

# **Benjamin D. Caldwell, Ph.D.**

## *Curriculum Vitae*

Current Position: Dean, College of Graduate Studies & Research, Radford University, Radford VA

Birthdate: July 10, 1968, Portsmouth, VA

### **Education**

B.S., Randolph-Macon College, Ashland, VA, May 1990.

Major: Chemistry,

Ph.D., University of Virginia, Charlottesville, VA, July 1995.

Major: Chemistry                      Supporting Area of Emphasis: Biological Chemistry

Dissertation Title: Nucleotide Binding Studies of the Na<sup>+</sup>, K<sup>+</sup>-ATPase

Advisor: Dr. Charles M. Grisham

Postdoctoral Fellow, Department of Neuroscience, Johns Hopkins University School of Medicine. Aug 1995 - Aug 1998.

### **Professional Positions**

**Dean, College of Graduate Studies and Research**, Radford University. (July 2019 – present).

**Interim Dean of Libraries**, Radford University (March 2021-January 2022)

**Professor of Chemistry**, Radford University. (July 2019 – present).

**Dean, Graduate School**, Missouri Western State University. (July 2012 – June 2019).

**Dean, College of Professional Studies**, Missouri Western State University. (June 2018 – June 2019).

**Chairperson**, Department of Chemistry Missouri Western State University. (Aug 2007 - July 2012).

**Professor**, Department of Chemistry, Missouri Western State University. (Aug 2009 – June 2019).

**Associate Professor**, Department of Chemistry, Missouri Western State University. (Aug 2003 - July 2009).

**Assistant Professor**, Department of Chemistry, Missouri Western State University. (Aug 1998 - July 2003).

**Clinical Associate**, St. Luke's Hospital, Kansas City, MO (Sep 2003 – Aug 2015).

### **Professional Memberships**

American Society for Biochemistry & Molecular Biology

American Chemical Society

Council of Graduate Schools (Institutional Representative)

Midwest Association of Graduate School (Institutional Representative)

Chemical Educators Association of NW Missouri

### **Awards and Honors**

**Education Fellow**, American Society for Biochemistry and Molecular Biology (March 2015)

**Governor's Award for Excellence in Education**, MO Coordinating Board for Higher Education. (April 2009).

**Governors Distinguished Professor Award**, Missouri Western State University. (April 2008).

**Chapter Advisor of the Year**, MWSU Interfraternity Council-Panhellenic Council-National Panhellenic Council, (March 2015).

**Outstanding Instructor Award**, MWSU/Disability Services. (April 2007).

**Liberal Arts and Science Council of Chairpersons Award**, Missouri Western State University. (Aug 2003).

**All-University Outstanding Graduate Teaching Award - Sciences**, University of Virginia, 1995.

**VA Section Award for Outstanding Achievement**, American Chemical Society, Randolph-Macon College, 1990.

**American Institute of Chemists Foundation Award**, Randolph-Macon College, 1990.

**Chi Beta Phi Scientific Honor Fraternity**, Randolph-Macon College, 1989.

## TEACHING

### Courses Taught

#### Radford University

CHEM/BIOB 471 Biochemistry I

#### Missouri Western State University

CHE 101, Introductory Chemistry Laboratory

CHE 111, General Chemistry I, Lecture and Laboratory

CHE 120, General Chemistry II, Laboratory

CHE 310 Organic Chemistry I

CHE 311 Organic Chemistry I Laboratory

CHE 340 Physical Chemistry for Biological Sciences, Laboratory

CHE 370, Biochemistry I, Lecture and Laboratory

CHE 450, Independent Research/Project

CHE 470, Biochemistry II

CHE 490, Research in Chemistry

CHE 495, Seminar in Chemistry

CHE 680, Intellectual Property in the Scientific Setting (graduate course)

HON 395, Honors Colloquium, Finding the Science in Science Fiction

## SERVICE

### Radford University

Academic Affairs Leadership Team, (Aug 2019-present)

President's Leadership Council, (Aug 2019-present)

Graduate Affairs Council, Chair (Aug 2019-present)

Institutional Official for Institutional Animal Care and Use and Human Subject Research, (July 2019-Jan 2022)

Academic Policies and Procedures Committee, (Aug 2019-present)

Academic Program Review Committee, (Aug 2019-present)

SACSCOC Reaffirmation, Academic Advisory Committee (Sept 2021- present)

Administration Council, RU Libraries (March 2021-Jan 2022)

Scholarly Activities Committee, Chair (Sept 2019- Dec 2021)

Search Committee for Dean of Libraries, Chair (June - Nov 2021)

Search Committee for School of Nursing Inaugural Dean (Spring 2020)

RUC Operations Advisory Committee (2020- present)

Capital Campaign Steering Committee (2020-present)

Virginia Council of Graduate Schools October (2019-present)

### MWSU Chemistry Department

Chemistry Department Chairperson, (Aug 2007-July 2012)

Medical Technology Coordinator/Advisor. (Sep 2004 - 2015).

Chemistry Department Scholarship Committee. (Sep 2000 - 2015).

Pre-professional Scholarship Committee. (Sep 2000 - 2017).

Physical Chemistry Search Committee (Chair). (Sep 2009 - Jan 2010).

