

September, 2008

## CURRICULUM VITAE

### **Carol Bender**

Director, Undergraduate Biology Research Program & Biomedical Research Abroad:  
Vistas Open Program  
Professor in Practice, Molecular and Cellular Biology  
The University of Arizona

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The University of Arizona  
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### ***Honors***

#### *International*

- |   |            |
|---|------------|
| Invited speaker, 30 <sup>th</sup> Annual Fulbright Association Meeting,<br>Washington, DC   | 2007       |
| Member, American Delegations to the Sino-US Seminar on<br>Undergraduate STEM Education, Wuhan, China (funded by NSF<br>and the Chinese Ministry of Education) | 2005, 2006 |
| Medal of Honor, University of South Bohemia, Czech Republic   | 2003       |
| Millennium International Volunteer, US State Department   | 2000       |
| Fulbright Senior Scholar to Japan   | 1997       |

#### *National*

- |   |           |
|---|-----------|
| Councilor, Undergraduate Research Program Directors' Division,<br>Council on Undergraduate Research | 2004-2010 |
| Invited speaker, Council on Undergraduate Research Workshop,<br>Biosphere II, Oracle, AZ            | 2008      |
| Invited speaker, Project Kaleidoscope Summer Institute,<br>Williamsburg, VA                         | 2002      |
| Invited speaker, Project Kaleidoscope, Leadership Initiative,<br>Baltimore, MD                      | 2005      |
| Invited Speaker, Sigma Xi Annual National Meeting,<br>Galveston, TX                                 | 2002      |

## *State*

President , Arizona Chapter of the Fulbright Association	1999-present
Recognition Award from the Arizona Chapter of the Fulbright Association for Creative Work in the Spirit of Senator William Fulbright	2005
“Celebrate Service Learning Award” from Pima Community College	1998

## *University*

Mortar Board Outstanding Staff Award	2008
Honors College Outstanding Staff Award	2005
College of Science Outstanding Academic Professional Award	2002
University of Arizona International Affairs Travel Awards To present papers in Japan, Canada, and China	1999, '02, '05, '06
Awards for dedication to and concern for students in UBRP	1991, '93, '99

## ***Professional Positions***

The University of Arizona, Tucson, AZ	1988-present
- Professor in Practice, Molecular & Cellular Biology	2006-present
- Director, Undergraduate Biology Research Program (UBRP)	1989-present
- Director, Biomedical Research Abroad: Vistas Open! (BRAVO!)	1992-present
- Program Coordinator, Graduate College	1988-1989
The University of Oklahoma, Norman, Oklahoma	1982-1988
- Coordinator, External Relations, College of Arts & Sciences	1987-1988
- Proposal Development Specialist, Research Administration	1985-1987
- Assistant to the Dean/Research Assistant, Public Health	1982-1984
Lorain Community Hospital, Lorain, Ohio	1977-1982
- Assistant Director of Social Work	1980-1982
- Team Leader, Inpatient Psychiatric Unit	1977-1980
Jefferson County Mental Health, Arvada, Colorado	1976-1977
- Mental Health Therapist (group, couples, individual therapy)	
Boulder County Department of Human Services Social Worker (crisis intervention)	1974-1976
Boston University Gunderson Low Vision Clinic, Boston, Massachusetts	1973
- Social Worker (individual and group work)	
Boston University Child Guidance Clinic, Boston, Massachusetts (Social Work Placement)	1972-1973
United South End Settlements, Boston, Massachusetts	1972

Social Worker/Community Organizer (summer position)	
Boston Childrens' Service Association, Boston, Massachusetts (Social Work Placement)	1971-1972
Syracuse Public Schools, Syracuse, New York Title 1 Pre-K Teacher	1971

### ***External Funding***

"Interdisciplinary Biomedical Research for Undergraduates." Principal Investigator (Co-PI is William Montfort, Biochemistry). National Institute of General Medical Sciences (1 R25 GM072733). 3/05-3/09. \$367,200.

"Research Experiences for Undergraduates in Molecular Biosciences." Principal Investigator (Co-PI is Carol Dieckmann, Biochemistry). National Science Foundation (DBI 0242842). 3/1/2006-2/28/2009. \$249,072. Continuous funding since 1989 totaling: \$1,0429,592.

