

**BIOGRAPHICAL SKETCH**

NAME Bruce R. Conklin		POSITION TITLE Associate Investigator and Associate Professor	
EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)			
INSTITUTION AND LOCATION	DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY
University of California, Berkeley, CA	A.B.	1982	Public Health
Case Western Reserve University, Cleveland, OH	M.D.	1988	Medicine
Johns Hopkins Hospital, Baltimore, MD	Residency	1990	Internal Medicine
University of California, San Francisco (UCSF)	Postdoctoral	1994	Molecular Pharmacology

**A. POSITIONS AND HONORS**

1986–1988	Research Scholars Program, Howard Hughes Medical Institute–NIH, Laboratory of Cell Biology, NIMH, Preceptor: Julius Axelrod, Bethesda, MD
1988–1990	Internal Medicine Internship and Residency, Johns Hopkins Hospital, Baltimore, MD
1990–1994	Postdoctoral Fellow with Henry R. Bourne, M.D., Department of Pharmacology, UCSF
1995–2001	Associate Director, General Clinical Research Center, Founder, Genomics Core Laboratory, San Francisco General Hospital, San Francisco, CA
1995–2001	Assistant Investigator, Gladstone Institute of Cardiovascular Disease, San Francisco, CA
1995–2001	Assistant Professor of Medicine and Cellular and Molecular Pharmacology, UCSF
2001–	Associate Professor of Medicine and Cellular and Molecular Pharmacology, UCSF
2001–	Associate Investigator, Gladstone Institute of Cardiovascular Disease, San Francisco, CA

**Board Certifications and Academic Affiliations**

1992–	Board Certified, Internal Medicine, Medical Board of California, License #A49977
1995–	Faculty, Biomedical Sciences (BMS) Graduate Program, UCSF
1995–	Member, Molecular Design Institute, UCSF
1997–	Faculty, Program in Biological Sciences (PIBS), Graduate Program, UCSF
2000–	Faculty, Pharmacogenomics Graduate Program, UCSF

**Honors and Awards**

1980	President's Undergraduate Research Fellowship, University of California, Berkeley
1988	Harry Resnick Award, Case Western Reserve School of Medicine
1990	Medical Resident Research Award, NIH-NIDDK
1990	Damon Runyon–Walter Winchell Cancer Research Fund Postdoctoral Fellowship (superseded by NIH grant, below)
1991–1995	Physician Scientist Award, NIH-NHLBI

**B. SELECTED PUBLICATIONS (in chronological order)****Peer Reviewed**

Conklin BR, Burch RM, Steranka LR, Axelrod J. (1988) Distinct bradykinin receptors mediate stimulation of prostaglandin synthesis by endothelial cells and fibroblasts. *J. Pharmacol. Exp. Ther.* 244:646–649.

Conklin BR, Brann MR, Buckley NJ, Ma AL, Bonner TI, Axelrod J. (1988) Stimulation of arachidonic acid release and inhibition of mitogenesis by cloned genes of muscarinic receptor subtypes stably expressed in A9 L cells. *Proc. Natl. Acad. Sci. USA* 85:8698–8702.

Conklin BR, Chabre O, Wong YH, Federman AD, Bourne HR. (1992) Recombinant G<sub>q</sub>: Mutational activation and coupling to receptors and phospholipase C. *J. Biol. Chem.* 267:31–33.

Wong YH, Conklin BR, Bourne HR. (1992) G<sub>z</sub> mediates hormonal inhibition of cyclic AMP accumulation. *Science* 255:339–342.

Federman AD, Conklin BR, Schrader KA, Reed RR, Bourne HR. (1992) Hormonal stimulation of adenylyl cyclase via G<sub>i</sub> protein  $\alpha$  subunits. *Nature* 354:159–161. (first two authors contributed equally)

Chabre O, Conklin BR, Lin HY, Lodish HF, Wilson E, Ives HE, Catanzariti L, Hemmings BA, Bourne HR. (1992) A recombinant calcitonin receptor independently stimulates 3',5'-cyclic adenosine monophosphate and Ca<sup>2+</sup>/inositol phosphate signaling pathways. *Mol. Endocrinol.* 6:551–556.

Conklin BR, Farfel Z, Lustig KD, Julius D, Bourne HR. (1993) Substitution of three amino acids switches receptor specificity of G<sub>q</sub> to that of G<sub>i</sub>. *Nature* 363:274–276.