Dual Credit Coordinator Search Committee (Chair). (Jan 2009 - Oct 2009).

Chemathon High School Chemistry and Physics Competition (1999- 2019)

### **University Service as a Faculty Member, MWSU**

Graduate Council, Faculty Representative. (2008 - 2012). Council Chair, (2009 - 2012).  
Honors Program Committee. (2000 - 2012)  
Honors Program Golden Griffon Scholarship Committee. (2005 - 2012), Committee Chair (2005-2007)  
Educational Leadership Team. (2007 - 2019)  
Physics Promotion and Tenure Review Committee. (Nov - Dec 2010).  
Board of Governors Distinguished Professor Award Review Committee. (2009).  
Kansas City University of Medicine and Biosciences Partners Program. Early Admittance and Matriculation Committee (2007 - 2018).  
Faculty Senate Committees  
    Scholarship, 2009-2001; Professional Leave, 2005 – 2008 (Chair 2006 - 2008), 2010-2001;  
    Ad Hoc Committee on Summer Salary, Chair. (May - Dec 2011).  
Faculty Senate, Senator 2000-2005  
Writing Across the Curriculum (WAC) - 5 Year Review Committee, 2001  
Biochemistry Club/Student Chapter of ASBMB, Faculty Advisor. (2009 - 2019).  
Phi Delta Theta Fraternity, Faculty Advisor. (2000 - 2015).  
Phi Delta Theta Chapter Advisory Board Member. (2009 - 2015).  
Greek Life Planning Committee, Scholarship Subcommittee co-chair (2010 - 2011).

### **University-wide Search Committees, MWSU**

    Liberal Arts and Science Dean Search Committee, Search Committee Chair (February - May 2019)  
    Founding Dean of the School of Fine Arts Search, Search Committee Chair (May - July 2013)  
    Liberal Arts and Science Dean Search Committee. (Jan - May 2008).  
    Provost Search Committee. (Sept - Dec 2005).

### **University Leadership Positions, MWSU**

    Dean, College of Professional Studies (June 2018-June 2019)  
    Dean, Graduate School (2012-2019)  
    Chairperson, Department of Chemistry (2007-2012)  
    Director, Missouri Western Summer Research Institute (2002 - 2007)  
    Faculty Senator (2000-2005)

### **Committee Service as Dean, MWSU**

    Provost's Council (2012-2019)  
    Academic Deans Committee (2012-2019)  
    Strategic Planning Steering Committee (Jan 2017-July 2018)  
    College Completion Team (Enrollment Management)  
    Governance Advisory Committee (2012-2019)  
    University Assessment Committee (2017 – 2019)  
    Graduate Admissions and Registration Advisory Committee (2017-2019)  
    International Student Enrollment Management Committee (2015-2019)  
    Collaborative Marketing Committee (2017-2019)  
    Budget Advisory Committee (2017 – 2019)

### **Professional Service**

    ASBMB Student Chapters Steering Committee, American Society for Biochemistry & Molecular Biology (2007 - 2018).

ASBMB Student Chapters Regional Co-Director, South Central region (AR, AL, KS, LA MO, OK, TX) (2007 - 2018)  
ASBMB Honor Society Selection Committee  
ASBMB Outstanding Student Chapter Selection Committee  
Steering Committee Member for RCN-UBE Grant (NSF Grant 0957205). "Implementing Vision and Change: Developing Concept Driven Teaching Strategies in Biochemistry and Molecular Biology", supported by American Society for Biochemistry and Molecular Biology. (2010 - 2016).  
ASBMB Program and Degree Accreditation Development subcommittee, ASBMB Educational and Professional Development sub-committee (2010 - 2015).  
ASBMB Graduation Survey Committee, ASBMB Educational and Professional Development Committee. (2010 - 2015).  
Judge, Undergraduate Poster Competition - American Society for Biochemistry & Molecular Biology. (2004 - Present).  
Judge - Mid-America Regional Science & Engineering Fair, St. Joseph, MO. (March 1998 – March 2018).  
Peer Reviewer, *Transactions of the Missouri Academy of Science*.  
Peer Reviewer, *Bioscene*.

### Conference Organizing

Session co-organizer with Barbara Krauthamer, and Paula D. McCalin of Graduate Programs: Master's and Doctoral", presented as a pre-meeting workshop at the Annual Meeting of the Council of Graduate Schools, Washington, D.C., (Dec 5, 2018).

Session co-organizer with Nan Yancey, and Tyrus Miller, "Support services for Master's Students", Annual Meeting of the Council of Graduate Schools, Scottsdale, AZ. (Dec 8, 2017)

Symposia Co-organizer with Jon Talley, "Biomolecular Structure and Function", at 2015 Midwest Regional Meeting of the American Chemical Society. Hosted by Missouri Western State University, St. Joseph, MO, United States. (Oct 21 - Nov 23, 2015).

