

Dr. Larry Gross

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Education

- Ph.D. (1987) in Analytical Chemistry, University of California, Riverside
- B.S. (1977) in Chemistry, Ohio State University

Employment

- Research/Development Engineer (2017-present): Department of Chemistry and Biochemistry, University of California at San Diego, CA
- Research Specialist (1994-2017): Howard Hughes Medical Institute, San Diego California

Recent Publications

- E.A. Rodriguez, G.N. Tran, **L.A. Gross**, J.L. Crisp, X. Shu, J.Y. Lin, R.Y. Tsien. "A far-red fluorescent protein evolved from a cyanobacterial phycobiliprotein" *Nature Methods* 13(9), 763 (2016).
- H.L. Glasgow, M.A. Whitney, **L.A. Gross**, B.Friedman, S.R. Adams, J.L. Crisp, T.Hussain, A.P. Frei, K.Novy, B.Wollscheid,Q.T. Nguyen, R.Y. Tsien , "Laminin targeting of a peripheral nerve-highlighting peptide enables degenerated nerve visualization" *Proceedings of the National Academy of Sciences of the United States of America*, 113, 12774 (2016).
- S.F. Palida, M.T. Butko, J.T. Ngo, M.R. Mackey, **L.A. Gross**, M.H. Ellisman, R.Y. Tsien. "PKM ζ , but not PKC λ , is rapidly synthesized and degraded at the neuronal synapse" *Journal of Neuroscience* 35(20), 7736 (2015).
- D.T. Capraro, H. Lammert, D.K. Heidary, M. Roy, **L.A. Gross**, J.N. Onuchic, P.A. Jennings. "Altered backbone and side-chain interactions result in route heterogeneity during the folding of interleukin-1 β " *Biophysical Journal*, 105(4), 975 (2013).
- M.A. Whitney, J.L. Crisp, L.T. Nguyen, B. Friedman, **L.A. Gross**, P. Steinbach, R.Y. Tsien, Q.T. Nguyen. "Fluorescent peptides highlight peripheral nerves during surgery in Mice" *Nature Biotechnology*, 29(4), 352 (2011).
- M. Whitney, J.L. Crisp, E.S. Olson, T.A. Aguilera, **L.A. Gross**, L.G. Ellies, R.Y. Tsien. "Parallel in vivo and in vitro selection using phage display identifies protease-dependent tumor-targeting peptides" *Journal of Biological Chemistry*, 285(29), 22532 (2010).
- E.S. Olson, T.A. Aguilera, T. Jiang, L.G. Ellies, Q.T. Nguyen, E.H. Wong, **L.A. Gross**, R.Y. Tsien. "In vivo characterization of activatable cell penetrating peptides for targeting protease activity in cancer" *Integrated Biology (Cambridge)*, 1(5-6), 382 (2009).
- M.Z. Lin, M.R. McKeown, H.L. Ng, T.A. Aguilera, N.C. Shaner, R.E. Campbell, S.R. Adams, **L.A. Gross**, W. Ma, T. Alber,R.Y. Tsien. "Autofluorescent proteins with excitation in the optical window for intravital imaging in mammals". *Chemical Biology*, 16(11), 1169 (2009).

- S.E. Wiley, M.L. Paddock, E.C. Abresch, **L. Gross**, P. van der Geer, R. Nechushtai, A.N. Murphy, P.A. Jennings, J.E. Dixon. "The outer mitochondrial membrane protein mitoNEET contains a novel redox-active 2Fe-2S cluster" *Journal of Biological Chemistry*, 282(33), 23745 (2007).
- J.C. Covalt, T.B. Cao, J.R. Magdaroag, **L.A. Gross**, P.A. Jennings, "Temperature, media, and point of induction affect the N-terminal processing of interleukin-1beta" *Protein Expression and Purification*, 41(1), 45 (2005).
- S.R. Adams, R.E. Campbell, **L.A. Gross**, B.R. Martin, G.K. Walkup, Y. Yao, J. Llopis, R.Y. Tsien, "New biarsenical ligands and tetracysteine motifs for protein labeling in vitro and in vivo: synthesis and biological applications" *Journal of the American Chemical Society*, 124(21), 6063 (2002).
- J.M. Finke, **L.A. Gross**, H.M. Ho, D. Sept, B. H. Zimm, and P.A. Jennings, "Commitment to Folded and Aggregated States Occurs Late in Interleukin-1 Folding" *Biochemistry*, 39, 15633 (2000).
- **L.A. Gross**, G.S. Baird, R.C. Hoffman, K.K. Baldrige, R.Y. Tsien, "The structure of the chromophore within DsRed, a red fluorescent protein from coral" *Proceedings of the National Academy of Sciences of the United States of America*, 97, 11990 (2000).