

## Chuck Staben

Provost and Vice President for Academic Affairs  
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[Chuck.Staben@usd.edu](mailto:Chuck.Staben@usd.edu)  
Professor, Department of Biology

### PROFESSIONAL EMPLOYMENT

Provost and Vice President for Academic Affairs, University of South Dakota (2008-present)  
Professor, Department of Biology

Associate Vice President for Research, University of Kentucky (2005-2008)  
100% Administrative Appointment  
Vice President for Research, Acting (2006-2007), University of Kentucky

Biology Department Chair, University of Kentucky (2002-2004)  
Biology Department Acting Chair, University of Kentucky (2000-2002)  
Professor, University of Kentucky (2007-present)  
Associate Professor, University of Kentucky (1995-2007)  
Assistant Professor, University of Kentucky (1989-1995)

Postdoctoral Researcher, Stanford University (1987-1989)  
Postdoctoral Researcher, Chiron Research Laboratories (1985-186)  
Graduate Research and Teaching Assistant, University of California, Berkeley (1978-1984)

### EDUCATION

University of California, Berkeley, CA, Ph.D. in Biochemistry (1984)  
Characterization of C<sub>1</sub>-Tetrahydrofolate Synthase, Product of the *Saccharomyces cerevisiae ADE3* Gene (Dr. Jesse C. Rabinowitz, Advisor)

University of Illinois, Champaign-Urbana, IL, B.S. in Biochemistry (1978).

### POSTDOCTORAL TRAINING

Stanford University, Stanford, CA, Biology Department (1987-1989). Characterization of the *Neurospora crassa* mating type locus (Dr. Charles Yanofsky, Advisor).

Chiron Research Laboratories, Emeryville, CA Virology Department, (1985-1986) Nature and significance of sequence variation of the AIDS virus (Dr. Dino Dina, Advisor).

## ADMINISTRATIVE EXPERIENCE

### Service as an administrator

Provost and Vice President for Academic Affairs, University of South Dakota

- Work directly with President to oversee all academic matters at University of South Dakota, without budgetary responsibility in School of Medicine or direct medical education responsibility
- Work within South Dakota Regental system on all system-wide academic matters
- Work with peer Vice Presidents of Research, Student Services, Finance and Administration, Health Affairs on all University priorities and programs
- Direct budget, program, personnel responsibility for Colleges of Arts & Sciences, Business, Education, Fine Arts, Law.
- Direct budget, program, and personnel responsibility for Libraries, Information Technology, Graduate School, Division of Continuing and Distance Education, Academic Advising, Global Studies, Career Advising, Program Assessment, Institutional Diversity offices.
- Overall budget responsibility approximately \$45M
- Student enrollment 10,000; 2500 graduate and professional students. 2500 distance students
- Personnel responsibility for approximately 350 faculty, 150 staff

Vice President for Research, University of Kentucky [Acting] (2006-2007)

- Work directly with Provost to oversee all research matters
- Extramural research awards to University over \$290 million in FY06
- Operating budget of \$45 million
- Direct oversight of 10 interdisciplinary Centers and Institutes
  - 2006 Research awards of Centers totaled \$34.8 million
- Research organization employs 300 staff
- Responsible for Federal relations, coordinate with state legislative relations office
- Coordinate all faculty startup outside College of Medicine
- Directly responsible for major research core facilities
  - Department of Laboratory Animal Resources, UK Clinical Research Organization, DNA microarray, Proteomics, Imaging and Electron Microscopy
- Responsible institutional official for human subject protection, animal care, and research compliance
  - UK received full AAHRPP accreditation on its first attempt in 2006-2007
- Direct reports include Office of Sponsored Project Administration, Office of Research Integrity, Proposal Development Office, Research Finance and Administration, Research Information Services, Federal Relations
- Represent University as SURA Trustee, member of state EPSCoR committee, Advisory

Board for Kentucky Science and Engineering Foundation, Institutional representative, Oak Ridge Associated Universities (ORAU)

- Member, Board of Directors, Kentucky Technology, Incorporated (licenses University intellectual property, develops University-related businesses)

Associate Vice President for Research (2005-2008)

- Worked closely with Executive Vice President for Research on all matters, including budget, policy, planning, administration, facilities
- Primary effort in research development, faculty support
- Institutional representative, Oak Ridge Associated Universities (ORAU)