Conference co-organizer for "Transforming Undergraduate Education in the Molecular Life Sciences" ASBMB Special Symposium, Conference co-organizers, Quinn Vega, Montclair State University, Mary Huff, Bellarmine University, Ben Caldwell, Missouri Western State University. Conference hosted by Missouri Western State University, St. Joseph, MO. (Jul 30-Aug 2, 2015)

Workshop co-organizer with Elis Bell, and Rachell Booth. Workshop title: "Promoting Concept-Driven Teaching Strategies in BMB through Concept Assessments", sponsored by American Society for Biochemistry and Molecular biology at Texas State University, San Marcos, TX. (Mar 8, 2014)

Workshop co-organizer with Margaret Johnson, Elis Bell, and Marcy Osgood. Workshop title: "Effectively Assessing Laboratory and Research Skills, sponsored by American Society for Biochemistry and Molecular biology at University of Alabama, Tuscaloosa, AL. (Feb 23, 2013)

Workshop co-organizer with Ellis Bell, Cheryl Sensibaugh, Joe Provost. Workshop title: "Designing Teaching Tools for BMB Education" sponsored by American Society for Biochemistry and Molecular biology at University of San Diego, San Diego, CA. (Nov 2, 2013)

Session co-organizer with Ann Aguanno. "Biochemistry Lab Ideas and Assessments" at the conference on Student Centered Education in the Molecular Life Sciences II, sponsored by American Society for Biochemistry and Molecular Biology, University of Richmond, VA, (July 20-23, 2011).

Session Co-organizer with Ann Aguanno, "Sharing Lab Exercises & Ideas in Biochemistry & Molecular Biology Teaching," at "Student Centered Education in the Molecular & Life Sciences," American Society for Biochemistry and Molecular Biology, Colorado Springs, CO. (August 5, 2009 - August 8, 2009).

## Grants and Sponsored Research

Caldwell, B., Project Director, "GXP Work Force Training Laboratory," Sponsored by Department of Education - Fund for the Improvement of Postsecondary Education (FIPSE), \$285,000.00 to MWSU for purchase of laboratory equipment for the Christopher "Kit" Bond Science and Technology Incubator. (August 2009 - September 2010).

Caldwell, B., Ducey, M., "A Biochemical and Biophysical Examination of PAM-CD:P-CIP2 Binding: Engaging undergraduate students in an active biochemical research project.," Sponsored by Western Institute, Missouri Western State University, \$5,000.00. (May 2006 - August 2006).

Caldwell, B., Applied Learning Initiative Grants, Missouri Western State University  
\$50,000 to support the 2007 Summer Research Institute, May 2007.  
\$25,000 to support the 2006 Summer Research Institute, March 2006.

Caldwell, B. (Co-Principal), Baker, J. (Co-Principal), Eckdahl, T. (Principal), "Anti-tumor Drugs that Bind the DNA Minor Groove," Academic Research Enhancement Award (AREA) grant sponsored by National Cancer Institute/National Institutes of Health, Federal (NIH AREA R15 CA 96723-01), \$132,000.00. (July 2003 - June 2006).

Caldwell, B., "The Summer Research Institute: Research Collaborations for Undergraduates and High School Students," Sponsored by Strategic Planning and Implementation Funds, Missouri Western State University, \$15,000.00. (October 2003 - August 2004).

Caldwell, B. (Principal), Hiley, S. (Co-Principal), Wallner, A. (Co-Principal), "Cross course group projects using an NMR to simulate an industrial setting," a Course, Curriculum & Laboratory Improvement (Adaptation and Implementation, CCLI-A&I) grant sponsored by National Science Foundation, Federal, # DUE-9950492 for \$99,000.00. (August 2000 - April 2002).

Caldwell, B., Missouri Western State University Foundation Grant for purchase of Ultrasonic Cell Disruptor for use in biochemistry teaching laboratory, \$4000 (April 2000).

## RESEARCH/SCHOLARLY EFFORTS

### Book Chapter

Caldwell, Ben. (2020) "A Journey Through A Career in Academia: From Faculty to Administration" pp. 89 -109 in *Building Your Best Chemistry Career Volume 1: Academic Perspectives*, ACS Symposium Series; Mark A. Benvenuto. ed.; American Chemical Society: Washington, DC.

### Peer Reviewed Journal Articles

- Torres Y Torres, J., Hiley, S., Lorimor, S., Rhoad, J., Caldwell, B., Zweerink, G., Ducey, M. (2015) "Separation and Analysis of Caffeine from Beverages using Thin-Layer Chromatography and Gas Chromatography-Mass Spectrometry" in *Journal of Chemical Education* **92**(5): 900-902.  
<https://pubs.acs.org/doi/10.1021/ed500977r>
- White, H. B., Benore, M.A., Sumpter, T. F., Caldwell, B.D., Bell, E. (2013) "What Skills Should Biochemistry and Molecular Biology Programs Have Upon Graduation?" *Biochemistry and Molecular Biology Education*, **41**(5), 297-301. <https://iubmb.onlinelibrary.wiley.com/doi/abs/10.1002/bmb.20729>
- Caldwell, B. (2007). An Alternative Research Model of Faculty, Undergraduate, and High School Student Collaboration. *CUR Quarterly*, 28(2), 29-34.
- Ducey, M., Caldwell, B. (2006). Characterization and Analysis of a Product: A Guided-Inquiry Sequence of Instrumentally Based Experiments for Use in General Chemistry. *ICUC Quarterly*, **2**(1), 2.
- Caldwell, B., Rohlman, C., Benore-Parsons, M. (2004). A Curriculum Skills Matrix for Development and Assessment of Undergraduate Biochemistry and Molecular Biology Laboratory Programs. *Biochemistry and Molecular Biology Education*, **32**(1), 11-16.  
<https://iubmb.onlinelibrary.wiley.com/doi/abs/10.1002/bmb.2004.494032010295>
- Caldwell, B., Darlington, D. N., Penzes, P., Johnson, R. C., Eipper, B. A., Mains, R. E. (1999). The Novel Kinase Peptidylglycine alpha-Amidating Monooxygenase Interactor Protein 2 Interacts with the Cytosolic Routing Determinants of the Peptide Processing Enzyme Peptidylglycine alpha-Amidating Monooxygenase. *Journal of Biological Chemistry*, **274**, 34646-34656. <http://www.jbc.org/content/274/49/34646.full.pdf>
- Alam, R. M., B.D. Caldwell, R. C. Johnson, D. N. Darlington, B.A. Eipper, R. E. Mains, (1996) "Novel Proteins that Interact with the COOH-terminal Cytosolic Routing Determinants of an Integral Membrane Peptide-processing Enzyme." *Journal of Biological Chemistry* **271**: 28636-28640.  
<http://www.jbc.org/content/271/45/28636.full>

