

CURRICULUM VITAE

15 June 2017

Name: DAVIDE BOTTA

Citizenship: Italian

Spoken and written language(s): English, Italian and French

[Home address and cell phone number have been removed from this document]

Title: INSTRUCTOR

Department: Microbiology

[Business address, phone number, and e-mail address have been removed from this document]

Professional portfolio: www.davidebotta.weebly.com

EDUCATION

2004	B.S. (Biochemistry)	Benedictine College, Atchison, KS
2004	B.A. (French)	Benedictine College, Atchison, KS
2010	Ph.D. (Pharmaceutical Sciences)	University of Arizona, Tucson, AZ

POST-DOCTORAL TRAINING

2010-2012 University of Rochester Medical Center, Rochester, NY

2012-2016 University of Alabama at Birmingham, Birmingham, AL

AWARDS/HONORS

2015	First place prize (\$500), UAB Post-doctoral Research Day competition.
2014	Trainee Abstract Award (\$750), IMMUNOLOGY 2014™, 101 st Annual Meeting of the American Association of Immunologists (AAI), Pittsburgh, PA.
2014	Second place prize (\$300), UAB Post-doctoral Research Day competition.
2013	Second place prize (\$300), UAB Post-doctoral Research Day competition.
2012	Invitation to the 6 th Hoffmann-La Roche Commissions event at Carnegie Hall, New York, NY.
2011	Travel Award (\$500), FASEB Summer Research Conference on NAD ⁺ Metabolism and Signaling, Lucca, Italy.
2010	Travel Award (\$500), 18 th International Symposium on Poly(ADP-ribosyl)ation, Zurich, Switzerland.
2010-13	Hoffmann-La Roche Post-doctoral fellowship award.
2008	Registration Award (\$500), 17 th International Symposium on Poly(ADP-ribosyl)ation, Tucson, AZ.
2005	Honorary Citizenship of Tucson (AZ) awarded for community service by then-Mayor Robert E. Walkup.
2004	Benedictine College Discovery Scholar Award.
2004	American Chemical Society Outstanding Chemistry Senior Award.
2003	Benedictine College Outstanding Achievement in French Award.
2002	Honors for Academic Excellence awarded by then-Mayor of Lariano (Rome, Italy) Dr. Raffaele Montecucollo.
2002-04	Who's Who Among Students in American Universities and Colleges.
2001	Chemical Rubber Company (CRC) Freshman Chemistry Award.
2000-04	The National Dean's List.
2000-04	Benedictine College Honors.

PROFESSIONAL SOCIETIES

- 2012-present American Association of Immunologists (AAI)
- 2015-present American Association of Cancer Research (AACR)
- 2015-2016 Chemistry in Cancer Research (CICR) Working Group
- 2015-2016 Cancer Immunology (CIMM) Working Group

COMMITTEES

- 2015-present Co-advisor and committee member, Undergraduate Science and Technology Honors student Gaurav Agrawal, University of Alabama at Birmingham, AL.
- 2017-present Co-advisor and committee member, Undergraduate Science and Technology Honors student Wynton Michael Sims, University of Alabama at Birmingham, AL.

UNIVERSITY ACTIVITIES/SERVICE

- 2013 **Judge**, Graduate Biomedical Sciences (GBS) Rotation Students Poster sessions (Spring - April 17, Summer - August 14 & Fall).
- 2014 **Judge**, Graduate Biomedical Sciences (GBS) Rotation Students Poster session (Winter - February 26).
- 2015 **Guest Judge**, Oral presentations, Psychology Capstone PY409 course (Spring - Mar 16 and 31, and Fall - Oct 19 and 26).
- 2015 **Judge**, Graduate Biomedical Sciences (GBS) Rotation Students Poster sessions (Winter - March 6, Spring - May 27, Summer, and Fall – November 18).
- 2016 **Judge**, Graduate Biomedical Sciences (GBS) Rotation Students Poster sessions (Spring).
Faculty Judge, Poster competition, UAB Comprehensive Cancer Center (CCC) Retreat, UAB, October 17.
Faculty Judge, Poster competition, UASOM Dale J. Buenos Medical Student Research Day, UAB, November 4.
- 2017 **Faculty Judge**, Poster competition, The 12th Annual School of Dentistry Scholars' Symposium, UAB, March 1.
Poster Judge, Grades 7 and 8 Science Fair, St. Rose Academy, Birmingham, AL, March 23.