"Biomedical Research Abroad: Vistas Open!/MHIRT." Co-Principal Investigator (PI is Charles Sterling, Veterinary Sciences). NIH (T37 MD001427-15). 7/1/05-6/30/09. \$ 915,247. Continuous funding since 1993 totaling \$ 2,869,063.

"Improving Undergraduate Education in the Biological Sciences," Co-Principal Investigator (PI is Roy Parker, Molecular Biology). Howard Hughes Medical Institute (52003749). 2006-2010. \$1,500,000. Continuous funding since 1989 totaling \$10,660,663.

Summer Undergraduate Fellowship Program." Principal Investigator (Co-PI is Serrine Lau in Pharmacology & Toxicology). American Society for Pharmacology and Experimental Therapeutics. 2007-2010, \$27,000. Total awarded since 1991: \$136,000.

Beckman Scholars Grant. Co-Investigator (PI is John Enemark, Chemistry). 5/07-8/10. \$115,800. Funding since 2001 totaling \$312,400.

"Enrichment Grants" Principal Investigator. US Department of State. 5 awards since 2003 totaling \$19,100 to support programming for the Arizona Chapter of the Fulbright Association.

"Funds for Visiting Scholars from Developing Countries." Principal Investigator. To support a Polish Graduate Student, an Indian Graduate Student, and an Egyptian Faculty Member making short term (3 - 6 months) visits to the University of Arizona to interact with undergraduate students in the UBRP Program. RAIRE Funds from NSF grant. April 2001-January 2002. \$24,941.

"Science Writer in Residence" Co-Principal Investigator (Co-PI was Jacqueline Sharkey, Journalism). To support a science writer in residence for two semesters. NSF RAIRE grant. 2001. \$100,000.

“Ambos Nogales Ecological Education Project” Co-Principal Investigator (PI was Diane Austin, Bureau of Applied Research in Anthropology). CONAHEC. 7/1/03-6/30/04. \$9,200.

High School Biology Research Apprentice Program. Principal Investigator. Flinn Foundation, 4/15/93-4/14/94, \$10,000; 5/1/94-9/30/96, \$ 47,000.

High School Biology Research Apprentice Program/NIH 2 S03 RR03495; Principal Investigator. \$26,000 for 1994 and 1995; High School Biology Research Apprentice Program/NIH 2 S03 RR03495; PI: Thomas Lindell; Co-PI: Carol Bender, \$114,000 for 1991-1993.

Biology Bridge for Minority Community College Students/NIH 3R25 GM48993-02S1; Co-Principal Investigator (PI was Michael Wells, Biochemistry). \$600,000 from 1992-1998.

### ***Publications***

Bender, C, Wright, D, Lopatto, D, 2009. Students' Self-Reported Changes in Intercultural Knowledge and Competence Associated with Three Undergraduate Science Experiences. *Forum on International Education*, in press.

Bender, C, Blockus, L, Webster, M 2008. Building Community in Your Undergraduate Research Program: It Doesn't Happen Spontaneously! *Council on Undergraduate Research Quarterly*, 28(4): 8-12.

Bender, C. 2007. It All Began with a Simple Question: What do you guys do around here? *Council on Undergraduate Research Quarterly*, 28(2):11-15.

Bender, C. 2004 Assessing the Value of Undergraduate Research: A Hot Topic! *Council on Undergraduate Research Quarterly*. 25 (1): 34.

Bender, C. 2004. Biomedical Research Abroad: Vistas Open (BRAVO!): A Program to Internationalize the Undergraduate Science Curriculum. *In: Reinvigorating the Undergraduate Experience: Successful Models Supported by NSF's AIRE/RAIRE Program*. J. Stocks and L. Kauffman (eds). Council on Undergraduate Research [http://www.cur.org/publications/AIRE\\_RAIRE/arizona.asp](http://www.cur.org/publications/AIRE_RAIRE/arizona.asp)

Bender, C. 2000. Advance Science: Mentor an Undergraduate. *The Pharmacologist*. 42:3. Pp. 141-145.

Bender, C. 1999. The Development of an Undergraduate Research Program in Biology: A Guide for the Uninitiated. *Council on Undergraduate Research Quarterly*. 19:118-125.

Bender, C. 1998. Hosting Short Term Japanese IEAs is a Meaningful (and Fun!) Extension of an American IEA's Experience in Japan. *JUSEC Fulbrighter*, 21:12.