### Contributions to Periodicals

- Caldwell, B. (2017) "Intellectual property and its place in science curricula" in *ASBMB Today*, **16** (1): 28-29.
- Huff, M. and Caldwell, B. (2014) "Moving into Administration: Is it really that difficult?" in *ASBMB Today*, **13**(7): 42-43. <http://www.asbmb.org/asbmbsociety/201408/ProfessionalDevelopment/Administration/>
- Caldwell, B. (2014) Moving into Administration: Should you stay or should you go? Observations from a new dean." In *ASBMB Today*, **13**(2): 28-29.  
<http://www.asbmb.org/uploadedFiles/ASBMBToday/Content/Archive/ASBMBToday-2014-02.pdf>
- Caldwell, B. (2011). Undergraduates receive ASBMB support for summer research projects. *ASBMB Today* (January 2011), 4-5. [www.asbmb.org/asbmbsociety/asbmbsociety\\_article.aspx?id=11140](http://www.asbmb.org/asbmbsociety/asbmbsociety_article.aspx?id=11140)

Caldwell, B. (2011). JBC in the Classroom: Selecting appropriate research articles to introduce undergraduate students to primary literature. *ASBMB Today*, January 2011, Available in online edition only.

[www.asbmb.org/asbmbtoday/asbmbtoday\\_article.aspx?id=11172](http://www.asbmb.org/asbmbtoday/asbmbtoday_article.aspx?id=11172)

Pazin, M., Caldwell, B. (2011). The ABCs of Poster Making (2nd ed., vol. March 2011, pp. 2-5). *Enzymatic: The Newsletter of the ASBMB Undergraduate Affiliate Network*.

Caldwell, B. (2010). JBC in the Classroom: Selecting Appropriate Research articles to Introduce Undergraduate Students to Primary Literature (6th ed., pp. 9-11). *Enzymatic: The Newsletter of the ASBMB Undergraduate Affiliate Network*.

## Other

Interviewed for articles in *Chronicle for Higher Education*

“8 Tips to Help New Deans Get Off to a Good Start”, by Michael Anft, April 22, 2018

<https://www.chronicle.com/article/8-Tips-to-Help-New-Deans-Get/243167>

“To Change a Campus, Talk to the Dean”, by Audrey Williams Jones, November 24, 2014

<https://www.chronicle.com/article/To-Change-a-Campus-Talk-to/150197>

Caldwell, B. (2004). *Recruiting Can Help Jumpstart Faculty Research, Too!*. *CUR Quarterly*.

<http://www.cur.org/publications/TimeVignettes.asp>

## In Preparation

Hiley, S., Caldwell, B., Torres y Torres, J. The Quantification of Sodium in Beverages using Atomic Absorbance Spectroscopy.

Ducey, M., Caldwell, B. Wastewater Remediation Using Coffee Grounds. A Research Experiment for the General Chemistry Laboratory.

## Presentations (\* designates undergraduates co-authors/presenters)

Caldwell, B., Krauthamer, B., McClain, P. “Review of Graduate Programs: Master’s and Doctoral” presented as a pre-meeting workshop at the Council of Graduate Schools Annual Meeting, Washington, D.C., December 5, 2018.

Caldwell, B. Yancey, N, Miller, T. “Support services for Master’s Students” presented at the Annual Meeting of the Council of Graduate Schools, Scottsdale, AZ. Dec 8, 2017.

Svojanovsky, S., Ducey, M., Caldwell, B., "Development of a student portfolio to demonstrate a professional science masters skill set," presented at 24th Biennial Conference on Chemical Education (BCCE), ACS, University of Northern Colorado, Greeley, CO. July 31, 2016.

Caldwell, B., “Approaches to BMB Skills Assessment presented at Developing and Sharing Best Practices in Biochemistry Education”, (Keynote talk) presented at Developing and Sharing Best Practices: From Concept to Classroom, a workshop sponsored by American Society for Biochemistry and Molecular Biology, Wichita State University, Wichita, KS. Mar 19, 2016.

