

Translational Pain Research: Targeting Sensitization – Robert W. Gereau, Ph.D. - References  
References

- Bhave, G., Karim, F., Carlton, S. M., & Gereau IV, R. W. (2001). Peripheral group I metabotropic glutamate receptors modulate nociception in mice. *Nature neuroscience*, 4(4), 417-423.
- Bhave, G., Hu, H. J., Glauner, K. S., Zhu, W., Wang, H., Brasier, D. J., ... & Gereau IV, R. W. (2003). Protein kinase C phosphorylation sensitizes but does not activate the capsaicin receptor transient receptor potential vanilloid 1 (TRPV1). *Proceedings of the National Academy of Sciences*, 100(21), 12480-12485.
- Bhave, G., Zhu, W., Wang, H., Brasier, D. J., Oxford, G. S., & Gereau, R. W. (2002). cAMP-dependent protein kinase regulates desensitization of the capsaicin receptor (VR1) by direct phosphorylation. *Neuron*, 35(4), 721-731.
- Cavallone, L. F., Montana, M. C., Frey, K., Kallogjeri, D., Wages, J. M., Rodebaugh, T. L., ... & Gereau IV, R. W. (2020). The metabotropic glutamate receptor 5 negative allosteric modulator fenobam: pharmacokinetics, side effects, and analgesic effects in healthy human subjects. *Pain*, 161(1), 135-146.
- Chae, Y., Yang, C. H., Kwon, Y. K., Kim, M. R., Pyun, K. H., Hahm, D. H., ... & Shim, I. (2004). Acupuncture attenuates repeated nicotine-induced behavioral sensitization and c-Fos expression in the nucleus accumbens and striatum of the rat. *Neuroscience Letters*, 358(2), 87-90.
- Chiechio, S., Copani, A., De Petris, L., Morales, M. E. P., Nicoletti, F., & Gereau IV, R. W. (2006). Transcriptional regulation of metabotropic glutamate receptor 2/3 expression by the NF- $\kappa$ B pathway in primary dorsal root ganglia neurons: a possible mechanism for the analgesic effect of L-acetylcarnitine. *Molecular pain*, 2, 1744-8069.
- Chiechio, S., Zammataro, M., Morales, M. E., Busceti, C. L., Drago, F., Gereau, R. W., ... & Nicoletti, F. (2009). Epigenetic modulation of mGlu2 receptors by histone deacetylase inhibitors in the treatment of inflammatory pain. *Molecular pharmacology*, 75(5), 1014-1020.
- Crock, L. W., Kolber, B. J., Morgan, C. D., Sadler, K. E., Vogt, S. K., Bruchas, M. R., & Gereau, R. W. (2012). Central amygdala metabotropic glutamate receptor 5 in the modulation of visceral pain. *Journal of Neuroscience*, 32(41), 14217-14226.
- Crock LW, Stemler KM, Song DG, Abbosh P, Vogt SK, Qiu CS, Lai HH, Mysorekar IU, Gereau RW  
4th. Metabotropic glutamate receptor 5 (mGluR5) regulates bladder nociception. Mol Pain. 2012  
Mar 26;8:20. doi: 10.1186/1744-8069-8-20. PMID: 22449017; PMCID: PMC3369204.
- Davidson, S., Golden, J. P., Copits, B. A., Ray, P. R., Vogt, S. K., Valtcheva, M. V., ... & Gereau IV, R. W. (2016). Group II mGluRs suppress hyperexcitability in mouse and human nociceptors. *Pain*, 157(9), 2081-2088.
- Hu, H. J., Alter, B. J., Carrasquillo, Y., Qiu, C. S., & Gereau, R. W. (2007). Metabotropic glutamate receptor 5 modulates nociceptive plasticity via extracellular signal-regulated kinase–Kv4.2 signaling in spinal cord dorsal horn neurons. *Journal of Neuroscience*, 27(48), 13181-13191.