#### Service as faculty administrator

Chair or Acting Chair, Biology Department (2000-2004)

- 31 tenure track faculty
  - Responsible for promotion, tenure, evaluation, recruitment
- 10 departmental staff (responsible for 13 additional grant-supported postdocs, staff)
- 60 graduate students (MS and Ph.D)
- 900 undergraduate majors
- Departmental budget \$3,000,000 per year
- Departmental research grants and contracts \$2.9 M in 2003-4

Director, Undergraduate Studies for School of Biological Sciences (1996-1999)

- Oversaw curriculum, advising for >900 majors and >2000 non-majors

Section Head, Molecular and Cell Biology, School of Biological Sciences (1998-2000)

#### **PUBLICATIONS**

1. **Cushion MT, Smulian AG, Slaven BE, Sesterhenn T, Arnold J, Staben C, Porollo A, Adamczak R, Meller J.** (2007) Transcriptome of *Pneumocystis carinii* during fulminate infection: carbohydrate metabolism and the concept of a compatible parasite. *PLoS ONE*. 2:e423
2. **Rehmeyer C, Li W, Kusaba M, Kim YS, Brown D, Staben C, Dean R, Farman M.**(2006) Organization of chromosome ends in the rice blast fungus, *Magnaporthe oryzae*. *Nucleic Acids Res.* 34:4685-701.
3. **Smith JJ, Putta S, Walker JA, Kump DK, Samuels AK, Monaghan JR, Weisrock DW, Staben C, Voss SR** (2005) . Sal-Site: integrating new and existing ambystomatid salamander research and informational resources. *BMC Genomics*. 6:181
4. **Li W, Staben C, Farman ML.** (2005) TRUMATCH, a BLAST post processor. *Bioinformatics* 21:2097-98.
5. **Li W, Rehmeyer CJ, Staben C, Farman ML.** (2005) TERMINUS - telomeric end-read mining IN unassembled sequences. *Bioinformatics* 8:1695-8.

Galagan JE, Calvo SE, Borkovich KA, Selker EU, Read ND, Jaffe D, FitzHugh W, Ma LJ, Smirnov S, Purcell S, Rehman B, Elkins T, Engels R, Wang S, Nielsen CB, Butler J, Endrizzi M, Qui D, Ianakiev P, Bell-Pedersen D, Nelson MA, Werner-Washburne M, Selitrennikoff CP, Kinsey JA, Braun EL, Zelter A, Schulte U, Kothe GO, Jedd G, Mewes W, Staben C, Marcotte E, Greenberg D, Roy A, Foley K, Naylor J, Stange-Thomann N, Barrett R, Gnerre S, Kamal M, Kamvysselis M, Mauceli E, Bielke C, Rudd S, Frishman D, Krystofova S, Rasmussen C, Metzenberg RL, Perkins DD, Kroken S, Cogoni C, Macino G, Catcheside D, Li W, Pratt RJ, Osmani SA, DeSouza CP, Glass L, Orbach MJ, Berglund JA, Voelker R, Yarden O, Plamann M, Seiler S, Dunlap J, Radford A, Aramayo R, Natvig DO, Alex LA, Mannhaupt G, Ebbole DJ, Freitag M, Paulsen I, Sachs MS, Lander ES, Nusbaum C, Birren B. (2003) The genome sequence of the filamentous fungus *Neurospora crassa*. *Nature*. 422:859-68.