Caldwell, B., "An in-class discovery based activity for students to investigate sequential events in enzyme catalyzed reactions and protein activities." Presented at Transforming Undergraduate Education in the Molecular Life Sciences", conference sponsored by American Society for Biochemistry and Molecular Biology, St. Joseph, MO. (July 31, 2015).

Caldwell, B., "Assessing student skills in laboratory and research experiences." Presented at Experimental Biology 2014, San Diego, CA. Apr 27, 2014.

Bell, E., Sensibaugh, C., Caldwell, B., Provost, J. "Designing Scientific Teaching Tools for BMB Education." Presented at ASBMB RCN-UBE Workshop, University of San Diego, San Diego, CA. Nov 2, 2013.

Bell, E., Caldwell, B., Elliot, S., Sears, D., Sirum, K., White, H., Wright, A. "Implementing Vision and Change Using Concept –Driven Teaching Strategies in Biochemistry and Molecular Biology." Presented at the Student-Centered Education in the Molecular Life Sciences, sponsored by American Society for Biochemistry and Molecular Biology Seattle, WA. Aug 5, 2013.

White, H., Benore, M., Sumter, T., Caldwell, B., Bell, E. "What Skills Should Students Have Upon Graduation from Undergraduate Biochemistry and Molecular Biology Programs?" Presented at Experimental Biology 2013, Boston, MA. Apr 22, 2013.

Caldwell, B., "Sharing Best Practices in Laboratory Assessment," Presented at Effectively Assessing Laboratory and Research Skills - An ASBMB RCN UBE Workshop, sponsored by American Society for Biochemistry and Molecular Biology, University of Alabama, Tuscaloosa, AL. Feb 22, 2013.

Caldwell, B., "The Benefits of Starting an ASBMB Undergraduate Affiliate Network Chapter," Heartland Undergraduate Biochemistry Forum, sponsored by Biochemistry and Molecular Biology Department, University of Kansas Medical Center, Kansas City, KS. Nov 10, 2012.

\*Clary, A., \*Galloway, P., Caldwell, B., "Continued development of a fluorescent glutathione analog for monitoring interactions of GST fusion proteins," PORTAL Symposium, Missouri Western State University. Sep 21, 2012.

Torres y Torres, J., Ducey, M., Caldwell, B., "Successes and Challenges in Implementation of the Laboratory Components of a Dual Credit General Chemistry I Course," 2012 Biennial Conference on Chemical Education (BCCE), American Chemical Society, Pennsylvania State University, State College, PA. Aug 1, 2012.

\*Huff, H., \*Gaines, C., Caldwell, B., "A fluorescent glutathione analog for monitoring interactions of GST fusion proteins," Experimental Biology 2012, San Diego, CA. Apr 21, 2012.

Caldwell, B., "Missouri Western State University Professional Science Graduate Programs," presented at Professional Science Masters Summit, University of Missouri System, Columbia, MO. Apr 17, 2012.

\*Huff, H. C., \*Gaines, C. R., Caldwell, B., "Development of a generic system to monitor GST fusion proteins and their interactions," Heartland Undergraduate Biochemistry Forum, sponsored by Biochemistry and Molecular Biology Department, University of Kansas Medical Center, Kansas City, KS. Nov 19, 2011.



- Caldwell, B. "Use of a mock lab report to assess student understanding and comprehension of biochemistry laboratory methods", Student Centered Education in the Molecular Life Sciences II, sponsored by American Society for Biochemistry and Molecular Biology, University of Richmond (VA). Jul 22, 2011.
- Torres y Torres, J., Ducey, M., Caldwell, B., "Dual Credit General Chemistry: a model university-high school collaborative effort," Experimental Biology 2011, Washington, D.C. Apr 11, 2011.
- \*King, M., \*Turner, H., Caldwell, B., "Examining albumin's esterase activity for use in the biochemistry teaching laboratory," Experimental Biology 2011, Washington, D.C., April 10, 2011.
- \*Melton, A. D., \*King, S. L., \*Rawlings, T. C., \*King, M., \*Turner, H., \*Cozad, K. D., \*Janssen, B. M., \*Lane, C. E., \*Limle, A. B., \*Rogers, J. D., Caldwell, B., Woodford, J., "Kinetic study of the esterase activity of albumins," 241st National Meeting of the American Chemical Society, Anaheim, CA. Mar 28, 2011.
- Caldwell, B., Daggett, M., "Development of a laboratory skills survey and assessment tool for use in the biochemistry teaching laboratory," Experimental Biology 2010, Anaheim, CA. (Apr 24, 2010).
- Caldwell, B. and Aguanno, A., "Sharing Lab Exercises & Ideas in Biochemistry & Molecular Biology Teaching," Student Centered Education in the Molecular & Life Sciences, sponsored by American Society for Biochemistry and Molecular Biology, Colorado College, Colorado Springs, CO. Aug 7, 2009.
- Eckdahl, T., Poet, J., Caldwell, B., "Synthetic Biology and Artificial Life," Honors Colloquium, Missouri Western State University. Feb 10, 2009.
- Caldwell, B., Ducey, M., "Using coffee grounds to remediate heavy metal ions from wastewater samples: bringing research projects into the undergraduate general chemistry laboratory," presented at American Chemical Society National Meeting, Philadelphia, PA. Aug 2008.
- Caldwell, B., "The Summer Research Institute: An Alternative Research Model Involving Faculty, Undergraduates and High School Students," Third Annual Conference on Research at Predominantly Undergraduate Institutions, Park University. Parkville, MO. May 2008.
- \*Thomsen, K., \*Barnett, J., \*Elder, D., Caldwell, B., Ducey, M., "Investigation of GST fusion proteins for screening protein interactions," Experimental Biology 2008, San Diego, CA. Apr 6, 2008.
- Ducey, M., Caldwell, B., Hiley, S., "Engaging Students with Research Problems: Applied Learning in the General Chemistry Laboratory," Second Annual Conference on Applied Learning in Higher Education, Missouri Western State University. Feb 23, 2007.
- Daggett, M., Caldwell, B., "Performance Based Skills Assessment in Introductory Cell Biology and Biochemistry Courses," Second Annual Conference on Applied Learning in Higher Education, Missouri Western State University. Feb 23, 2007.
- \*Unzicker, M., \*Voekel, J., Caldwell, B., Ducey, M., "Remediation of Heavy Metal Ions in Wastewater by Coffee Grounds," Undergraduate Summer Research Institute Symposium, Missouri Western State University. Oct. 2006.