MAJOR RESEARCH INTERESTS

My research has focused on the metabolism of Nicotinamide Adenine Dinucleotide (NAD), the bioactive form of the vitamin niacin, and the roles that NAD-utilizing enzymes and NAD-derived molecules play in modulating cellular life/death decisions and inflammatory responses following oxidative stress. My interests are in basic and translational research aimed at (i) validating NAD metabolism as a therapeutic target, and (ii) discovering new therapies for the treatment of diseases as diverse as cancer, chronic obstructive pulmonary disease (COPD), interstitial pulmonary fibrosis (IPF), acute respiratory distress syndrome (ARDS), Alzheimer's Disease, and schistosomiasis.

TEACHING EXPERIENCE

- 2001-2004 College tutor of French Benedictine College, Atchison, KS
- 2003-2004 Undergraduate teaching assistant Benedictine College, Atchison, KS
- 2004-2006 Graduate teaching assistant University of Arizona, Tucson, AZ
- 2015-present Laboratory instructor to rotation students University of Alabama at Birmingham, Birmingham, AL

RESEARCH SUPPORT

ADDA, Alabama Drug Discovery Alliance

Years of funding: 2013-2018

PI on award: Frances E. Lund

Treating B cell-derived neoplasms by targeting ectoenzyme CD38: a regulator of the NAD metabolic pathway. The specific goals of this proposal are to generate the reagents and cell lines necessary to develop a high throughput screen for CD38 inhibitors, to develop and validate counter-screens, and to perform proof of concept *in vitro* and *in vivo* studies in B-cell neoplasms with the validated hits.

Salary distribution: **50%**

Role: Co-investigator

MANUSCRIPTS

1. **Botta, D.** and Jacobson, M.K. Identification of a regulatory segment of poly(ADP-ribose) glycohydrolase (2010). *Biochemistry* 49(35):7674-7682.
2. Muller-Steffner, H., Jacques S.A., Kuhn, I., Schultz, M.D., **Botta, D.**, Osswald, P., Maechling, C., Lund, F.E., Kellenberger, E. Efficient inhibition of *SmNACE* by coordination complexes is abolished by *S. mansoni* sequestration of metal (2017). *ACS Chem. Biol.* 12(7):1787-1795.
3. **Botta, D.**, Fuller, M., Randall, T.D., Lund, F.E., León, B, Ballesteros-Tato, A. Dynamic changes in Interleukin-2 (IL-2) fine-tune T Follicular Regulatory (TFR) cell responses during Influenza virus infection (2017). *Nat Immunol.* [*In Press*].
4. Zumaquero, E., Stone, S.L., Nellore, A., Scharer, C.D., Jenks, S.A., Rosal-Vela, A., **Botta, D.**, Bradley, J.E., Wojciechowski, W., Ptacek, T., Danila, M.I., Edberg, J.C., Bridges, S.L., Kimberly, R.P., Chatham, W.W., Schoeb, T.R., Boss, J.M., Sanz, I., Lund, F.E. Identification of T-bet and TLR7 expressing antibody secreting cell precursors and defining their role in SLE [*Submitted to Immunity*].
5. Garcia-Rodriguez, S., Rosal-Vela, A., Cumba-Garcia, L.M., Zumaquero, E., **Botta, D.**, Prados-Maniviesa, V., Cerezo-Wallis, D., Lo Buono, N., Gonzales-Peredes, E., Andres-Leon, E., Corbi, A., Mack, M., Koch-Nolte, F., Lund, F.e., Merino, R., Zubiaur, M., Sancho, J. CD38 promotes pristane-induced chronic inflammation and increases susceptibility to experimental lupus by an apoptosis-driven mechanism [*Submitted to Scientific Reports*].
6. **Botta, D.**, Rivero-Nava, L., Schultz, M.D., Zhang, D., Risley, C.A., Lund, F.E. The NAD glycohydrolase CD38 regulates macrophage effector function and defence against *Listeria monocytogenes* (*In preparation*).
7. **Botta, D.**, Peng R., Dadali, T., Schultz, M.D., Tyagi, G., Phillips, J.E., Harris, P., Renteria, L., Burns, L., Curtiss, M., Lund, F.E., Stevenson, C.S., Bauer, C.M.T. A TRPM2-deficiency significantly worsens the fibrotic response to bleomycin in a preclinical mouse model (*In preparation*).
8. **Botta, D.**, Schultz, M.D., Mudunuru, U., Simpler, T.S., Bradley, J.E., Ballesteros-Tato, A., Randall, T.D., Stevenson, C.S., Lund, F.E. Deficiency in Transient Receptor Potential Melastatin 2 impairs alveolar macrophage activation and protects mice against endotoxin-induced lung inflammation and injury (*In preparation*).