6. **Kronstad, J.W. and C. Staben** (1997) Mating type in filamentous fungi . *Ann. Rev. Genet.* **31**:245-276.
7. **Smulian AG, Ryan M, Staben C, Cushion M.** (1996) Signal transduction in *Pneumocystis carinii*: characterization of the genes (*pcg1*) encoding the alpha subunit of the G protein (PCG1) of *Pneumocystis carinii carinii* and *Pneumocystis carinii rattii*. *Infect Immun.* **64**:691-701.
8. **Staben, C.** (1995) Resistance to azole drugs in *Neurospora crassa* *Exp. Mycol.* **19**: 163-5.
9. **Edelmann, S. E., and C. Staben.** (1994). A statistical analysis of sequence features within genes from *Neurospora crassa*. *Exp. Mycol.* **18**:70-81.
10. **Phillely, M. L., and C. Staben.** (1994). Functional analyses of the *Neurospora crassa* MT a-1 mating type polypeptide. *Genetics* **137**:715-722.
11. **Ludewig, G., Y. Li, J. M. Williams, and C. Staben.** (1994). Effects of pentamidine isethionate on *Saccharomyces cerevisiae*. *Antimicrob. Ag. Chemother.* **38**:1123-1128.
12. **Chang, S., and C. Staben.** (1994). Directed Replacement of *mt A* by *mt a-1* Effects a Mating Type Switch in *Neurospora crassa*. *Genetics* **138**:75-81.
13. **Ludewig, G., and C. Staben.** (1994). Characterization of the *PNT1* pentamidine resistance gene of *Saccharomyces cerevisiae*. *Antimicrob. Ag. Chemother.* **38**:2850-2856.
14. **Tsai HF, Liu JS, Staben C, Christensen MJ, Latch GC, Siegel MR, Schardl CL.** (1994) Evolutionary diversification of fungal endophytes of tall fescue grass by hybridization with *Epichloe* species. *Proc Natl Acad Sci U S A.* 91:2542-6.
15. **Hatfield C, Kasarskis A, Staben C.** (1991) Pentamidine sensitivity and resistance in *Saccharomyces cerevisiae* as a model for pentamidine effects on *Pneumocystis carinii*. *J Protozool.* **38**:70S-71S.
16. **Staben, C., and Yanofsky.** (1990). *Neurospora crassa* a mating type region. *Proc. Nat. Acad. Sci. USA* **87**:4917-4921
17. **Glass, N. L., S. J. Vollmer, C. Staben, R. L. Metzenberg, and C. Yanofsky.** (1988). DNAs of the two mating-type alleles of *Neurospora crassa* are highly dissimilar. *Science* **241**:570-573.
18. **Staben C, Whitehead TR, Rabinowitz JC.** (1987) Heparin-agarose chromatography for the purification of tetrahydrofolate utilizing enzymes: C1-tetrahydrofolate synthase and 10-formyltetrahydrofolate synthetase. *Anal Biochem.* **162**:257-64

19. **Staben, C., and J. C. Rabinowitz.** (1986). Nucleotide Sequence of the *Saccharomyces cerevisiae* ADE3 Gene Encoding C<sub>1</sub>-Tetrahydrofolate Synthase. J. Biol. Chem. **261**:4629-4637.
20. **Staben, C., and J. C. Rabinowitz.** (1983). Immunological crossreactivity of eukaryotic C<sub>1</sub>-tetrahydrofolate synthase and prokaryotic 10-formyltetrahydrofolate synthetase. Proc. Nat. Acad. Sci. USA **80**:6799-6803

## GRANT SUPPORT

### Extramural Funds-Past

- Kentucky Biomedical Research Information Network, (\$649,000, year 3) National Institutes of Health, 8/2004-2009, subcontract on primary grant to Nigel Cooper, University of Louisville, 2P20RR016481-04
- Kentucky Department of Environmental Protection (\$2,000,000) 7/1/2007-6/30/2011, Supplemental Environmental Projects
- Extramural Research Facilities Improvement, (\$3,685,000) 9/15/2004-9/14/2007, National Institutes of Health, 1C06RR020098-01 (W. Baldwin, original PI)
- Kentucky Biomedical Research Information Network, Subcontracts(\$2,400,000 total) National Institutes of Health, 10/2002-12/2004, subcontract on primary grant to Nigel Cooper, University of Louisville
- Center for Biologic Basis of Oral/Systemic Diseases, National Institutes of Health, 9/2004-7/2009, co-Investigator with Jeff Ebersole, 1P20RR020145-01 (5% effort, informatics core).
- Telomeres of Filamentous Fungi, (\$600,000) NSF, co-PI. Primary Investigator, Mark Farman, Plant Pathology, University of Kentucky. (an informatics subcontract of \$20,000/year for 3 years, 2002-2005)
- Neurospora Genome Project, National Science Foundation, subcontract on grant to B. Birren, Whitehead Institute (\$30,000 direct to UK), 10/2000-12/2002.
- *Pneumocystis carinii* Genome Project, National Institutes of Health, subcontract on grant to M. Cushion (\$200,000 direct), 2/99-12/02
- Gene Expression in Normal and Damaged Rat Brain (\$50,000) Kentucky Spinal Cord and Head Injury Foundation, co-investigator with Dr. Steven Scheff.
- Bioinformatics: Genetics in the Genomics Age. Course and Curriculum Development Grant (\$115,000) National Science Foundation, 2/98-2/2002.
- Genetic Determinants of the *Neurospora crassa* Life Cycle, NSF (\$315,000) 9/95-9/98
- "Genetic Approach to Understanding *Pneumocystis* Therapy", (NIH) GM46193, (\$362,355), 6/1/91-5/31/95.
- "Genetic Determinants of the *Neurospora* Life Cycle", (NSF) MCB-9107083, (\$290,000) 1/91-12/95.
- Effect of Cigarette Smoking on *Pneumocystis* Pneumonia in the Rat Animal Model System, Tobacco and Health Research Institute, \$19,968, 7/1/96-6/30/97 (Declined).
- The regulation of mating and meiosis in *Neurospora crassa* by mating-type polypeptides", (NSERC-Canada)-Collaboration with N. Louise Glass, funds to be used to support work in