Daggett, M., Caldwell, B., "Design and Implementation of Skill-Specific Assessments in Introductory and Advanced Cell Biology And Biochemistry Courses" presented Experimental Biology 2006, San Francisco, CA. Apr 2, 2006.

Caldwell, B., "Teaching and Research: A Twist on the Typical Summer Research Model," 1st Annual Conference on Applied Learning in Higher Education, Missouri Western State University. Feb 10, 2006.

Eckdahl, T., Baker, J., Caldwell, B., Daggett, M., "Faculty working together to conduct undergraduate research.", " 1st Annual Conference on Applied Learning in Higher Education, Missouri Western State University. Feb 10, 2006.

Caldwell, B., Miller, J., "Gatekeeping: Screening Scholarship Applicants," presented at Annual Conference of the National Collegiate Honors Council, St. Louis, MO. Oct 26, 2005.

Caldwell, B., Ducey, M., Hiley, S., Zweerink, G., "Guided Inquiry Projects Using Instrumental Analysis in the Freshman General Chemistry Laboratory," presented at First Year Undergraduate Chemistry Education International Conference, sponsored by International Center for First Year Undergraduate Chemistry Education, University of Illinois, Urbana-Champaign. (May 23, 2005).

Archer, L., Caldwell, B., Ducey, M., Hiley, S., Zweerink, G., "Using Instrumentation in First Year Chemistry Laboratory - Helping Students Visualize the Practice of Chemistry," presented at First Year Undergraduate Chemistry Education International Conference, sponsored by International Center for First Year Undergraduate Chemistry Education, University of Illinois at Urbana-Champaign. (May 23, 2005).

Caldwell, B. D.. "Cooperation between chemistry and biology departments can lead to a successful biochemistry and molecular biology undergraduate degree." Presented at the 229<sup>th</sup> American Chemical Society Meeting, San Diego, CA. Mar 13-17, 2005.

Caldwell, B. D. and M. Daggett. "A Learning Community Designed to Link Chemistry and Biology Laboratory Courses." Presented at the 229<sup>th</sup> American Chemical Society Meeting, San Diego, CA, Mar 13-17, 2005.

Ducey, M.W., S.L. Hiley, B.D. Caldwell & G. L. Zweerink. "Characterization and Analysis of a Product: A Semester Long Guided Inquiry Laboratory Sequence for Use in General Chemistry." Presented at the Midwest Regional American Chemical Society, Kansas State University, Manhattan, KS, Oct 21, 2004.

\*Silvey\*, D., & B.D. Caldwell. "Sequence Specificity Studies of DNA-Anti-tumor Drug Interactions using Molecular Fluorescence." Presented at the Spring Multidisciplinary Research Day, Missouri Western State College, May 4, 2004.

Caldwell, B. D., "Catch 'Em Early: a novel research opportunity for incoming freshman and high school students." Presented at the 225<sup>th</sup> American Chemical Society National Meeting, New Orleans, Mar 23-27, 2003.

\*Felts L, B.D. Caldwell and Michael W Ducey. "Development of the laboratory component for a physical chemistry for biological sciences course." Presented at the 225<sup>th</sup> American Chemical Society National Meeting, New Orleans, LA, Mar 23-27, 2003.