PUBLISHED ABSTRACTS

1. Bermudez, Y., Meyer, R.G., Benavente, C.A., **Botta D.**, Jacobson, M.K., Jacobson, E.L. Nicotinic acid receptors as potential skin cancer prevention targets (2007). *Cancer Prev. Res.* 2007:A150.
2. **Botta, D.**, Ballesteros-Tato, A., Martin, K., Hartson, L., Rangasamy, T., Mariani, T.J., Randall, T.D., Cockayne, D.A., Stevenson, C.S., Lund, F.E. Deficiency of the Transient Receptor Potential Melastatin 2 (TRPM2) cation channel provides protection against pulmonary inflammation in a murine model of Chronic Obstructive Pulmonary Disease (COPD) (2012). *Am. J. Respir. Crit. Care Med.* 185: A1305.
3. **Botta, D.**, Ballesteros-Tato, A., Mudunuru, U., Martin, K., Randall, T.D., Stevenson, C.S., Lund, F.E. Transient Receptor Potential Melastatin 2 is a critical mediator of lipopolysaccharide-induced pulmonary inflammation and injury (2013). *J. Immunol.* 190:180.21.
4. Bauer, C.M.T., **Botta, D.**, Peng R., Tyagi, G., Phillips, J.E., Harris, P., Renteria, L., Burns, L., Lund, F.E., Stevenson, C.S. A TRPM2-deficiency significantly worsens the fibrotic response to bleomycin in a preclinical mouse model (2013). *Am. J. Respir. Crit. Care Med.* 187:A5652.
5. **Botta, D.**, Mudunuru, U., Southworth, K.J., Simpler, T.S., Bradley, J.E., Randall, T.D., Stevenson, C.S., Lund, F.E. Deficiency in Transient Receptor Potential Melastatin 2 impairs alveolar macrophage activation and protects mice against endotoxin-induced lung inflammation and injury (2014). *J. Immunol.* 192 (1 Supplement) 120.13.
6. **Botta, D.**, Rivero-Nava, L., Lund, F.E. The NAD glycohydrolase CD38 regulates macrophage effector function and defense against *Listeria monocytogenes* (2014). *J. Immunol.* 192 (1 Supplement) 186.10.
7. **Botta, D.**, Dadali, T., Mousseau, B., Manouvakhova, A., Sosa, M.I., McKellip, S.N., Woods, L., Tower, N.A., Ross, L.J., Rasmussen, L., White, E.L., Bostwick, J.R., Lund, F.E. Targeting CD38 to modulate the cellular redox state and chemosensitize B-cell neoplasms. *Proceedings of the 106th Annual Meeting of the American Association for Cancer Research*; 2015 Apr 18-22; Philadelphia, PA: AACR; *Cancer Res* 2015; 75(15 Suppl): Abstract nr. 1242.
8. **Botta, D.**, Dadali, T., Mousseau, B., Zhou, F., Schultz, M.D., Zumaquero, E., Manouvakhova, A., Sosa, M.I., McKellip, S.N., Woods, L., Tower, N.A., Ross, L.J., Rasmussen, L., White, E.L., Padmalayam, I., Zhang, W., Everts, M., Augelli-Szafran, C.E., Bostwick, J.R., Suto, M.J., Lund, F.E. High-throughput screening efforts for the identification of selective and potent inhibitors of CD38 for the treatment of hematological cancers. *Proceedings of the 107th Annual Meeting of the American Association for Cancer Research*; 2016 Apr 16-20; New Orleans, LA. Philadelphia (PA): AACR; *Cancer Res* 2016; 76(14 Suppl): Abstract nr. LB-055.
9. Schultz, M.D., Dadali, T., **Botta, D.**, Manouvakhova, A., Sosa, M.I., McKellip, S.N., Woods, L., Tower, N.A., Ross, L.J., Rasmussen, L., White, E.L., Padmalayam, I., Augelli-Szafran, C.E., Everts, M., Sorci, L., Bostwick, J.R., Suto, M.J., Lund, F.E. Regulation of host immune responses to *Schistosoma mansoni* by the inhibition of the parasitic NAD salvage pathway (2016). *J. Immunol.* 196 (1 Supplement) 135.1.

