

# 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<sup>2+</sup>-INFLUX PATHWAY ACTIVATED BY EMPTYING THE INTRACELLULAR CA<sup>2+</sup> 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