Paul R Thompson

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PROFESSIONAL PREPARATION

Institution	*Major Area*	*Degree & Year*
McMaster University	Biochemistry	Honors B.S.c. – 1994
McMaster University	Biochemistry	Ph.D. – 2000
Johns Hopkins University SOM	Pharmacology	PDF – 2000-2003

PROFESSIONAL EXPERIENCE

Dates	*Title*	*Institution*	*Department*
2014-present	Professor and Director of Chemical Biology with tenure	University of Massachusetts Medical School	Biochemistry and Molecular Pharmacology
2010-2014	Associate Professor with tenure	The Scripps Research Institute, Scripps Florida	Chemistry
2009-2010	Associate Professor with Tenure	University of South Carolina	Chemistry
2004-2008	Assistant Professor	University of South Carolina	Chemistry
2003-2004	Visiting Assistant Professor	University of South Carolina	Chemistry
2000-2003	Postdoctoral Fellow	Johns University SOM	Pharmacology
1994-2000	Teaching and Research Assistant	McMaster University	Biochemistry
1993-1994	Teaching Assistant	McMaster University	Chemistry

HONORS, AWARDS AND OTHER SIGNIFICANT ACTIVITIES

- Fellow Royal Society of Chemistry (FRSC), 2019-present
- Consultant to Disarm Therapeutics, 2018 to present
- Chair, Bioorganic Chemistry Gordon Research Conference 2017
- Permanent Member, Synthetic Biological Chemistry B (SBCB) Study Section, NIH October 2016-present.
- Consultant to Celgene, 2018 to present.
- 2018 Dean's Award for Research Mentoring and Commitment to Student Professional Advancement from UMass Medical School
- Associate Chair, Bioorganic Chemistry Gordon Research Conference 2017
- Consultant to Bristol Myers Squibb, 2016 to 2017.
- Co-organizer of the PTM Theme at the 2015 ASBMB Meeting in Boston, MA.
- Chair of SAB for PADlock Therapeutics, 2015 to 2016. Company purchased by Bristol Myers Squibb.
- Consultant to PADlock Therapeutics, 2014 to 2016. Company purchased by Bristol Myers Squibb.
- Co-Founder of PADlock Therapeutics, 2014. Company purchased by Bristol Myers Squibb.
- Co-organizer (with Phil Cole) of a session focusing on " Mechanistic impacts of post-translation modifications " at the 2015 ASBMB Annual Meeting, March 28 – April 1, 2015 in Boston.
- Chair, Enzymes, Coenzymes & Metabolic Pathways Gordon Research Conference 2014
- The Sigma-Aldrich Seminar at the Department of Medicinal Chemistry, College of Pharmacy, University of Utah 2013.
- Associate Chair, Enzymes, Coenzymes & Metabolic Pathways Gordon Research Conference 2013

- Symposium Chair, Chemical Biology: Chemical Answers to Biological Questions, SERMACS 2012
- Session Leader, FASEB Conference entitled: "Biological Methylation: From DNA to Histones"
- 2010 South Carolina Governor's Young Scientist Award for Excellence in Scientific Research
- Mail in reviewer, NIH Challenge Grants, June 2009
- Camille Dreyfus Teacher Scholar Award 2009
- Executive Committee, Department of Chemistry and Biochemistry, University of South Carolina, 08/2008-04/2010.
- Chair of American Chemical Society Division of Biological Chemistry Nominating Committee, 20011-2012
- Member of American Chemical Society Division of Biological Chemistry Nominating Committee, 2008-2011
- Ad Hoc Member, Synthetic Biological Chemistry B (SBCB) Study Section, October 2008
- Member American Chemical Society, 2003-present,
- Departmental Nominee for Mungo Graduate Teaching award, 2008
- Departmental Nominee for Mungo Graduate Teaching award, 2007
- New Investigator of the American Heart Association, 2005
- USC NanoCenter Seed Award, 2005 (with J.J. Lavigne)
- USC Research and Productive Scholarship Award, 2005
- Canadian Institutes for Health Research Post Doctoral Fellowship, 2000-2003
- McMaster University Graduate Scholarship, 1998-2000
- Thomas Neilson Scholarship, McMaster University, 1996
- NSERC Graduate Student Fellowship (PGS B), 1996-1998
- Ontario Graduate Student Fellowship - Declined in Favor of NSERC (PGS B), 1996
- NSERC Graduate Student Fellowship (PGS A), 1994-1996
- Ontario Graduate Student Fellowship - Declined in Favor of NSERC (PGS A), 1994
- Graduated Summa Cum Laude, McMaster University, 1994
- Centennial Award, McMaster University, 1994
- J.L.W. Gill Prize, McMaster University, 1993
- University Scholarship, McMaster University
- Chancellor's Scholarship, McMaster University, 1990
- Dean's Honour List, McMaster University, 1990-1994