her laboratory in Canada (\$195,000) 1995-1997.

- "Mating Type Genes of *Pneumocystis carinii*", University of Cincinnati Research Challenge Grant, \$33,000 for research in my laboratory, 9/94-3/96. Co-investigators Melanie Cushion, George Smulian, VA Medical Center.

## **INSTRUCTION**

### **Honors and Awards**

College of Arts and Sciences, Distinguished Teacher 1997-2000  
Most prestigious teaching award offered by College  
College of Arts and Sciences, Outstanding Teacher 1996-1997  
Dean's "Top Ten" List: 1993-1998 (Student poll conducted by Dean)

### **Instructional activities, courses**

BIO150 (Principles of Biology I, 2005)  
BIO425 (Seminar in Biology, Classics in Bioinformatics and Genomics)  
BIO520 (Bioinformatics)-classroom and distance instruction (via TV, internet)  
(1996-2005), see NSF Course and Curriculum Development grant  
BIO621 (Bioinformatics Projects course) (2001, 2002)  
BIO304 (Genetics, 1992-1996), BIO208 (Microbiology, 1990-1992), assorted  
graduate, undergraduate seminars in molecular biology, genetics

### **Graduate Education**

Postdoctoral Students

Gabriele Ludewig, Alfredo Martinez-Espinoza

PhD graduates:

Shinyu Chang, Yi Li, Jennifer Williams, Melissa Philley, Thomas Badgett

MS graduates

Stephanie Edelmann, Shiping Zhou, Qing Chang, Qin Li

Current PhD. Student

Weixi Li

Graduate Committees

Served on over 30 PhD and MS Committees since 1989.

## PROFESSIONAL ACTIVITIES

### Peer Review Activities

- NSF Reviewer, Major Research Instrumentation, 2008
- NSF SBIR Reviewer, Genomics and Bioinformatics 2006
- NIH Site visit team for RO1 grant, MIT, 2004
- Genetics Study Section, Member, NIH, 1999 –2003
- Special Study Section, NIH, 1999 (review of special genomics grants)
- Chair, Special Study Section, NIH, 1999 (review of molecular mycology grants)
- Ad hoc* member, Genetics Study Section, NIH 1998, 1999 (twice)
- Ad hoc* member, Microbial Physiology Study Section, NIH 1998,1999
- NSF EPSCoR Reviewer, Kentucky REG Grants, 1996
- Ad hoc* reviewer,
  - National Science Foundation, United States Department of Agriculture, Veterans Administration Research Service, tenure reviews for various universities
- Member, Association of Biomolecular Resource Facilities Education Committee (1999)
- Referee
  - Applied and Environmental Microbiology, Biochemistry, BOMC Bioinformatics, Current Genetics, Fungal Genetics and Biology, Journal of Biological Chemistry, Molecular and Cellular Biology, Molecular and General Genetics, Molecular Microbiology, Genetics, Nucleic Acids Res., Proceedings of the National Academy of Sciences, USA*
- Reviewer
  - Saunders Publishing Corporation, Wadsworth Publishing Corporation, Wiley Interscience, Kluwer, Harcourt Brace Corporation, Jones and Bartlett Life Sciences Interactive Media, Addison-Wesley
- Consultant
  - Virage, Inc., San Mateo, CA (Image Domain Expert-Biological Images) -1999
  - SciMagix, Inc., San Mateo, CA (Image Domain Expert-Biological Images)-1999
  - Member, Louisville Science Center Advisory Board (2006-present)

