

# Stanford

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## Bruce Koch, Ph.D.

Director, High-Throughput Screening

Sarafan ChEM-H

NIH Biosketch available Online

Resume available Online

### SUPERVISORS

- Carolyn Bertozzi

### Bio

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#### CURRENT ROLE AT STANFORD

Head, ChEM-H/CSB High Throughput Screening Knowledge Center (HTSKC)

Staff Co-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

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### 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 CA<sub>2+</sub>-INFLUX PATHWAY ACTIVATED BY EMPTYING THE INTRACELLULAR CA<sub>2+</sub> 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**  
Deshaines, 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**  
Deshaines, 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 ADENYLYLATE-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