STUDENTS AND POSTDOCTORAL SCHOLARS

Graduate Students Receiving Ph.D. Degrees

1. Monica Bhatia, PhD Dec. 2007 (Senior Scientist, Solazyme)
2. Tanesha C. Osborne, PhD Aug. 2008 (Assistant Professor, Georgia Southern)
3. Dana Broughton, PhD May 2008 (Co-mentored with John Lavigne; Associate IP Attorney, Wood IP LLC)
4. Bryan Knuckley, PhD December 2009 (Associate Professor & Chair, University of North Florida)
5. Justin Jones, PhD December 2010 (Senior Scientist, Siemens)
6. Jessica Slack, PhD December 2010 (Associate Product Manager, Thermo Fisher Scientific)
7. Obiamaka Obianyo, PhD December 2010 (Postdoc, Moffat Cancer Center, Tampa, FL)
8. Kevin L. Bicker, PhD December 2010 (Assistant Professor, Middle Tennessee State University)
9. Jing Sun, PhD December 2012 (Instructor Georgia Southern)
10. Heather Rust, PhD August 2013 (Postdoc, University of Pittsburgh School of Medicine)
11. Chunxue Wang, transferred to Lebioda lab at USC
12. Christina J. Dreyton, PhD June 2016 (Postdoc, Scripps Florida)
13. Heather S. Loring, May 2018 - current
14. Janneke Doedee, Feb. 2019 - current

Graduate Students Receiving M.S. Degrees

1. Yuejiao Zou, M.S. Aug 2006 (Milliken)
2. Joy R. Burleyson, M.S. Aug 2009 (UNC)

Postdoctoral Scholars

1. Mary Glascock, 11/01/03-04/30/2004
2. Yuan Luo, 01/01/05-02/15/07
3. Corey P. Causey, 08/13/2007-06/30/2010 (Associate Professor, University of North Florida)
4. Larry E. Jones, Jr., 01/01/2009-07/31/2010 (Pharmacist, Triad Isotopes)
5. Bryan Knuckley, 01/01/2010-07/31/2010 (Associate Professor & Chair, University of North Florida)
6. Venkataraman Subramanian, 08/15/2010 – 08/15/2015 (Senior Scientist, Sigma Aldrich/Millipore)
7. Daniel Lewallen, 10/25/2010 – 02/15/2014 (Patent Agent, Barnes and Thornburg, Indianapolis, IN).
8. Justin E. Jones, 11/01/2010 – 10/31/2011 (Senior Scientist, Siemens)
9. Jessica L. Slack, 01/01/2011- 06/30/2011 (Associate Product Manager, Thermo Fisher Scientific)
10. Obiamaka Obianyo, 01/01/2011 – 10/31/2011 (Postdoc, Moffat Cancer Center, Tampa, FL)
11. Kevin L. Bicker, 01/15/2011 – 06/15/2013 (Assistant Professor, Middle Tennessee State University)
12. Daniel Slade, 08/01/2011 – 08/08/2014 (Assistant Professor, Virginia Tech)
13. Jakob Fuhrmann, 01/15/2012 – 01/01/2017 (Sr. Scientist, Genentech)
14. Min Wang, 01/15/2012 – 11/06/2016 (Sr. Scientist, Prelude Therapeutics)
15. Kate Clancy, 08/27/2012- 03/10/2017 (Investigator, GSK)
16. Richard Brust, 08/16/2013 – 07/31/2014 (PDF with Douglas Kojetin, Scripps Florida)
17. Aaron Muth, 08/15/2014 – 08/15/2016 (Assistant Professor, St John's University School of Pharmacy)
18. Sangram Parelkar, 09/01/2014 – present
19. Jeremy Yap, 10/01/2014 – 03/31/2016 (Scientist II, C4 Therapeutics, Inc)
20. Shivam Mukherjee, 11/01/2014 – 01/15/2015 (whereabouts unknown)
21. Inna Shcherbakova, 02/01/2015 – 07/15/2015 (Principal Scientist at Flagship Pioneering VL58)
22. Son Nguyen, 03/15/2015 – 07/31/2018 (Assistant Professor, Hollins University)
23. Mitesh Nagar, 01/15/2016 – present
24. Li Zheng, 05/15/2016 – 09/21/2018 (Research Scientist, QPS)
25. Venkatesh Nemmara, 07/15/2016 – 08/31/2019 (Tenure track Assistant Professor, Rowan University)
26. Ronak Tivawala, 08/15/2016 – present
27. Santanu Mondal, 10/24/2016 – present
28. Padmavathy Nandha Premnath, 01/15/2017 –12/21/2018 (Scientist, Lonza)
29. Ari Salinger, 02/21/2017 – present
30. Sudeshna Sen, 04/30/2017 - present
31. Archie Reyes, 10/01/2018 - present