Bender, C. 1997. Biomedical Research Abroad: Vistas Open!. p 82-85. *In: Aspectos Ambientales, Ideologicos, Eticos y Politicos en el Debate sobre Bioprospeccion y Uso de Recursos Geneticos en Chile*. B. Timmermann and G. Montenegro (eds.). Sociedad de Biologia de Chile Press, Santiago, Chile.

Bender, C. 1997. Climbing Mt. Fuji (or How It Must Have Felt to be an Extra in a Cecil B. DeMille Production). *JUSEC Fulbrighter*, 20:10 - 11.

Bender, C. November 29, 1996. Education Reform in Eastern Europe [Letter to the Editor]. *The Chronicle of Higher Education*, B8.

Bender, C. 1995. International Research Experience in Biology for Undergraduates. *Council on Undergraduate Research Quarterly* 16:73-76.

Bender, C, S. Ward, and M. Wells. 1994. Improving Undergraduate Biology Education at a Large Research University. *Molecular Biology of the Cell*, 5:129-134.

Bender, C. and K. Watts-Penny. 1987. Tapping Hidden Resources: Building Blocks for Training Staff and Students in Proposal Development. *SRA Journal*, 19: 9 – 14.

Bender, C and J.P. Hart. 1987. Health Promotion for the Rural Elderly: A Model. *The Gerontologist*, 27: 139-142.

Bender, C. and J.P. Hart. 1986. Rural Health Promotion: Bailiwick for Social Work. *Health and Social Work*, 11: 52-58.

### ***Selected Presentations***

Bender, C (May 2008). Campus France: Academic Innovation Workshop. Part of a panel offered at the 60<sup>th</sup> Annual NAFSA Meeting, Washington, DC.

Bender, C (March 2008). Many Routes to the Development of Interculturally Competent Students. 3<sup>rd</sup> Annual APAIE Meeting, Tokyo, Japan.

Bender, C (November 2007). An Optimist's Guide to Proposal Development and Why You Too Should Get Involved! Part of a panel offered at the 30<sup>th</sup> Annual Meeting of the Fulbright Association. Washington, DC.

Bender, C. (March 2007). Biomedical Research Abroad: Vistas Open!(BRAVO!): Preparing Students for the International Scientific Community. Part of session on Student Mobility at the Asian Pacific Association for International Education Conference, Singapore.

Bender, C (November 2006). Faculty Work in the New Academy. Presentation at the American Association of Colleges and Universities Network Meeting, Chicago, IL.

Bender, C (June 2006). Creating Community in Your Summer Undergraduate Research Program: It Doesn't Happen Spontaneously. Presentation at the 2006

Council on Undergraduate Research Annual Conference, DePauw University, Greencastle, Indiana.

Bender, C (June 2006). Challenges and Benefits of International Undergraduate Research. Presentation at the 2006 Council on Undergraduate Research Annual Conference, DePauw University, Greencastle, Indiana.

Bender, C (June 2006). Introducing Undergraduates to Science Through Research Experience. Poster presented at the 2006 Council on Undergraduate Research Annual Conference, DePauw University, Greencastle, Indiana.

Bender, C (June 2006). Introducing Undergraduates to Research in the Global Village. Poster presented at the 2006 Council on Undergraduate Research Annual Conference, DePauw University, Greencastle, Indiana.

Bender, C (May 2006). Tapping Hidden Resources at RI Universities in the Service of Undergraduate and Precollege Education. Presentation at the Enriching the Academic Experience of College Science Students, 2006 Conference, Ann Arbor, Michigan.

Bender, C (April 2006). Creating International Undergraduate Research Experiences: Factors to Consider. Invited address, Emory University, Atlanta, Georgia.

Bender, C (November 2005). Building Global Research Rich Connections: Means of Introducing Undergraduates to Research in the Global Village. Invited presentation at the Sino-US Undergraduate STEM Reform Meeting, Wuhan, China.

Bender, C (October 2005). Internationalizing the Undergraduate STEM Experience. Invited presentation at PKAL Conference, Baltimore, MD.

Bender, C (November 2003). Chair of a Panel on Infusing an International Perspective Into the Undergraduate Science, Technology, Engineering, and Mathematics Curriculum at a PKAL Conference in Irvine, CA.

Bender, C (November 2002, May 2002). Invited presentations on BRAVO! at Annual Sigma Xi Meeting in Galveston, TX and at PKAL Conference in Williamsburg, VA.