- Lustig KD, Conklin BR, Herzmark P, Taussig R, Bourne HR. (1993) Type II adenylylcyclase integrates coincident signals from G<sub>s</sub>, G<sub>i</sub>, and G<sub>q</sub>. *J. Biol. Chem.* 268:13900–13905.
- Voyno-Yasenetskaya T, Conklin BR, Gilbert RL, Hooley R, Bourne HR, Barber DL. (1994) G<sub>q</sub>13 stimulates Na<sup>+</sup>-H<sup>+</sup> exchange. *J. Biol. Chem.* 269:4721–4724.
- Chabre O, Conklin BR, Brandon S, Bourne HR, Limbird LE. (1994) Coupling of the  $\beta$ 2A-adrenergic receptor to multiple G proteins, a simple approach for estimating receptor-G protein coupling efficiency in a transient expression system. *J. Biol. Chem.* 269:5730–5734.
- Liu J, Conklin BR, Blin N, Yun J, Wess J. (1995) Identification of a receptor/G protein contact site critical for signalling specificity and G protein activation. *Proc. Natl. Acad. Sci. USA* 92:11642–11646.
- Conklin BR, Herzmark P, Ishida S, Voyno-Yasenetskaya TA, Sun Y, Farfel Z, Bourne HR. (1996) C-Terminal mutations of G<sub>q</sub> $\beta$  and G<sub>s</sub> $\beta$  that alter the fidelity of receptor activation. *Mol. Pharmacol.* 50:885–890.
- Kostenis E, Degtyarev MY, Conklin BR, Wess J. (1997) The N-terminal extension of G $\beta$ <sub>q</sub> is critical for constraining the selectivity of receptor coupling. *J. Biol. Chem.* 272:19107–19110.
- Coward P, Wada HG, Falk MS, Chan SDH, Meng F, Akil H, Conklin BR. (1998) Controlling signaling with a specifically designed G<sub>i</sub>-coupled receptor. *Proc. Natl. Acad. Sci. USA* 95:352–357.
- Redfern CH, Coward P, Degtyarev MY, Lee EK, Kwa A, Hennighausen L, Bujard H, Fishman GI, Conklin BR. (1998) Conditional expression and signaling of a specifically designed G<sub>i</sub>-coupled receptor in transgenic mice. *Nat. Biotechnol.* 17:165–169.
- Coward P, Chan SDH, Wada HG, Humphries GM, Conklin BR. (1999) Chimeric G proteins allow a high-throughput signaling assay of G<sub>i</sub>-coupled receptors. *Anal. Biochem.* 270:242–248.
- Redfern CH, Degtyarev MY, Desai K, Kwa AT, Salomonis N, Vranizan K, Lee EK, Coward P, Shah N, Warrington JA, Fishman GI, Bernstein D, Baker AJ, Conklin BR. (2000) Conditional expression of a G<sub>i</sub>-coupled receptor causes ventricular conduction delay and a lethal cardiomyopathy. *Proc. Natl. Acad. Sci. USA* 97:4826–4831.
- Chang MA, Horner JW, Conklin BR, Bok D, Zack DJ. (2000) Tetracycline-inducible system for photoreceptor-specific gene expression. *Invest. Ophthalmol. Vis. Sci.* 41:4281–4287.
- Baker AJ, Redfern CH, Harwood MD, Simpson PC, Conklin BR. (2001) Abnormalities of myocardial contraction and relaxation caused by expression of a G<sub>i</sub>-coupled receptor in a transgenic mouse model of dilated cardiomyopathy. *Am. J. Physiol.* 280:H1653–H1659.
- Dahlquist KD, Salomonis N, Vranizan K, Lawlor SC, Conklin BR. (2002) GenMAPP: A new tool for viewing and analyzing microarray data on biological pathways. *Nat. Genet.* 31:19–20.
- Doniger SW, Salomonis N, Dahlquist KD, Vranizan K, Lawlor SC, Conklin BR. (2003) MAPPFinder: Using Gene Ontology and GenMAPP to create a global gene-expression profile from microarray data. *Genome Biol.* 4:R7–R7.12.
- Zambon AC, McDearmon EL, Salomonis N, Vranizan K, Johansen K, Adey D, Takahashi JS, Schambelan M, Conklin BR. Time- and exercise-dependent gene regulation in human skeletal muscle. *Genome Biol.* 4:R61–R61.12.
- Commentaries and Invited Reviews**
- Bourne HR, Lustig KO, Wong YH, Conklin BR. (1992) Detection of coincident signals by G proteins and adenylyl cyclase. *Cold Spring Harb. Symp. Quant. Biol.* 57:145–148.
- Conklin BR, Bourne HR. (1993) Structural elements of G $\beta$  subunits that interact with G $\alpha$  receptors and effectors. *Cell* 73:631–641.
- Conklin BR, Bourne HR. (1993) Mouse coat colour reconsidered. *Nature* 364:110.
- Conklin BR, Bourne HR. (1994) Homeostatic signals: Marriage of the flytrap and the serpent. *Nature* 367:22.
- Scarce-Levie K, Coward P, Redfern CH, Conklin BR. (2001) Engineering receptors activated solely by synthetic ligands (RASSLs). *Trends Pharmacol. Sci.* 22:414–420.
- Scarce-Levie K, Coward P, Redfern CH, Conklin BR. (2002) Tools for dissecting signaling pathways in vivo: Receptors activated solely by synthetic ligands (RASSLs). *Methods Enzymol.*, 343:232–248.