Undergraduate Students

1. Sean Courtney, 1 academic year, 1 summer, 10/01/03-08/01/04 (Grad School, Georgia State University, Biology)
2. Joseph Gnanashekar, 1 semester, 01/15/04-05/15/04
3. Erin Stuckey, 01/15/04-05/15/04
4. Kristen Catchings, 1 summer, 1 academic year, 06/01/04-05/31/05 (Pharmacy School, South Carolina School of Pharmacy, Columbia)
5. David Smith, 2 summer, 3 semesters, 01/15/05-09/15/06
6. Ahmad Ismail, 1 academic year, 08/15/05-05/15/06
7. Zachary Coffman, 1 academic year, 08/15/06-05/15/07
8. Wendy Lin, 1 semester, 08/15/07-12/15/07
9. Kimberly Wright, 1 semester, 08/15/07-12/15/07
10. Heather Flick, 2 summers, 1 academic year, 06/01/07-12/15/08 (Shire Pharmaceuticals)
11. Hamer Manning, 2 summers, 1 academic year, 06/01/07-08/15/08
12. Christina Dreyton, 3 summers, 2.5 academic year, 06/01/07-05/31/2010 (Grad School, Scripps Florida)
13. Heather Rust, 1 summer, 06/20/08-08/15/08 (Grad School, USC)

14. Mindi Thommes, 1 semester, 01/15/09-05/31/09
15. Lori Meyer, 1 semester, 09/15/09 - 05/31/2010.
16. Ngozika Obianyo, 1 summer, 06/01/2011 - 08/12/2011
17. Sergine Brutus, 1 summer, 06/01/2012 - 08/12/2012
18. Hafeez S. Haniff, 1 summer, 06/01/2013 - 08/12/2013 (Grad School, Scripps Florida)
19. Cody Hecht, 1 summer, 06/01/2016 – 08/12/2016 (Undergraduate, Wesleyan University)
20. Prashant Singh, 2 summers, 2016 and 2017 (Undergraduate at U. Wisconsin)
21. Lacey Miller, 1 summer, 06/01/2017 – 08/12/2017 (Undergraduate, Wesleyan University)
22. Micaela Tobin, 2 summers, 2018 and 2019 (Undergraduate at Hamilton College)
23. Brielle Hentz, 1 summer, 06/01/2018 – 08/06/2018 (Undergraduate at Howard University)
24. Angel Chavez, 1 summer, 06/01/2019 – 08/09/2019 (Undergraduate at College of the Holy Cross)

Other Research Supervision

1. Patricia Kearney (technician), 05/15/04-06/15/05 (MD-PhD Program, Medical University of South Carolina)
2. Obiamaka Obianyo (PREP Scholar), 08/15/06-12/31/07 (Grad School, USC, Chemistry)
3. Rune H Evjenth (Visiting Postdoc from Bergen University), 01/01/11-06/30/11
4. Havard Foyn (Visiting Grad student from Bergen University), 11/15/11-06/30/12
5. Hema Srinath (Technician), 01/15/2015 – 02/28/2016 (Abbvie, Worcester, MA)

PUBLICATIONS (153 total)

1. Ali, R., Guan, Y., Leveille, A.N., Vaughn, E., Parelkar, S.S., **Thompson, P.R.** and Mattson, A.E. (2019) Synthesis and Anticancer Activity of Structure Simplified Naturally Inspired Dimeric Chromenone Derivatives *Eur. J. Org. Chem.* **in press DOI: 10.1002/ejoc.201901026**

2. Sorvillo, N., Mizurini, D., Coxon, C., Martinod, K., Tilvawala, R., Cherpokova, D., Salinger, A. J., Seward, R. J., Staudinger, C., Weerapana, E., Shapiro, N. I., Costello, C. E., **Thompson, P.**, and Wagner, D. D. (2019) Plasma Peptidylarginine Deiminase IV Promotes VWF-Platelet String Formation and Accelerates Thrombosis after Vessel Injury, *Circ Res.* **in press. Highlighted in Circulation Research.**