POSTER EXHIBITS

1. Bermudez, Y., Meyer, R.G., Benavente, C.A., **Botta D.**, Jacobson, M.K., Jacobson, E.L. Nicotinic acid receptors as potential skin cancer prevention targets. Presented at the 6th Annual AACR International Conference on Frontiers in Cancer Prevention Research, Philadelphia, PA. December 5-8, 2007.
2. Bermudez, Y., Meyer, R.G., Benavente, C.A., Schnell, S.A., **Botta, D.**, Jacobson, M.K., Jacobson, E.L. Role of nicotinic acid receptors during skin differentiation. Presented at the 17th International Symposium on Poly(ADP-ribosyl)ation, Tucson, AZ, May 28-31, 2008.
3. Steffen, J.D., **Botta, D.**, Jacobson, M.K. Evaluation of high-throughput assays for poly(ADP-ribose) polymerase (PARP-1). Presented at the 17th International Symposium on Poly(ADP-ribosyl)ation, Tucson, AZ, May 28-31, 2008.
4. **Botta, D.**, Steffen, J.D., Jacobson, M.K. Evaluation of a high throughput colorimetric assay for poly(ADP-ribose) glycohydrolase. Presented at the 17th International Symposium on Poly(ADP-ribosyl)ation, Tucson, AZ, May 28-31, 2008.
5. **Botta, D.**, Ballesteros-Tato, A., Martin, K., Hartson, L., Stevenson, C.S., Cockayne, D.A., Randall, T.D., Lund, F.E. Loss of ADPR-gated Ca(2+) influx attenuates cigarette smoke-induced lung inflammation in mice. Presented at the FASEB Summer Research Conference on NAD⁺ Metabolism and Signaling, Lucca, Italy, September 4-9, 2011.
6. **Botta, D.**, Ballesteros-Tato, A., Martin, K., Hartson, L., Rangasamy, T., Mariani, T.J., Randall, T.D., Cockayne, D.A., Stevenson, C.S., Lund, F.E. Deficiency of the Transient Receptor Potential Melastatin 2 (TRPM2) cation channel provides protection against pulmonary inflammation in a murine model of COPD. Presented at the Spring Immunology symposium, University of Alabama at Birmingham, Birmingham, AL, June 9-10, 2012.
7. **Botta, D.**, Ballesteros-Tato, A., Martin, K., Hartson, L., Rangasamy, T., Mariani, T.J., Randall, T.D., Cockayne, D.A., Stevenson, C.S., Lund, F.E. Deficiency of the Transient Receptor Potential Melastatin 2 (TRPM2) cation channel provides protection against pulmonary inflammation in a murine model of Chronic Obstructive Pulmonary Disease (COPD). Presented at the American Thoracic Society (ATS) International Conference, San Francisco, CA, May 18-23, 2012.
8. **Botta, D.**, Ballesteros-Tato, A., Mudunuru, U., Martin, K., Randall, T.D., Stevenson, C.S., Lund, F.E. Transient Receptor Potential Melastatin 2 is a critical mediator of lipopolysaccharide-induced pulmonary inflammation and injury. Presented at *IMMUNOLOGY 2013™*, the 100th Annual Meeting of the American Association of Immunologists, Honolulu, HI, May 3-7, 2013.
9. Bauer, C.M.T., **Botta, D.**, Peng R., Tyagi, G., Phillips, J.E., Harris, P., Renteria, L., Burns, L., Lund, F.E., Stevenson, C.S. A TRPM2-deficiency significantly worsens the fibrotic response to bleomycin in a preclinical mouse model. Presented at the American Thoracic Society (ATS) International Conference, Philadelphia, PA, May 17-22, 2013.
10. **Botta, D.**, Ballesteros-Tato, A., Mudunuru, U., Martin, K., Randall, T.D., Stevenson, C.S., Lund, F.E. Harmful role of Transient Receptor Potential Melastatin 2 (TRPM2) in endotoxin-induced pulmonary inflammation and injury. Presented at the Pulmonary and Critical Care

Research symposium, sponsored by the University of Alabama at Birmingham, Birmingham, AL, March 1, 2013.

