Stanford

Bruce Koch, Ph.D.

Director of High-Throughput Screening

Sarafan ChEM-H

NIH Biosketch available Online Resume available Online

SUPERVISORS

- Carolyn Bertozzi

Bio

CURRENT ROLE AT STANFORD

Director, ChEM-H/CSB High Throughput Screening Group

Staff Lead, IMA HTS Module

Adviser to the SPARK Program

ACADEMIC APPOINTMENTS

- Senior Research Scientist, Sarafan ChEM-H

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Committee Member, NIH Study Section (Drug Discovery for Aging, Neuropsychiatric and Neurologic Disorders (SBIR/STTR)) (2014 - 2018)
- Committee Member, NIH Study Section (NIH Roadmap HTS Assay for MLPCN R03) (2010 - 2010)
- Committee Member, NIH Study Section (NIH Roadmap Assay Development R25) (2009 - 2009)
- Committee Member, National Academy of Sciences Ohio BRTT Committee (2003 - 2003)
- Member, Biophysical Society (1995 - present)
- Member, Society for Laboratory Automation and Screening (1999 - present)
- Member, Association of Biomolecular Resource Facilities (2012 - present)

PROFESSIONAL EDUCATION

- Post-doc, UC Berkeley , Biochemistry (PI: Randy Schekman)
- Ph.D., Harvard Medical School , Cell and Developmental Biology (1986)
- B.S., Bates College , Biology (1979)

PATENTS

- P.S. Dietrich, B. Koch, H. Guthrie, U. A. Gubler. "United States Patent 8,349,572 Stable cell lines expressing hERG", Roche Palo Alto LLC, Jan 8, 2013
- P.S. Dietrich, B. Koch, H. Guthrie, U. A. Gubler. "United States Patent 7,776,590B2 Stable cell lines expressing hERG", Roche Palo Alto LLC, Aug 17, 2010

Publications

PUBLICATIONS

- **Developing Assays for High-Throughput Screening (HTS)** *A Practical Guide to Drug Development in Academia: The SPARK Approach*
  Koch, B.
  Springer.2014; 1: 40–45

- **Surface plasmon resonance based assay for the detection and characterization of promiscuous inhibitors** *JOURNAL OF MEDICINAL CHEMISTRY*
  Giannetti, A. M., Koch, B. D., Browner, M. F.
  2008; 51 (3): 574-580

- **A tetrodotoxin-resistant voltage-gated sodium channel from human dorsal root ganglia, hPN3/SCN10A** *PAIN*
  Rabert, D. K., Koch, B. D., Ilnicka, M., Obernolte, R. A., NAYLOR, S. L., Herman, R. C., Eglen, R. M., Hunter, J. C., Sangameswaran, L.
  1998; 78 (2): 107-114

- **Functional analysis of a voltage-gated sodium channel and its splice variant from rat dorsal root ganglia** *JOURNAL OF NEUROCHEMISTRY*
  Dietrich, P. S., McGivern, J. G., Delgado, S. G., Koch, B. D., Eglen, R. M., Hunter, J. C., Sangameswaran, L.
  1998; 70 (6): 2262-2272

- **A novel tetrodotoxin-sensitive, voltage-gated sodium channel expressed in rat and human dorsal root ganglia** *JOURNAL OF BIOLOGICAL CHEMISTRY*
  Sangameswaran, L., Fish, L. M., Koch, B. D., Rabert, D. K., Delgado, S. G., Ilnicka, M., Jakeman, L. B., Novakovic, S., Wong, K., Sze, P., Tzoumaka, E., Stewart, G. R., Herman, et al
  1997; 272 (23): 14805-14809

- **Structure and function of a novel voltage-gated, tetrodotoxin-resistant sodium channel specific to sensory neurons** *JOURNAL OF BIOLOGICAL CHEMISTRY*
  Sangameswaran, L., Delgado, S. G., Fish, L. M., Koch, B. D., Jakeman, L. B., Stewart, G. R., Sze, P., Hunter, J. C., Eglen, R. M., Herman, R. C.
  1996; 271 (11): 5953-5956