Bender, C (December 2000). Involving Undergraduate Students in Scientific Research Abroad. Invited address made to scientists at the Smithsonian Institution in Washington, DC.

Bender, C (August 2000). BRAVO!: A Model to Involve Undergraduates in the International Scientific Community. Invited address made to the Program Directors of National Science Foundation Research Experiences for Undergraduates Sites, Arlington, VA.

Bender, C (April 21, 2000). Educating the Next Generation of Scientists: The Biomedical Research Abroad: Vistas Open! Program. Keynote address at the Annual Meeting of the Tucson Bureau for International Visitors, Tucson, AZ

Bender C (April 9, 2000). The Biomedical Research Abroad: Vistas Open Program: A Model for Research Institutions. Paper presented at the Annual Meeting of the Southwest and Rocky Mountain Regional Division of the American Association for the Advancement of Science. Las Cruces, New Mexico.

Bender, C. (July 9, 2000). Undergraduate Research in Biology Linked to the International Scientific Community. Poster given at the RAIRE Meeting at the University of Michigan, Ann Arbor Michigan.

Bender, C (April 17, 2000). The BRAVO!/MIRT Program. Invited address made at the 10<sup>th</sup> Anniversary Celebration of the National Institutes of Health Office for Research on Minority Health. Washington, DC.

Bender, C. (July 25, 1999). A Model for Preparing the Next Generation of Women Scientists. Paper presented at the 11<sup>th</sup> International Conference of Women Engineers and Scientists, Chiba, Japan.

Bender, C. (March 30, 1999). The Undergraduate Biology Research Program. Presentation made at the Best Practices Workshop held in conjunction with the Wiesner Symposium at the University of Michigan, Ann Arbor, Michigan.

Bender, C. (August 19, 1998). How Do We Link Students to Research and Research to Students? Presentation at the Second Annual UA Academic Unit Heads Retreat, Tucson, AZ .

Bender, C.(May 28, 1998). Japanese-U.S. Fulbright International Education Administrators Program: Global Competence Through Staff Exchanges. Presentation given at the 50th Annual Meeting of NAFSA: Association of International Educators, Washington, DC.

Bender, C. (May 20, 1998). Erasing Boundaries: Teaching, Research and Learning. Presentation made at the Annual Meeting of the Southwestern and Rocky Mountain Region of the American Association for the Advancement of Science, Grand Junction, Colorado.

Bender, C. (March 4, 1998). Magnifying Undergraduate Research In Biology. Presentation given at the Arizona Imaging and Microanalysis Society Annual Meeting, Tucson, Arizona.

Bender, Carol (March 4, 1998). The Undergraduate Biology Research Program--A Female Dominated Program. Presentation give to the Women at the Top, Tucson, Arizona.

Bender, C (November 1997). Keynote address to UA students preparing to study abroad, sponsored by the UA International Affairs Office.

Bender, C (December 1997). Keynote address to the Winter Commencement of Students in the UA Center for English as a Second Language (CESL) Program.

Bender, C (February 1997). Evaluating the Impact of an Undergraduate Biology Research Program: A Case Example." Poster presented at the Annual Meeting of the American Association for the Advancement of Science, Seattle, Washington.

Bender, C (March 1996). The University of Arizona BRAVO! Program. Presentation made at the Annual Meeting of the Minority International Research Training Grant Program Directors, Bethesda, Maryland.

Bender, C (February 1996). Undergraduates Contribute to the International Scientific Community. Poster presented at the Annual Meeting of the American Association for the Advancement of Science, Baltimore, Maryland.

Bender, C. (July 1995). Novel Program Encourages International Scientific Cooperation. Paper presented at the Annual International Congress on Challenges to Education, Cancun, Mexico.

Bender, C. (February 1995). The Research Laboratory Provides an Excellent Environment for Attracting Students from Diverse Backgrounds to Science. Poster presented at the Annual Meeting of the American Association for the Advancement of Science, Atlanta, Georgia.

Bender C. (January 1995). Undergraduate Research Programs Provide Model to Bridge Students into Science. Panel presentation made at the First Annual Expanding Minority Opportunities Conference, Tempe, Arizona.

Bender, C( March 1994). Undergraduate Biology Research: Springboard for Science Education. Invited Presentation made at the Educators' Forum, Annual Meeting of the Society of Toxicology, Dallas, Texas.

