

Andrew N Gifford, Ph.D.

Selected Publications (from a total of 51)

- Malik N, **Gifford A.N.**, Sandell J, Tuchman D, Ding Y.S. (2017) Synthesis and in vitro and In vivo evaluation of [3H]LRRK2-IN-1 as a novel radioligand for LRRK2. *Mol Imaging Biol In Press*
- **Gifford, A. N.**, Bennett, C. V., and Fowler, J. S. (2012) Radiosynthesis of the fluorinated sucrose analogue, 1' [¹⁸F]fluoro-1'-deoxysucrose. *J. Labelled Comp. Radiopharm.* 55; 441- 446.
- **Gifford A. N.**, Kuschel S., Shea C. and Fowler J. S. (2011) Polymer-Supported Organotin Reagent for Prosthetic Group Labeling of Biological Macromolecules with Radioiodine. *Bioconjugate Chem.* **22**, 406-412.
- **Gifford A. N.**, Espaillat M. P. and Gatley S. J. (2008) Biodistribution of radiolabeled ethanol in rodents. *Drug Metab. Dispos.* **36**, 1853-1858.
- Tovar-Salazar A., Dhawan J., Lovejoy A., Liu Q. A. and **Gifford A. N.** (2007) Preparation of radioiodinated peptide nucleic acids with high specific activity. *Anal. Biochem.* **360**, 92-98.
- Dhawan J., Deng H. F., Gatley S. J., Makriyannis A., Akinfeleye T., Bruneus M., Dimaio A. A. and **Gifford A. N.** (2006) Evaluation of the in vivo receptor occupancy for the behavioral effects. of Cannabinoids using a radiolabeled cannabinoid receptor agonist, R-[I-125/131]AM2233. *Synapse* **60**, 93-101.
- Glaser S.T., Gatley S.J., **Gifford A.N.** (2006) Ex-vivo imaging of fatty acid amide hydrolase (FAAH) activity and its inhibition in the mouse brain. *J Pharmacol Exp Ther* 316: 1088-1097
- Cosenza M., **Gifford A.N.**, Gatley S.J., Pyatt B., Liu Q., Makriyannis A. and Volkow N.D. (2006) Locomotor activity and occupancy of brain cannabinoid CB1 receptors by the antagonist/inverse agonist AM281. *Synapse.* 38: 477-82
- Deng H, **Gifford A.N.**, Zvonok AM, Cui G, Li X, Fan P, Deschamps J.R., Flippen-Anderson J.L., Gatley S.J., Makriyannis A. (2005). Potent cannabinergic indole analogues as radioiodinatable brain imaging agents for the CB1 cannabinoid receptor. *J Med Chem* 48: 6386-6392
- Li Z., **Gifford A.N.**, Liu Q., Thotapally R., Ding Y.S., Makriyannis A. and Gatley S.J. (2005) Candidate PET radioligands for cannabinoid CB(1) receptors: [¹⁸F]AM5144 and related pyrazole compounds. *Nucl Med Biol.* 32: 361-6.
- Gerasimov M.R., Collier L., Ferrieri A., Alexoff D., Lee D., **Gifford A.N.** and Balster R.L. (2003) Toluene inhalation produces a conditioned place preference in rats. *Eur J Pharmacol.* 477: 45-52.
- Gatley S. J., Volkow N. D., Fowler J. S., Ding Y. S., Logan J., Wang G. J. and **Gifford A. N.** (2003) Positron emission tomography and its use to image the occupancy of drug binding sites. *Drug Dev. Res.* 59, 194-207.
- Rice O.V., Gordon N. and **Gifford A.N.** (2002) Conditioned place preference to morphine in cannabinoid CB1 receptor knockout mice. *Brain Res.* 945: 135-8.
- Horan B., **Gifford A.N.**, Matsuno K., Mita S. and Ashby C.R., Jr. (2002) Effect of SA4503 on the electrically evoked release of (3)H-acetylcholine from striatal and hippocampal rat brain slices. *Synapse.* 46: 1-3.
- **Gifford A.N.**, Makriyannis A., Volkow N.D. and Gatley S.J. (2002) In vivo imaging of the brain cannabinoid receptor. *Chem Phys Lipids.* 121: 65-72.
- Gerasimov M.R., Ferrieri R.A., Schiffer W.K., Logan J., Gatley S.J., **Gifford A.N.**, Alexoff D.A., Marsteller D.A., Shea C., Garza V., Carter P., King P., Ashby C.R., Jr., Vitkun S.

and Dewey S.L. (2002) Study of brain uptake and biodistribution of [¹¹C]toluene in non-human primates and mice. *Life Sci.* 70: 2811-28