- Caldwell, B.D. and J. Zweerink, "Development of an undergraduate level physical chemistry course for biochemistry and molecular biology: an experiment in progress." Presented at Experimental Biology 2002, New Orleans, LA, Apr 20-24, 2002.
- Hiley, S.L., B. Caldwell, and R. Nulph. "Finding the science in science fiction: An honors colloquium." Presented at the 223<sup>rd</sup> National Meeting of the American Chemical Society, Orlando, FL, Apr 7-11, 2002.
- Parsons, M., B.D. Caldwell, & C.E. Rohlman. "Lab Teaching and the Research Paradigm for Majors and Non Majors." Presented at the Project Kaleidoscope Summer Institute, Jul 25-28, 2001, Snowbird, UT.
- \*Crowley, A., and B. Caldwell. "Examination of metal binding in small GTP binding proteins by nuclear magnetic resonance spectroscopy" presented at the 2001 Undergraduate Research Summer Institute (URSI) Symposium, Missouri Western State College, St. Joseph, MO, Oct 16, 2001.
- \*Glasgow, L., B. Caldwell, & J. Baker. "Investigations of the effects of NSAIDs on antibiotic susceptibility in *Staphylococcus aureus*." Presented at American Chemical Society national meeting, San Diego, CA, Apr 1-5, 2001.
- \*Lombardi-Lynn, S.L., & B. Caldwell. "Investigations into the protein-protein interactions between the cytosolic routing determinants of the peptides amidating enzyme PAM and the kinase PCIP2." Presented at the American Chemical Society National Meeting, San Diego, CA, Apr 1-5, 2001.
- \*Harlow, S. and B. Caldwell. "Expression and Purification of Secretory Pathway Proteins from *E. coli* for Generation of Polyclonal Antibodies." Presented at the 2000 Undergraduate Research Summer Institute (URSI) Symposium, Missouri Western State College, St. Joseph, MO, Oct 17, 2000.
- Caldwell, B.D. "A New Faculty Member's Perspective on Starting Research." Presented at the Project Kaleidoscope Summer Institute, Keystone, CO, Jul 23-26, 2000.
- Caldwell, B.D. "Use of Conferencing Software in the Biochemistry Curriculum at Missouri Western State College." Presented at the joint meeting of the American Chemical Society and American Society for Biochemistry and Molecular Biology, Boston, MA, Jun 4-8, 2000,.
- Caldwell, B.D. and T.C. Eckdahl. "Development of an Integrated Biochemistry and Molecular Biology Major at Missouri Western State College." Presented at the 219<sup>th</sup> National Meeting of the American Chemical Society, San Francisco, CA, Mar 26-30, 2000.
- Hiley, S.L., B.D. Caldwell & G. Zweerink. "Development of instrumental experiments for general chemistry." Presented at the 219<sup>th</sup> National Meeting of the American Chemical Society, San Francisco, CA, Mar 26-30, 2000.
- Caldwell, B.D., A.M. Harrison, and B.M. Murray. "Student Use of Web-based Tutorials in an On-line Pharmaceutical Chemistry Course." Presented at the 217<sup>th</sup> National Meeting of the American Chemical Society, Anaheim, CA, Mar 21-25, 1999.
- Harrison, A.M., L.J. Archer, J.M. Beard, B.D. Caldwell, S. Esjornsen, E.R. Guise, B.M. Murray, D. Rosenthal, "A Comparison of Intercollegiate On-Line Chemistry Courses," Presented at the 216<sup>th</sup> American Chemical Society National Meeting, Boston, MA, Aug 23-27, 1998.

Caldwell, B.D., R.C. Johnson, D.N. Darlington, B.A. Eipper, R.E. Mains, (1996) "Identification of a Putative Kinase that Interacts with the COOH-terminal Domain of Peptidylglycine alpha-Amidating Monooxygenase." Presented at the American Society for Biochemistry & Molecular Biology national meeting, New Orleans, LA Jun 2 - 6, 1996. Abstract in *FASEB Journal* **10** (6): A1269.

Klevickis, C., B.D. Caldwell, J.E. Mahaney, R.B. Martin, R.A. Farley, and C.M. Grisham, (1993) "New Magnetic Resonance Methods for Study of Na,K-ATPase and Ca-ATPase." Presented at the VII<sup>th</sup> International Conference on The Sodium Pump, Todtmoos/Black Forest, Germany, Sep 5-11<sup>th</sup>, 1993. Abstract in *Biological Chemistry Hoppe-Seyler* **374**: 556.

Farley, R.A, B.S. Gordon, E.E. Huston, K. Wang, B.D. Caldwell, and C.M. Grisham, (1993) "Expression of the ATP Binding Domain of Na,K-ATPase in Bacterial Cells." Presented at the 37<sup>th</sup> Annual meeting of the Biophysical Society, Washington, D.C. Abstract in *Biophysical Journal* **64**: A330.

### **Professional Development Activities Attended**

Engaging Differences Workshop, sponsored by Crossroads Antiracism Organizing and Training, Radford University, January 13-14, 2022.

Academic Leadership Professional Development workshop series, sponsored by the Academic Success Center, Radford University, Fall 2021 – Spring 2022.

Introduction to Systemic Racism Workshop, sponsored by Crossroads Antiracism Organizing and Training, (Online workshop), June 30, 2021.

Council of Graduate Schools Annual Meeting, Online/Virtual, Dec 2-7, 2020

Council of Graduate Schools Annual Meeting, Nashville, TN Dec 4-7, 2019

Missouri Graduate Dean Round Table, Missouri Association of Graduate Deans, Springfield, 2015, 2017 & 2018.

Transforming Undergraduate Education in the Molecular Life Sciences, Missouri Western State University, St. Joseph, MO, July 30 - Aug 2, 2015.

Graduate Education for the 21st Century - 79th Annual Meeting of the Midwest Association of Graduate Schools, St. Louis, MO, Apr 15 - 17, 2015.