3. Mondal, S., Gong, X., Zhang, X., Salinger, A. J., Zheng, L., Sen, S., Weerapana, E., Zhang, X., and **Thompson, P. R.** (2019) Halogen Bonding Increases the Potency and Isozyme Selectivity of Protein Arginine Deiminase 1 Inhibitors, *Angew Chem Int Ed Engl.* **in press.**

4. Zheng, L., Nagar, M., Maurais, A. J., Slade, D. J., Parelkar, S. S., Coonrod, S. A., Weerapana, E., and **Thompson, P. R.** (2019) Calcium Regulates the Nuclear Localization of Protein Arginine Deiminase 2, *Biochemistry 58*, 3042-3056.

5. Mishra, N., Schwerdtner, L., Sams, K., Mondal, S., Ahmad, F., Schmidt, R. E., Coonrod, S. A., **Thompson, P. R.**, Lerch, M. M., and Bossaller, L. (2019) Cutting Edge: Protein Arginine Deiminase 2 and 4 Regulate NLRP3 Inflammasome-Dependent IL-1beta Maturation and ASC Speck Formation in Macrophages, J Immunol 203, 795-800.

6. Sen, S., Mondal, S., Zheng, L., Salinger, A. J., Fast, W., Weerapana, E., and **Thompson, P. R.** (2019) Development of a Suicide Inhibition-Based Protein Labeling Strategy for Nicotinamide N-Methyltransferase, *ACS Chem Biol. 14*, 613-618. PMID: 30933557

7. Cau, L., Takahara, H., **Thompson, P. R.**, Serre, G., Mechin, M. C., and Simon, M. (2019) Peptidylarginine Deiminase Inhibitor Cl-amidine Attenuates Cornification and Interferes with the Regulation of Autophagy in Reconstructed Human Epidermis, *J Invest Dermatol. in press.*

8. Nagar, M., Tilvawala, R., and **Thompson, P. R.** (2019) Thioredoxin Modulates Protein Arginine Deiminase 4 (PAD4)-Catalyzed Citrullination, *Front Immunol 10*, 244.