- Volkow N. D., Wang G. J., Fowler J. S., Logan J., Jayne M., Franceschi D., Wong C., Gatley S. J., **Gifford A. N.**, Ding Y. S. and Pappas N. (2002) "Nonhedonic" food motivation in humans involves dopamine in the dorsal striatum and methylphenidate amplifies this effect. *Synapse* 44, 175-180
- Rice O.V., Gatley S.J., Shen J., Huemmer C.L., Rogoz R., DeJesus O.T., Volkow N.D. and **Gifford A.N.** (2001) Effects of endogenous neurotransmitters on the in vivo binding of dopamine and 5-HT radiotracers in mice. *Neuropsychopharmacology.* 25: 679-89.
- **Gifford A.N.**, Park M.H., Kash T.L., Herman L.M., Park E.H., Gatley S.J. and Volkow N.D. (2000) Effect of amphetamine-induced dopamine release on radiotracer binding to D1 and D2 receptors in rat brain striatal slices. *Naunyn Schmiedeberg's Arch Pharmacol.* 362: 413-8.
- **Gifford A.N.**, Bruneus M., Gatley S.J. and Volkow N.D. (2000) Cannabinoid receptor-mediated inhibition of acetylcholine release from hippocampal and cortical synaptosomes. *Br J Pharmacol.* 131: 645-50.
- Gatley S.J., **Gifford A.N.**, Carroll F.I. and Volkow N.D. (2000) Sensitivity of binding of high-affinity dopamine receptor radioligands to increased synaptic dopamine. *Synapse.* 38: 483-8.
- Cosenza M., **Gifford A.N.**, Gatley S.J., Pyatt B., Liu Q., Makriyannis A. and Volkow N.D. (2000) Locomotor activity and occupancy of brain cannabinoid CB1 receptors by the antagonist/inverse agonist AM281. *Synapse.* 38: 477-82.
- Volkow N.D., Wang G.J., Fowler J.S., Gatley S.J., Logan J., Ding Y.S., Dewey S.L., Hitzemann R., **Gifford A.N.** and Pappas N.R. (1999) Blockade of striatal dopamine transporters by intravenous methylphenidate is not sufficient to induce self-reports of "high". *J Pharmacol Exp Ther.* 288: 14-20.
- **Gifford A.N.**, Bruneus M., Lin S., Goutopoulos A., Makriyannis A., Volkow N.D. and Gatley S.J. (1999) Potentiation of the action of anandamide on hippocampal slices by the fatty acid amide hydrolase inhibitor, palmitylsulphonyl fluoride (AM 374). *Eur J Pharmacol.* 383: 9-14.
- **Gifford A.N.**, Bruneus M., Gatley S.J., Lan R., Makriyannis A. and Volkow N.D. (1999) Large receptor reserve for cannabinoid actions in the central nervous system. *J Pharmacol Exp Ther.* 288: 478-83.
- Gatley S.J., Volkow N.D., **Gifford A.N.**, Fowler J.S., Dewey S.L., Ding Y.S. and Logan J. (1999) Dopamine-transporter occupancy after intravenous doses of cocaine and methylphenidate in mice and humans. *Psychopharmacology (Berl).* 146: 93-100.
- **Gifford A.N.**, Gatley S.J. and Volkow N.D. (1998) Evaluation of the importance of rebinding to receptors in slowing the approach to equilibrium of high-affinity PET and SPECT radiotracers. *Synapse.* 28: 167-75.
- Gatley S.J., Lan R., Volkow N.D., Pappas N., King P., Wong C.T., **Gifford A.N.**, Pyatt B., Dewey S.L. and Makriyannis A. (1998) Imaging the brain marijuana receptor: development of a radioligand that binds to cannabinoid CB1 receptors in vivo. *J Neurochem.* 70: 417-23.
- Gatley S.J., Ding Y.S., Brady D., **Gifford A.N.**, Dewey S.L., Carroll F.I., Fowler J.S. and Volkow N.D. (1998) In vitro and ex vivo autoradiographic studies of nicotinic acetylcholine receptors using [¹⁸F]fluoronocholepiatidine in rodent and human brain. *Nucl Med Biol.* 25: 449-54
- **Gifford A.N.**, Tang Y., Gatley S.J., Volkow N.D., Lan R. and Makriyannis A. (1997) Effect of the cannabinoid receptor SPECT agent, AM 281, on hippocampal acetylcholine release from rat brain slices. *Neurosci Lett.* 238: 84-6.

- **Gifford A.N.**, Samiiian L., Gatley S.J. and Ashby C.R., Jr. (1997) Examination of the effect of the cannabinoid receptor agonist, CP 55,940, on electrically evoked transmitter release from rat brain slices. *Eur J Pharmacol.* 324: 187-92.
- **Gifford A.N.**, Gardner E.L. and Ashby C.R., Jr. (1997) The effect of intravenous administration of delta-9-tetrahydrocannabinol on the activity of A10 dopamine neurons recorded in vivo in anesthetized rats. *Neuropsychobiology.* 36: 96-9.
- Gatley S.J., Volkow N.D., **Gifford A.N.**, Ding Y.S., Logan J. and Wang G.J. (1997) Model for estimating dopamine transporter occupancy and subsequent increases in synaptic dopamine using positron emission tomography and carbon-11-labeled cocaine. *Biochem Pharmacol.* 53: 43-52.
- Gatley S.J., Lan R., Pyatt B., **Gifford A.N.**, Volkow N.D. and Makriyannis A. (1997) Binding of the non-classical cannabinoid CP 55,940, and the diarylpyrazole AM251 to rodent brain cannabinoid receptors. *Life Sci.* 61: PL 191-7.
- **Gifford A.N.**, Minabe Y., Toor A., Wang R.Y. and Ashby C.R., Jr. (1996) Examination of the action of 3,4-methylenedioxymethamphetamine on rat A10 dopamine neurons. *Synapse.* 23: 52-7.
- **Gifford A.N.**, Gatley S.J. and Ashby C.R., Jr. (1996) Endogenously released dopamine inhibits the binding of dopaminergic PET and SPECT ligands in superfused rat striatal slices. *Synapse.* 22: 232-8.
- **Gifford A.N.** and Ashby C.R., Jr. (1996) Electrically evoked acetylcholine release from hippocampal slices is inhibited by the cannabinoid receptor agonist, WIN 55212-2, and is potentiated by the cannabinoid antagonist, SR 141716A. *J Pharmacol Exp Ther.* 277: 1431-6.
- Gatley S.J., **Gifford A.N.**, Volkow N.D., Lan R. and Makriyannis A. (1996) 123I-labeled AM251: a radioiodinated ligand which binds in vivo to mouse brain cannabinoid CB1 receptors. *Eur J Pharmacol.* 307: 331-8