

Sandra McCallum Field, Ph.D.

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- Ability to clearly communicate scientific concepts to diverse audiences
- Experienced in medical writing, particularly oncology-related topics
- Ten years of laboratory research in signal transduction and infectious disease
- Experienced educator of college-level biology courses

Professional Experience

Owner, Field Scientific LLC, Scientific and Medical Writing Services
2005 – present

Recent projects include:

- training manuals and slide sets for pharmaceutical sales training in hematological malignancy
- clinical trial manuscripts and review articles in oncology
- basic science manuscripts in cell biology and infectious disease
- NIH grants
- developmental editing of scientific manuscripts for targeted proteins database
- ESL editing of manuscripts and NIH grants
- non-clinical study reports
- book chapters for popular science audiences
- magazine articles for scientific annual reports
- alumni magazine articles
- articles for hospital research newsletters

Adjunct Professor, Bloomsburg University, Department of Biological and Allied Health Sciences

Fall 2008

Instructor for laboratory section of Concepts in Biology I

Adjunct Professor, Bucknell University, Department of Biology

Fall 2008, Spring 2009

Instructor for laboratory section of Biol 205 - Introduction to Molecules and Cells and Biol 206 - Organismal Biology

Visiting Professor, Bucknell University, Department of Biology

Spring 2007

Developed and taught upper level Microbiology course with an emphasis on infectious disease. Laboratory sections in Microbiology and Organismal Biology

Director of Scientific Content, LabVelocity Inc.

1999 – 2006

Managed all aspects of development of scientific content for comprehensive online scientific resource. Responsibilities included researching and writing articles on new scientific trends for online publication, building scientific product hierarchy, writing user manuals, e-newsletter publishing, database management, software design, website management, and customer support.

Professional Experience, Continued	<p>Postdoctoral Research 1997 - 1999 Department of Biochemistry, Stanford University, Advisor: Julie Theriot, "Biochemical and microscopic analyses of actin-based motility by the bacterial pathogen, <i>Shigella flexneri</i>."</p>
	<p>Graduate Research 1991 - 1997 Department of Biochemistry, Molecular and Cell Biology, Cornell University, Advisor: Richard Cerione, "Identification and Characterization of Two New Targets/Effectors for the Cdc42Hs GTP-binding Protein."</p>
	<p>Undergraduate Research 1989 - 1990 Department of Pathology, University of California, Davis, Medical School, Robert Cardiff, Supervisor, "Characterization of Antibodies for use in Diagnosis and Treatment of Tumors of the Head and Neck by Photoradio Immune Therapy (PRIT)."</p>
Education	<p>Ph.D., August 1997, Cornell University, Section of Biochemistry, Molecular and Cell Biology, Pharmacology Minor, Advisor: Richard Cerione.</p> <p>B.S. Honors, June 1990, University of California, Davis, Genetics.</p>
Professional Affiliations	<p>National Association of Science Writers (NASW) American Medical Writers Association (AMWA) Philadelphia-Area Science Writers Association (PASWA)</p>
Selected Publications	<p>Field, S., Argonne National Laboratory, Advanced Photon Source, Annual Report APS Science 2008, ANL-08/24, ISSN 1931-5015, May 2009. "Taking Big Steps with Myosin VI", (p76-77). "A Nuclear Receptor Complex Revealed", (p 79-80). "Using Viruses to Target Cancer", (84-85). "Marine Sediments have an Apatite for Diatomaceous Polyphosphate", (p 106-107).</p> <p>Field, S., in The Science of Dune: An unauthorized exploration into the Real Science Behind Frank Herbert's Fictional Universe. "Evolution by Any Means on Dune", (p 67-81). Edited by Kevin Grazier, PhD. Ben Bella Books, January 2008.</p> <p>Field, S., Argonne National Laboratory, Advanced Photon Source, Annual Report APS Science 2007, ANL-07/25, ISSN 1931-5007 (May 2008, Argonne National Laboratory) "The Fate of Vitamin B-12", (p 86-87). "Mechanisms of Molecular Trash Disposal", (p 88-89). "Solution of the First Death Domain Complex Structure", (p 90-91). "A Conserved Mechanism for Identifying Breaks in DNA", (p 94-95). "Opening a Window of Vulnerability in HIV-1", (p96-97). "Biological Springs from Cholesterol Ribbons?", (p 104-105).</p> <p>Field, S., Bucknell Magazine, Spring 2008 and Bucknell.edu Alumni Profile, Thomas Spitzer, "Making Breakthroughs in Transplant Surgery", (p 45).</p> <p>Field, S., Bucknell Magazine, Winter 2008 and Bucknell.edu. "These 'bots were made for walking", (p 12-13). "Faculty Profile, DeeAnn Reeder", (p 12). "Student Profile, Evan Wessler", (p 15).</p>

Robbins, J.R., Baldwin, D.N., **McCallum, S.J.**, and Theriot, J.A., in *Cellular Microbiology* "Bacterial Manipulation of the Host Cell Cytoskeleton", 2nd Edition. Eds. Cossart, Boquet, Normark and Rappuoli. ASM Press, Washington, D.C. (2004).

Robbins, J.R., Monack, D., **McCallum, S.J.**, Vegas, A., Pham, E., Goldberg, M.B., and Theriot, J.A., "The making of a gradient: IcsA (VirG) Polarity in *Shigella flexneri*", *Molec. Micro.* 41(4):861-72 (2001).

Field, S.M., "Studying biology without a test tube: Bioinformaticists use computers to find patterns in genomic databases", Stanford University Medical Center, Office of News and Public Affairs, *Stanford Medicine* - Winter/Spring 2001:26-29.

McCallum, S.J., and Theriot, J.A., in *Cellular Microbiology* "Bacterial Manipulation of the Host Cell Cytoskeleton", 1st edition, Eds. Cossart, Boquet, Normark and Rappuoli. ASM Press, Washington, D.C. (2001).

McCallum, S.J., Erickson, J.W., and Cerione, R.A., "Characterization of the Association of the Actin-binding protein, IQGAP, and Activated Cdc42 with Golgi Membranes", *J. Biol. Chem.* 273 (35) 22537-22544 (1998).

McCallum, S.J., Wu, W.J., and Cerione, R.A. "Identification of a Putative Effector for Cdc42Hs with High Sequence Similarity to the RasGAP related protein, IQGAP1 and a Cdc42 Binding Partner with Similarity to IQGAP2.", *J. Biol. Chem.* 271 (36) 21732-21737 (1996).