11. Dadali, T., **Botta, D.**, Mousseau, B., Rosal-Vela, A., Ross, L., White, L., Lund, F.E. Treating B-cell derived neoplasms by targeting the ectoenzyme CD38: a regulator of the NAD metabolic pathway. Presented at the Alabama Drug Discovery Alliance (ADDA) symposium, Birmingham, AL, June 14, 2013.
12. **Botta, D.**, Mudunuru, U., Southworth, K.J., Simpler, T.S., Bradley, J.E., Randall, T.D., Stevenson, C.S., Lund, F.E. Deficiency in Transient Receptor Potential Melastatin 2 impairs alveolar macrophage activation and protects mice against endotoxin-induced lung inflammation and injury. Presented at *IMMUNOLOGY 2014™*, the 101st Annual Meeting of the American Association of Immunologists, Pittsburgh, PA, May 2-6, 2014.
13. **Botta, D.**, Rivero-Nava, L., Lund, F.E. The NAD glycohydrolase CD38 regulates macrophage effector function and defense against *Listeria monocytogenes*. Presented at *IMMUNOLOGY 2014™*, the 101st Annual Meeting of the American Association of Immunologists, Pittsburgh, PA, May 2-6, 2014.
14. **Botta, D.**, Mudunuru, U., Southworth, K.J., Simpler, T.S., Bradley, J.E., Randall, T.D., Stevenson, C.S., Lund, F.E. Deficiency in Transient Receptor Potential Melastatin 2 impairs alveolar macrophage activation and protects mice against endotoxin-induced lung inflammation and injury. Presented at the 3rd Annual Southeastern Immunology Symposium, Atlanta, GA, June 7-8, 2014.
15. **Botta, D.**, Dadali, T., Mousseau, B., Manouvakhova, A., Sosa, M.I., McKellip, S.N., Woods, L., Tower, N.A., Ross, L.J., Rasmussen, L., White, E.L., Bostwick, J.R., Lund, F.E. Discovery and development of potent and selective small molecule CD38 inhibitors for treating B cell malignancies. Presented at the 2014 Alabama Drug Discovery Alliance (ADDA) symposium, Birmingham, AL, October 22, 2014.
16. **Botta, D.**, Dadali, T., Mousseau, B., Manouvakhova, A., Sosa, M.I., McKellip, S.N., Woods, L., Tower, N.A., Ross, L.J., Rasmussen, L., White, E.L., Bostwick, J.R., Lund, F.E. Modulating the cellular redox state by targeting the NAD glycohydrolase CD38: A novel therapeutic approach for chemosensitizing B-cell malignancies. Presented at the American Association for Cancer Research (AACR) annual meeting, Philadelphia, PA, April 18-22, 2015.
17. Schultz, M.D., **Botta, D.**, Fuller, M.J. and Lund, F.E. The role of Transient Receptor Potential Melastatin 2 (TRPM2) in a murine model of influenza A infection. Presented at the 4th Annual Southeastern Immunology Symposium, Atlanta, GA, June 13-14, 2015.
18. **Botta, D.**, Dadali, T., Mousseau, B., Manouvakhova, A., Sosa, M.I., McKellip, S.N., Woods, L., Tower, N.A., Ross, L.J., Rasmussen, L., White, E.L., Bostwick, J.R., Lund, F.E. Targeting CD38 to modulate the cellular redox state and chemosensitize B-cell neoplasms. Presented at the Southeastern Immunology Symposium, Atlanta, GA, June 13-14, 2015.
19. Schultz, M.D., Dadali, T., **Botta, D.**, Agrawal, G., Manouvakhova, A., Sosa, M.I., McKellip, S.N., Woods, L., Tower, N.A., Ross, L.J., Rasmussen, L., White, E.L., Padmalayam, I., Zhang, W., Augelli-Szafran, C., Everts, M., Sorci, L., Bostwick, J.R., Suto, M.J., Lund, F.E. Inducing toxicity in the blood fluke *Schistosoma mansoni* by inhibiting the NAD salvage

pathway. Presented at the Symposium for International Research and Innovation in Schistosomiasis (SIRIS), sponsored by the Biomedical Research Institute (BRI) and held at George Washington University, Washington, DC, Feb 3-4, 2016.