- Hu, H. J., Bhave, G., & Gereau, R. W. (2002). Prostaglandin and protein kinase A-dependent modulation of vanilloid receptor function by metabotropic glutamate receptor 5: potential mechanism for thermal hyperalgesia. *Journal of Neuroscience*, 22(17), 7444-7452.
- Hu, H. J., & Gereau IV, R. W. (2003). ERK integrates PKA and PKC signaling in superficial dorsal horn neurons. II. Modulation of neuronal excitability. *Journal of neurophysiology*, 90(3), 1680-1688..
- Institute of Medicine (US) Committee on Advancing Pain Research, Care, and Education. (2011). *Relieving Pain in America: A Blueprint for Transforming Prevention, Care, Education, and Research*. National Academies Press (US).
- Karim, F., Bhave, G., & Gereau IV, R. W. (2001). Metabotropic glutamate receptors on peripheral sensory neuron terminals as targets for the development of novel analgesics. *Molecular psychiatry*, 6(6).
- Karim, F., Hu, H. J., Adwanikar, H., Kaplan, D., & Robert IV, W. G. (2006). Impaired inflammatory pain and thermal hyperalgesia in mice expressing neuron-specific dominant negative mitogen activated protein kinase kinase (MEK). *Molecular Pain*, 2, 1744-8069.
- Kolber, B. J., Montana, M. C., Carrasquillo, Y., Xu, J., Heinemann, S. F., Muglia, L. J., & Gereau, R. W. (2010). Activation of metabotropic glutamate receptor 5 in the amygdala modulates pain-like behavior. *Journal of Neuroscience*, 30(24), 8203-8213.
- Karim, F., Wang, C. C., & Gereau, R. W. (2001). Metabotropic glutamate receptor subtypes 1 and 5 are activators of extracellular signal-regulated kinase signaling required for inflammatory pain in mice. *Journal of Neuroscience*, 21(11), 3771-3779.
- Lai, H. H., North, C. S., Andriole, G. L., Cupps, L., Song, D., Ness, T. J., & Hong, B. A. (2014). Urological symptoms in a subset of patients with urological chronic pelvic pain syndrome and a polysymptomatic, polysyndromic pattern of presentation. *The Journal of urology*, 191(6), 1802-1807.
- Lax, N. C., George, D. C., Ignatz, C., & Kolber, B. J. (2014). The mGluR5 antagonist fenobam induces analgesic conditioned place preference in mice with spared nerve injury. *PloS one*, 9(7), e103524.
- Montana, M. C., Conrardy, B. A., Cavallone, L. F., Kolber, B. J., Rao, L. K., Greco, S. C., & Gereau, R. W. (2011). Metabotropic glutamate receptor 5 antagonism with fenobam: examination of analgesic tolerance and side effect profile in mice. *The Journal of the American Society of Anesthesiologists*, 115(6), 1239-1250.
- Pecknold, J. C., McClure, D. J., Appeltauer, L., Wrzesinski, L., & Allan, T. (1982). Treatment of anxiety using fenobam (a nonbenzodiazepine) in a double-blind standard (diazepam) placebo-controlled study. *Journal of clinical psychopharmacology*, 2(2), 129-132.
- Porter, R. H., Jaeschke, G., Spooren, W., Ballard, T. M., Büttelmann, B., Kolczewski, S., ... & Malherbe, P. (2005). Fenobam: a clinically validated nonbenzodiazepine anxiolytic is a potent, selective, and noncompetitive mGlu5 receptor antagonist with inverse agonist activity. *Journal of Pharmacology and Experimental Therapeutics*, 315(2), 711-721.

- Schwedt, Todd J., et al. "Episodic and chronic migraineurs are hypersensitive to thermal stimuli between migraine attacks." *Cephalgia* 31.1 (2011): 6-12.
- Sheahan, T. D., Valtcheva, M. V., McIlvried, L. A., Pullen, M. Y., Baranger, D. A., & Gereau, R. W. (2018). Metabotropic glutamate receptor 2/3 (mGluR2/3) activation suppresses TRPV1 sensitization in mouse, but not human, sensory neurons. *Eneuro*, 5(2).
- Valtcheva, M. V., Copits, B. A., Davidson, S., Sheahan, T. D., Pullen, M. Y., McCall, J. G., ... & Gereau IV, R. W. (2016). Surgical extraction of human dorsal root ganglia from organ donors and preparation of primary sensory neuron cultures. *Nature protocols*, 11(10), 1877-1888.
- Vervaeke, K., Hu, H., Graham, L. J., & Storm, J. F. (2006). Contrasting effects of the persistent Na<sup>+</sup> current on neuronal excitability and spike timing. *Neuron*, 49(2), 257-270.
- Yang, D., & Gereau, R. W. (2002). Peripheral group II metabotropic glutamate receptors (mGluR2/3) regulate prostaglandin E2-mediated sensitization of capsaicin responses and thermal nociception. *Journal of Neuroscience*, 22(15), 6388-6393.
- Yang, L., Mao, L., Tang, Q., Samdani, S., Liu, Z., & Wang, J. Q. (2004). A novel Ca2+-independent signaling pathway to extracellular signal-regulated protein kinase by coactivation of NMDA receptors and metabotropic glutamate receptor 5 in neurons. *Journal of Neuroscience*, 24(48), 10846-10857.
- Zammataro, M., Chiechio, S., Montana, M. C., Traficante, A., Copani, A., Nicoletti, F., & Gereau, R. W. (2011). mGlu2 metabotropic glutamate receptors restrain inflammatory pain and mediate the analgesic activity of dual mGlu2/mGlu3 receptor agonists. *Molecular pain*, 7, 1744-8069.
- Zammataro, M., Sortino, M. A., Parenti, C., Gereau IV, R. W., & Chiechio, S. (2014). HDAC and HAT inhibitors differently affect analgesia mediated by group II metabotropic glutamate receptors. *Molecular pain*, 10, 1744-8069.