a result of hind limb suspension, but not *Merg1a* expression alone. *Eur J Trans Myol- Basic Appl Myol* **24**:7-14 (2014)
33. Wang, Y., Jarrard, R.J., Pratt, E.P.S., Guerra, M.L., Lange, A.M., Soderling, I.M., and **Hockerman, G.H.** Uncoupling of Ca_v1.2 from Ca²⁺-induced Ca²⁺ release and SK channel regulation in pancreatic beta cells. *Mol Endocrinol* **28**:458-476 (2014)
32. Pond, A.L., Nedele, C., Wang, W-H, Wang, X., Walther, D.V.M., Jaeger, C., Latour, C.D., Du, H., Fujita, N., **Hockerman, G.H.**, and Hannon, K.M. The MERG1a Channel Modulates Skeletal Muscle NF- κ B Activity and MuRF1 Expression *Muscle Nerve* **49**:378-388 (2014)
31. Conley J.M., Brand C.S., Bogard A.S., Pratt E.P.S., Xu R., **Hockerman, G.H.**, Ostrom R.S., Dessauer C.W., and Watts V.J. Development of a high-throughput screening paradigm for the discovery of small molecule modulators of adenylyl cyclase. *J Pharmacol Exp Ther* **347**:276-287 (2013).
30. Han. C., Salyer A.E., Kim, E.H., Jiang, X., Jarrard, R.E., Powers, M.S., Kirchhoff, A.M., Salvador, T.K., Chester, J.A., **Hockerman, G.H.**, and Colby, D.A. Evaluation of difluoromethylketones as agonists of the γ -aminobutyric acid type B (GABA_B) receptor. *J Med Chem* **56**:2456-2465 (2013)

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29. Jarrard, R.E., Wang, Y., Salyer, A.E, Soderling, I.M., Guerra, M.L., Lange, A.M., Pratt E.P.S., Broderick, H.J. and **Hockerman, G.H.** Potentiation of sulfonylurea action by an EPAC-selective cAMP analog in INS-1 cells: Comparison of tolbutamide and gliclazide, and a potential role for EPAC activation of a 2-APB-sensitive Ca^{2+} influx. *Mol Pharmacol* 83:191-205 (2013).
28. Lin, M., Aladejebe, O., and **Hockerman, G.H.** Distinct properties of amlodipine and nifedipine block of the voltage-dependent Ca^{2+} channels $\text{Ca}_v1.2$ and $\text{Ca}_v2.1$ and the mutant channels $\text{Ca}_v1.2/\text{DHPi}$ and $\text{Ca}_v2.1/\text{DHPs}$. *Eur. J. Pharmacol.* 670:105-113 (2011).
27. Shabbir, W., Beyl, S., Timin, E.N., Schellmann, D., Erker, T., Hohaus, A., **Hockerman, G.H.**, and Hering, S. Interaction of diltiazem with an intracellularly accessible binding site on $\text{Ca}_v1.2$. *Br. J. Pharmacol.* 62:1074-1082 (2011).
26. Jacobo, S.M.P., Guerra, M.L., and **Hockerman, G.H.** $\text{Ca}_v1.2$ and $\text{Ca}_v1.3$ are differentially coupled to glucagon-like peptide-1 potentiation of glucose-stimulated insulin secretion in the pancreatic beta cell line INS-1. *J. Pharmacol. Exp. Ther.* 331:724-732 (2009).
25. Jacobo, S.M.P., Guerra, M.L., Jarrard, R.E., Przybyla J.A., Liu G., Watts V.J., and **Hockerman, G.H.** The intracellular II-III loop of $\text{Ca}_v1.2$ and $\text{Ca}_v1.3$ uncouple L-type voltage-gated Ca^{2+} channels from glucagon-like peptide-1 potentiation of insulin secretion in INS-1 cells via displacement from lipid rafts. *J. Pharmacol. Exp. Ther.* 330:283-293 (2009).
24. Wang, X., Xu, R., Abernathy, G., Taylor, J., Alzghoul, M.B., Hannon, K., **Hockerman, G.H.**, and Pond, A. L. $\text{K}_v11.1$ channel subunit composition includes MinK and varies developmentally in mouse cardiac muscle. *Dev. Dyn.* 237:2430-2437 (2008).
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22. Liu, G., Jacobo, S. M. P., Hilliard, N., and **Hockerman, G.H.** Cyclic AMP potentiates coupling of both $\text{Ca}_v1.2$ and $\text{Ca}_v1.3$ to glucose-stimulated insulin secretion at sub-maximal glucose concentration through Epac and PKA in INS-1 cells. *J. Pharmacol. Exp. Ther.* 318:152-160 (2006).
21. Wang, X., **Hockerman, G.H.**, Green, H.W., Babbs, C.F., Mohammad, S.I., Gerrard, D., Latour, M.A., London, B., Hannon, K.M., and Pond, A.L. Merg1A K^+ channel induces skeletal muscle atrophy by activating the ubiquitin proteasome pathway. *FASEB J.* 20:1531-1533 (2006).

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19. Dilmac, N., Hilliard, N., and **Hockerman, G.H.** Molecular determinants of frequency-dependence and Ca^{2+} potentiation of verapamil block in the pore region of $\text{Ca}_v1.2$. *Mol. Pharmacol.* 66:1236-1247 (2004).
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16. Liu, G., Hilliard, N., and **Hockerman, G.H.** Preferential coupling of $\text{Ca}_v1.3$ to glucose-induced $[\text{Ca}^{2+}]_i$ oscillations in the pancreatic beta cell line INS-1. *Mol. Pharmacol.* 65:1269-1277 (2004)
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