20. **Botta, D.**, Dadali, T., Mousseau, B., Zhou, F., Schultz, M.D., Zumaquero, M., Manouvakhova, A., Sosa, M.I., McKellip, S.N., Woods, L., Tower, N.A., Ross, L.J., Rasmussen, L., White, E.L., Padmalayam, I., Zhang, W., Everts, M., Augelli-Szafran, C.E., Bostwick, J.R., Suto, M.J., Bostwick, J.R., Lund, F.E. High-throughput screening efforts for the identification of selective and potent inhibitors of CD38 for the treatment of hematological cancers. Presented at the American Association for Cancer Research (AACR) annual meeting, New Orleans, LA, April 16-20, 2016.
21. Schultz, M.D., Dadali, T., **Botta, D.**, Manouvakhova, A., Sosa, M.I., McKellip, S.N., Woods, L., Tower, N.A., Ross, L.J., Rasmussen, L., White, E.L., Padmalayam, I., Zhang, W., Augelli-Szafran, C., Everts, M., Sorci, L., Bostwick, J.R., Suto, M.J., Lund, F.E. Regulation of host immune responses to *Schistosoma mansoni* by the inhibition of the parasitic NAD salvage pathway. Presented at *IMMUNOLOGY 2016TM*, the 103rd Annual Meeting of the American Association of Immunologists, Seattle, WA, May 13-17, 2016.
22. Zumaquero, E., Nellore, A., Rosal, A., **Botta, D.**, Garner, N., Ledbetter, S.S., Danila, M.I., Rennert, P., Ranger, A., Davis, R.S., Edberg, J.C., Bridges, S.L., Kimberly, R.P., Lund, F.E. Expression of T-box Transcription Factor T-bet Identifies a Novel Population of Inflammatory B Cells in Systemic Lupus Erythematosus. Presented at the Federation of Clinical Immunology Societies (FOCIS) meeting, Boston, MA, June 22-25, 2016.
23. Ballesteros-Tato, A., **Botta, D.**, Fuller, M.J., Bachus, H., Bradley, J.E., Zajak, A.J., Randall, T.D., Lund, F.E., Leon, B. Dynamic regulation of T Follicular Regulatory (Tfr) cell responses by Interleukin-2 (IL-2) during influenza infection. Presented at *IMMUNOLOGY 2017TM*, the 104th Annual Meeting of the American Association of Immunologists, Washington, DC, May 12-16, 2017.
24. Fuller, M.J., **Botta, D.**, Schultz, M.D., Bachus, H., Ballesteros-Tato, A. Duration of antigen presentation to influenza-specific CD8⁺ T cells regulates the development of tissue resident memory populations. Presented at *IMMUNOLOGY 2017TM*, the 104th Annual Meeting of the American Association of Immunologists, Washington, DC, May 12-16, 2017.

ORAL PRESENTATIONS

1. **Botta, D.** and Jacobson, M.K. Poly(ADP-ribose) metabolism: A novel target for drug development. Presented at the University of Rochester Medical Center, Rochester, NY, August 2009 (*Invited Speaker*).
2. **Botta, D.** and Lund, F.E. Role of TRPM2 in lung inflammation and COPD: An update. Presented at Hoffmann-La Roche, Inc., Nutley, NJ, July 2010 (*Invited Speaker*).
3. **Botta, D.** and Jacobson, M.K. Identification of a regulatory segment of poly(ADP-ribose) glycohydrolase. Presented at the 18th International Symposium on Poly(ADP-ribosylation), Zurich, Switzerland, August 20, 2010.
4. **Botta, D.** and Lund, F.E. Deficiency of the non-selective cation channel TRPM2 protects against pulmonary inflammation in a murine model of COPD. Presented at the Center

Research Meeting at the University of Rochester Medical Center, Rochester, NY, March 2011.