### Invited Seminars and Research Presentations (selected, 1998-2006)

- National IDEA Symposium of Biomedical Research Excellence (NISBRE) (2006)
- University of Kentucky, Department of Biology (2006)
- Oak Ridge National Laboratories, Session Leader, Workshop on Molecular Machines (2006)
- Delaware Biotechnology Institute, University of Delaware (2005)
- Biotechnology in EPSCoR States, NSF EPSCoR Conference, Puerto Rico (2005)
- Miami University of Ohio (2004)
- University of Rhode Island, College of Pharmacy (2003)
- SURA BIOGrid Workshop, Research Triangle Park, North Carolina, (2003)
- High Performance Research Computing, Rio de Janeiro, Brazil (2002)
- Northern Kentucky University, Biology Department (2001)
- Eastern Kentucky University Biology Departments (2001)
- University of Kentucky, Anatomy and Neurobiology Department (1999)

Association of Biomolecular Resource Facilities, Bioinformatics Education, Durham, NC (1999)  
University of Georgia, Department of Genetics, Athens, GA (1998)  
Schering-Plough Corporation, Kenilworth, NJ (1998)  
Millenium Pharmaceuticals, Cambridge, MA (1998)  
Bristol Myers Squibb, Princeton, NJ (1998)

### **UNIVERSITY SERVICE-University of Kentucky (selected)**

Chair, Academic Strategic Planning Committee for University (2002-2003)

- One of 3 University committees that wrote 2003-2006 strategic plan (<http://www.uky.edu/Home/2003-06StrategicPlan/plan.html>). Worked closely with senior administrators, major role in crafting and writing strategic plan

Chair, University Senate Committee on Institutional Resources and Finances (2003-2005)  
Chair, Arts and Sciences College Council (1999-2000)  
Phi Beta Kappa, President (1996-97) Treasurer (1997-2004), Membership Chair (2002-present)

Member, University Committee on Strategic Planning and Priorities (2006)  
    Co-Chair, Research Domain Subcommittee

Member, Provost Search Committee, 2005

Member, University of Kentucky Committee on Postsecondary Education Agenda, 2005

Member, University Senate Council (2004 [resigned upon administrative appointment])

Member, Academic Planning and Priorities Committee (2003-5)

Member, University of Kentucky Budget Advisory Group (2004-5)  
    Meet monthly with Provost, Vice-Presidents (Budget, Finance, Research, Development), comptroller, Athletics Director to advise on University budget issues

Member, Univ. of Kentucky NCAA Academic Integrity Subcommittee (Recertification-2004)

University Faculty Senator (2002-2004, elected to Senate Council for 2004-5, resigned due to Administrative post)

Member, University Top 20 Taskforce (2002)  
    Presidential taskforce on University of Kentucky goals, mission, assessment criteria

Member, Institutional Biosafety Committee (2002-2005)

Institutional Animal Care and Use Committee (2005-present, ex-officio)

Member, Search Committee for Pharmaceutical Sciences Division Head (2002)

Member, University Task Force, Natural Products Center Development (2002-present)

Member, Biological and Biomedical Sciences Research Building Committee (complete Spring 2005) Oversee design of \$67M research building

Member, Tracey Farmer Center for the Environment Establishing Committee (2001)

Member, Biocomputing Taskforce (2002-2004)

Member, University Informatics Connection (subcomm. chair on bioinformatics) (2001-2002)

Member, University Research Advisory Committee (1999-2000)

Member, Lexington Campus Research Advisory Committee (1999-2000)

Member, Arts and Sciences College Council (1997-1999)

**External Service-while at University of Kentucky**

National EPSCoR/IDeA Foundation Board, Director (2007-2008)

SURA Representative (2006-2008)

Southeast University Research Association

Member, Kentucky Technology Incorporated Board of Directors

ORAU Councilor (2005-2008)

Oak Ridge Associated Universities

Kentucky EPSCoR Committee (2006-2008)

Kentucky Science and Engineering Foundation Board (2006-2008)

OVALS Steering Committee (2005-2008)

Ohio Valley Affiliates for Life Sciences