Strategies for Growing Online, International and Graduate Enrollment, sponsored by Elliance, Inc., Kansas City, MO, Nov 8, 2013.

Student Centered Education in the Molecular Life Sciences, sponsored by American Society for Biochemistry and Molecular Biology University of Seattle, Seattle, WA, Aug 4 - 7, 2013.

ASBMB Degree Certification Working Group, sponsored by American Society for Biochemistry and Molecular Biology, Bethesda, MD, May 24-26, 2013.

Strengthening the National Rural Veterinary Infrastructure, National Food Animal Veterinary Institute, Kansas City, MO, Dec 12, 2012.

Intellectual Property: Understanding the New Paradigm, sponsored by Polsinelli & Shughart Law Firm, Kansas City, MO, Aug 30, 2012.

ASBMB Accreditation Exam Workshop III, sponsored by American Society for Biochemistry and Molecular Biology and Teagel Foundation, Bethesda, MD, Mar 2012.

ASBMB Accreditation Exam Workshop II," sponsored by American Society for Biochemistry and Molecular Biology and Teagel Foundation. Bethesda, MD, Nov 11-13, 2011.

Student Centered Education in the Molecular Life Sciences II," sponsored by American Society for Biochemistry and Molecular Biology, Richmond, VA, Jul 20-23, 2011.

ASBMB Accreditation Exam Workshop I" sponsored by American Society for Biochemistry and Molecular Biology and Teagel Foundation. Bethesda, MD, May 20-22, 2011.

Pedagogy - Online Course Development, sponsored by MWSU Western Institute and Instructional Media Center, May 13-18, 2010.

Conceptual Assessment in Biochemistry and Molecular Biology," sponsored American Society for Biochemistry and Molecular Biology, Bethesda, MD, Mar 19 - 21, 2010.

Student Centered Education in the Molecular & Life Sciences, sponsored by American Society for Biochemistry and Molecular Biology, Colorado Springs, CO, Aug 5-8, 2009.

The Proteins in Active Learning Modules (PALM) Workshop, sponsored by Center for Biomolecular Modeling, Milwaukee School of Engineering, Milwaukee, WI, Jun 16-19, 2009.

Critical Thinking: A Professional Development Workshop, sponsored by Missouri Western State University, June 7 - 8, 2007.

Writing Successful Grants, sponsored by Missouri Western State University, Apr 27, 2007.

NSF STEP/STEM Proposal Workshop, Fluorescent Valley Community College, St. Louis, MO, Apr 2, 2007.

Laboratory Safety Management in Academia, sponsored by Missouri Western State University Chemistry Department, Nov 2, 2004.

Proposal Writing Institute, Council on Undergraduate Research/National Science Foundation, East Tennessee State University, Johnson City, TN, Jul 17-24, 2004.

Laboratory Safety Institute: Role of Administrators, sponsored by Missouri Western State University Chemistry Department, Feb 2, 2003.

Project Kaleidoscope Summer Institute - "A coherent program on 21st century science majors," Snowbird, UT, Jul 22-25, 2001.

Project Kaleidoscope National Assembly, Tucson, AZ, Dec 1 - 2, 2000.

Project Kaleidoscope Summer Institute - Biochemistry: Biology or Chemistry. What is Biochemistry at the Undergraduate Level? Keystone, CO, Jul 26-29, 2000.

Biochemistry: Biology or Chemistry? A Project Kaleidoscope workshop, Macalaster, College, St. Paul, M., July 16 - 18, 1999.

Teaching In Organic Chemistry and Chemistry for the 21st Century – Project Outreach, University of Nebraska-Lincoln, Lincoln, NE, Apr 24, 1999.

### **Community Service and Volunteerism**

Grace Episcopal Church, Search Committee July 2021-January 2022

Boy Scouts, Troop 244, volunteer, Radford, VA Sept 2019 – Oct 202

Blue Ridge Highlands Regional Science Fair, Radford University, March 7, 2020

Board of Trustees, St. Joseph Museums, Inc., St. Joseph, MO. 2013 - 2019.

Executive Board, Vice President Jan. 2014 – 2019.

Board Development Committee, Chair, 2014 – 2019

Membership Committee, 2013-2019

Vestry (Board Member), Christ Episcopal Church, St. Joseph, MO. 2013 - 2016.

Sr. Warden (Chairperson), Jan 2015 – Jan 2016.

Board Member, Ensworth Hospital and Medical Education Trust, St. Joseph, MO. (2004 - 2012).

Super Science Saturday, MWSU/St. Joseph Museum, Inc., St. Joseph, MO. (January 2001 - present).

Noyes Elementary School Representative, PACT - Planning a Course Together for St. Joseph School District, St. Joseph, MO. (March 2010 - April 2012).

Science Advisor to St. Joseph School District Rainbow Program

Career information provider to St. Joseph Chamber of Commerce, St. Joseph, MO. (November 12, 2011).

Chemical Demonstrations, Noyes Elementary School (2010), Eugene Field Elementary (2013, 2018), Coleman Elementary School (2017, 2018)

Judge, Mid-America Regional Science and Engineering Fair, St. Joseph, MO. (1998 - 2018).

Volunteer, Noyes Accelerated Elementary School, St. Joseph, MO. (Jan 2006 - 2012).

My Success Event, High School Career Fair, 2007