- **Modulation of mechano-hyperalgesia by clinically effective analgesics in rats with a peripheral mononeuropathy.** *Analgesia*
  B.D. Koch, G.F. Faurot, J.R. McGuirk, D.E. Clarke, J.C. Hunter
  1996; 2: 157 - 164

- **PHARMACOLOGY OF A CA2+-INFLUX PATHWAY ACTIVATED BY EMPTYING THE INTRACELLULAR CA2+ STORES IN HL-60 CELLS - EVIDENCE THAT A CYTOCHROME-P-450 IS NOT INVOLVED** *BIOCHEMICAL JOURNAL*
  Koch, B. D., FAUROT, G. F., Kopanitsa, M. V., Swinney, D. C.
  1994; 302: 187-190

- **THE ROLE OF STRESS PROTEINS IN MEMBRANE BIOGENESIS** *TRENDS IN BIOCHEMICAL SCIENCES*
  Deshaies, R. J., Koch, B. D., Schekman, R.
  1988; 13 (10): 384-388

- **A SUBFAMILY OF STRESS PROTEINS FACILITATES TRANSLOCATION OF SECRETORY AND MITOCHONDRIAL PRECURSOR POLYPEPTIDES** *NATURE*
  Deshaies, R. J., Koch, B. D., WERNERWASHBURNE, M., Craig, E. A., Schekman, R.
  1988; 332 (6167): 800-805

- **CHARACTERIZATION OF THE CYCLIC AMP-INDEPENDENT ACTIONS OF SOMATOSTATIN IN GH CELLS .1. AN INCREASE IN POTASSIUM CONDUCTANCE IS RESPONSIBLE FOR BOTH THE HYPERPOLARIZATION AND THE DECREASE IN INTRACELLULAR FREE CALCIUM PRODUCED BY SOMATOSTATIN** *JOURNAL OF BIOLOGICAL CHEMISTRY*
  Koch, B. D., BLALOCK, J. B., Schonbrunn, A.
  1988; 263 (1): 216-225

- **CHARACTERIZATION OF THE CYCLIC AMP-INDEPENDENT ACTIONS OF SOMATOSTATIN IN GH CELLS .2. AN INCREASE IN POTASSIUM CONDUCTANCE INITIATES SOMATOSTATIN-INDUCED INHIBITION OF PROLACTIN SECRETION** *JOURNAL OF BIOLOGICAL CHEMISTRY*
  Koch, B. D., Schonbrunn, A.
  1988; 263 (1): 226-234

- **Pertussis toxin blocks both cyclic AMP-mediated and cyclic AMP-independent actions of somatostatin. Evidence for coupling of Ni to decreases in intracellular free calcium.** *journal of biological chemistry*
  Koch, B. D., Dorflinger, L. J., Schonbrunn, A.
  1985; 260 (24): 13138-13145

- **MECHANISMS OF SOMATOSTATIN ACTION IN PITUITARY-CELLS** *ADVANCES IN EXPERIMENTAL MEDICINE AND BIOLOGY*
  Schonbrunn, A., Dorflinger, L. J., Koch, B. D.
  1985; 188: 305-324

- **THE SOMATOSTATIN RECEPTOR IS DIRECTLY COUPLED TO ADENYLATE-CYCLASE IN GH4C1 PITUITARY CELL-MEMBRANES** *ENDOCRINOLOGY*
  Koch, B. D., Schonbrunn, A.
  1984; 114 (5): 1784-1790

- **THERMOSENSITIVITY OF THE MEMBRANE-POTENTIAL OF NORMAL AND SIMIAN VIRUS-40-TRANSFORMED HAMSTER LYMPHOCYTES** *CANCER RESEARCH*
  Mikkelsen, R. B., Koch, B.
  1981; 41 (1): 209-215