5. **Botta, D.**, Ballesteros-Tato, A., Martin, K., Hartson, L., Stevenson, C.S., Cockayne, D.A., Randall, T.D., Lund, F.E. Deficiency of the non-selective cation channel TRPM2 provides protection against pulmonary inflammation in a murine model of COPD. Presented at the Roche Post-doctoral Fellowship (RPF) symposium, Hoffmann-La Roche, Inc., Nutley, NJ, September 20, 2011.
6. **Botta, D.**, Ballesteros-Tato, A., Martin, K., Hartson, L., Stevenson, C.S., Cockayne, D.A., Randall, T.D., Lund, F.E. Loss of ADPR-gated Ca(2+) influx attenuates cigarette smoke-induced lung inflammation in mice. Presented at the FASEB Summer Research Conference on NAD⁺ Metabolism and Signaling, Lucca, Italy, September 8, 2011.
7. **Botta, D.** and Lund, F.E. Transient Receptor Potential Melastatin 2 is a critical mediator of lipopolysaccharide-induced pulmonary inflammation and injury. Presented at the 10th Annual Post-Doctoral Research Day (PDRD) symposium, University of Alabama at Birmingham, Birmingham, AL, February 18, 2013.
8. **Botta, D.**, Bauer, C.M.T., Peng R., Dadali, T., Tyagi, G., Phillips, J.E., Harris, P., Renteria, L., Burns, L., Lund, F.E., Stevenson, C.S. Deficiency in the redox-sensitive cation channel TRPM2 exacerbates bleomycin-induced fibrotic responses in a murine model of idiopathic pulmonary fibrosis. Presented at the 11th Annual Post-Doctoral Research Day (PDRD) symposium, University of Alabama at Birmingham, Birmingham, AL, February 17, 2014.
9. **Botta, D.**, Mudunuru, U., Southworth, K.J., Simpler, T.S., Bradley, J.E., Randall, T.D., Stevenson, C.S., Lund, F.E. Deficiency in Transient Receptor Potential Melastatin 2 impairs alveolar macrophage activation and protects mice against endotoxin-induced lung inflammation and injury. Presented at *IMMUNOLOGY 2014*TM, the 101st Annual Meeting of the American Association of Immunologists, Pittsburgh, PA, May 3, 2014.
10. **Botta, D.**, Jacobson, M.K., Lund, F.E. Poly(ADP-ribose) metabolism and TRPM2-mediated Ca²⁺ influx: novel targets for drug development. Presented at Birmingham Southern College, Birmingham, AL, June 5, 2014 (*Invited Speaker*).
11. **Botta, D.**, Dadali, T., Mousseau, B., Manouvakhova, A., Sosa, M.I., McKellip, S.N., Woods, L., Tower, N.A., Ross, L.J., Rasmussen, L., White, E.L., Bostwick, J.R., Lund, F.E. Modulating the cellular redox state by targeting the NAD glycohydrolase CD38: A novel therapeutic approach for chemosensitizing B-cell malignancies. Presented at the 12th Annual Post-Doctoral Research Day (PDRD) symposium, University of Alabama at Birmingham, Birmingham, AL, February 16, 2015.
12. **Botta, D.** and Lund, F.E. Modulating inflammation and oxidative stress by regulating NAD metabolism: the role for NAD glycohydrolases in Alzheimer's Disease, glioma and brain injury. Presented at the Center for Neuromolecular Research seminar series, Southern Research, Birmingham, AL, August 19, 2016 (*Invited Speaker*).

MISCELLANEOUS

Certifications

- 2011 *Ethics in Scientific Research*, University of Rochester, Rochester, NY.
2012 *Diversity Awareness*, University of Alabama at Birmingham, Birmingham, AL.
2016 *CIRTL (Center for the Integration of Research, Teaching, and Learning) Associate Certification in College Teaching*, by completing the following courses:
GRD750 CIRTL Teaching and Learning Seminar I (1 credit) – Summer 2015.
GRD752 Developing a Teaching Portfolio (2 credits) – Fall 2015.
GRD705 Teaching at the College Level and Beyond (3 credits) – Spring 2016.

Scholarships

- 2000-04 Benedictine College Scholarship (\$4000-\$4500/year), Atchison, KS.
2001-02 Benedictine College Chemistry Scholarship (\$100/year), Atchison, KS.
2001-04 Benedictine College Grant (\$1000/year), Atchison, KS.
2002 Benedictine College Research Grant (\$350), Atchison, KS.
2002-03 Benedictine College Student Government Grant (\$4000/year), Atchison, KS.
2003 Benedictine College Discovery Grant (\$500), Atchison, KS.

Other achievements

- 2002-03 Student Government Association Executive Vice President, Benedictine College, Atchison, KS.
2002 Selected for the 15th Annual Kansas Student Leadership Forum in Topeka, KS.
2003-04 Chemistry Club President, Benedictine College, Atchison, KS.
2003-04 Students in Free Enterprise (SIFE) Executive Board Member, Benedictine College, Atchison, KS.
2016 Established the UAB-St. Rose Academy Middle School Science Enrichment Program.