Bender, C (February 1994). Undergraduate Biology Research: Springboard for Science Education. Poster presented at the Annual Meeting of the American Association for the Advancement of Science, San Francisco, California.

Bender, C and A. Titcomb (February 1991). Combining Two Existing Summer Programs for High School Students: Possibilities, Pitfalls & Practicalities. Workshop conducted at the Maximizing Summer Opportunities Conference sponsored by the University of South Carolina, Columbia, South Carolina. Paper published in conference proceedings.

### ***Teaching***

Health Promotion Strategies (graduate level course), University of Oklahoma, College of Public Health  
1983

Theory and Practice of Stress Management, University of Oklahoma, Psychology Department  
1984

Women in Science (MCB 396I, University of Arizona, MCB and Women's Studies,  
Spring '07, Fall '07, Fall '08

Proposal Development Workshops for Academics and Professionals at:

National Research Centre, Dokki, Cairo,	1991, 1992, 1994, 1995
Binational Fulbright Commission, Garden City, Cairo,	1991, 1992, 1994, 1995
University of Aguascalientes, Aguascalientes, Mexico,	1992
National Association of Social Workers, Arizona Chapter Annual Meeting,	1988
Mountain States Assoc. of Museum Professionals, Annual Meeting, Kansas,	1986
Multiple times at the University of Oklahoma for faculty and staff,	1985-1987

***University Service***

Member, Search Committee for Outreach Coordinator in EEB	1992
Member, Biology Career Event Committee	1997, 1999, 2001, 2003
Member, BRAVO! Advisory Committee	1992-present
Member, UBRP Selection Committee	1989-present
Member, Minority Access to Research Careers Advisory Committee	1999-present
Member, College of Science Awards Committee	2002-present
Member, Interdisciplinary UBRP Selection Committee	2005-present
Member, Biomath Committee	2006-present
Member, HHMI External and Internal Advisory Committees Member	2006-present
Search Committee for the Director of the UA Office of International Faculty and Scholars	2007
Campus Fulbright Selection Committee	2007

***Professional Service***

Facilitator, Council on Undergraduate Research Workshop on Undergraduate Research Oklahoma Board of Regents, Edmond, Oklahoma,	September 2008
Lewis & Clark, Portland, Oregon,	March 2008
Advisory Committee, Annual Howard Hughes Medical Institute Program Directors' Meeting, Chevy Chase, MD	2008
Reviewer, The Beckman Foundation (Beckman Scholars' Competition),	2008
Reviewer, The Flinn Foundation (Flinn Scholars' Competition),	2005, 2007
Reviewer, The Udall Foundation (Udall Scholars' Competition),	2002, 2004, 2005, 2006
Reviewer, NSF REU Competitions,	2000, 2004, 2007
Reviewer, US Dept of Education, FIPSE and TRIO Competitions,	2000, 2004, 2007
Reviewer, NIH, DRG and NIGMS Competitions,	1996, 1999, 2004
Reviewer, CIES, IEA Programs for Japan and Korea	1997

Local Organizer, Annual Meeting of the NIH Minority International Research Training Grant Program Directors (meeting held at UA in Tucson) 2002

Local Organizer, Annual Meeting of the Southwest and Rocky Mountain Regional Division of the American Association for the Advancement of Science (meeting held at UA in Tucson) 2005

Executive Committee Member, Southwest and Rocky Mountain Regional Division of the American Association for the Advancement of Science 1998-2005

Member, Fogarty International Center Advisory Group on Minority International Research Training Grant Program for the National Institutes of Health, 1996

Consultant to the National Research Centre and the Binational Fulbright Commission, Cairo, Egypt 1991-1997

Consultant to the Universidad de Aguascalientes, Aguascalientes, Mexico 1992

### ***Education***

Cornell University, Ithaca, New York B.S. 1971

Boston University, Boston, Massachusetts M.S.S.S. 1973

The University of Oklahoma Health Sciences Center, OKC, OK  
Graduate coursework in public health

Harvard University  
Certificate of Completion/Course in Ethical Issues in International Health Research, 2001

### ***Professional Memberships***

SACNAS, Life Member  
Fulbright Association, Life Member  
American Association for the Advancement of Science  
American Society for Pharmacology and Experimental Therapeutics  
Council on Undergraduate Research

### ***Community Service***

Board Member, Trees for Mt. Lemmon 2005-present  
Master Watershed Steward 2007-present