9. Mondal, S., and **Thompson, P.R.** (2019) Protein Arginine Deiminases (PADs): Biochemistry and Chemical Biology of Protein Citrullination. *Account Chem Res* in press.
10. Tilvawala, R., and **Thompson, P. R.** (2019) Peptidyl arginine deiminases: detection and functional analysis of protein citrullination, *Curr Opin Struct Biol*. in press
11. Liu, Y., Lightfoot, Y. L., Seto, N., Carmona-Rivera, C., Moore, E., Goel, R., O'Neil, L., Mistry, P., Hoffmann, V., Mondal, S., Premnath, P. N., Gribbons, K., Dell'Orso, S., Jiang, K., **Thompson, P.R.**, Sun, H. W., Coonrod, S. A., and Kaplan, M. J. (2018) Peptidylarginine deiminases 2 and 4 modulate innate and adaptive immune responses in TLR-7-dependent lupus, *JCI Insight* 3.
12. Yuzhalin, A. E., Gordon-Weeks, A. N., Tognoli, M. L., Jones, K., Markelc, B., Konietzny, R., Fischer, R., Muth, A., O'Neill, E., **Thompson, P. R.**, Venables, P. J., Kessler, B. M., Lim, S. Y., and Muschel, R. J. (2018) Colorectal cancer liver metastatic growth depends on PAD4-driven citrullination of the extracellular matrix, *Nat Commun 9*, 4783.
13. Nemmara, V. V., and **Thompson, P. R.** (2019) Development of Activity-Based Proteomic Probes for Protein Citrullination, *Curr Top Microbiol Immunol. 420*, 233-251
14. Loring, H. S., and **Thompson, P. R.** (2018) Kinetic Mechanism of Nicotinamide N-Methyltransferase, *Biochemistry* 57,5524-5532.
15. Nemmara, V. V., Tilvawala, R., Salinger, A. J., Miller, L., Nguyen, S. H., Weerapana, E., and **Thompson, P. R.** (2018) Citrullination Inactivates Nicotinamide- N-methyltransferase, *ACS Chem Biol* 13, 2663-2672. **PMC6150842**
16. DeVore, S. B., Young, C. H., Li, G., Sundararajan, A., Ramaraj, T., Mudge, J., Schilkey, F., Muth, A., **Thompson, P. R.**, and Cherrington, B. D. (2018) Histone citrullination represses miRNA expression resulting in increased oncogene mRNAs in somatolactotrope cells, Mol Cell Biol. Doi:10.1128/MCB.0084-18. **PMC6146832**
17. Muller, S., Ackloo, S., Arrowsmith, C. H., Bauser, M., Baryza, J. L., Blagg, J., Bottcher, J., Bountra, C., Brown, P. J., Bunnage, M. E., Carter, A. J., Damerell, D., Dotsch, V., Drewry, D. H., Edwards, A. M., Edwards, J., Elkins, J. M., Fischer, C., Frye, S. V., Gollner, A., Grimshaw, C. E., A, I. J., Hanke, T., Hartung, I. V., Hitchcock, S., Howe, T., Hughes, T. V., Laufer, S., Li, V. M., Liras, S., Marsden, B. D., Matsui, H., Mathias, J., O'Hagan, R. C., Owen, D. R., Pande, V., Rauh, D., Rosenberg, S. H., Roth, B. L., Schneider, N. S., Scholten, C., Singh Saikatendu, K., Simeonov, A., Takizawa, M., Tse, C., **Thompson, P. R.**, Treiber, D. K., Viana, A. Y., Wells, C. I., Willson, T. M., Zuercher, W. J., Knapp, S., and Mueller-Fahrnow, A. (2018) Donated chemical probes for open science, *eLife 7* **PMC5910019**.
18. Ledet, M. M., Anderson, R., Harman, R., Muth, A., **Thompson, P. R.**, Coonrod, S. A., and Van de Walle, G. R. (2018) BB-Cl-Amidine as a novel therapeutic for canine and feline mammary cancer via activation of the endoplasmic reticulum stress pathway, *BMC Cancer 18*, 412. **PMC5898062**
19. Carmona-Rivera, C., Bicker, K. L., **Thompson, P. R.**, Buckner, J. H., Robinson, W. H., Fox, D. A., and Kaplan, M. J. (2018) Response to comment on "Synovial fibroblast-neutrophil interactions promote pathogenic adaptive immunity in rheumatoid arthritis", *Sci Immunol 3*. DOI: 10.1126/sciimmunol.aar3701.
20. Young, C. H., Rothfuss, H. M., Gard, P. F., Muth, A., **Thompson, P. R**., Ashley, R. L., and Cherrington, B. D. (2017) Citrullination regulates the expression of insulin-like growth factor-binding protein 1 (IGFBP1) in ovine uterine luminal epithelial cells, *Reproduction 153*, 1-10. **PMC5868962**
21. Mondal, S., Parelkar, S., Nagar, M., **Thompson, P.R**. (2018) Photochemical Control of Protein Arginine Deiminase (PAD) Activity *ACS Chem Biol 13, 1057-1065* **PMC5910237 Cover of April issue of ACS Chem Biol**
22. Wong, A., Bryzek, D., Dobosz, E., Scavenius, C., Svoboda, P., Rapala-Kozik, M., Lesner, A., Frydrych, I., Enghild, J., Mydel, P., Pohl, J., **Thompson, P.R.**, Potempa, J., Koziel, J. (2018) A Novel Biological Role for Peptidyl-Arginine Deiminases: Citrullination of Cathelicidin LL-37

Controls the Immunostimulatory Potential of Cell-Free DNA. *J. Immunology 200,* 2327-2340. **PMC5860981.**

23. Tilvawala, R., Nguyen, S.H., Maurais, A.J., Nemmara, V.V., Nagar, M., Salinger, A.J., Nagpal, S., Weerapana, E., and **Thompson, P.R.** (2018) The Rheumatoid Arthritis Associated Citrullinome. *Cell Chem Bio* 25, 691-704 **PMC6014894**
24. Nemmara, V., Subramanian, V., Muth, A., Mondal, S., Salinger, A.J., Maurais, A.J., Tilvawala, R., Weerapana, E., **Thompson, P.R.** (2018) The Development of Benzimidazole-Based Clickable Probes for the Efficient Labeling of Cellular Protein Arginine Deiminases (PADs) *ACS Chem Biol 13,* 712-722. **PMC5862558 Highlighted in ChemBioChem.**
25. Qin, H., Liu, X., Li, F., Miao, L., Li, T., Xu, B., An, X., Muth, A., **Thompson, P.R.**, Coonrod, S.A., Zhang, X. (2017) PAD1 promotes epithelial-mesenchymal transition and metastasis in triple-negative breast cancer cells by regulating MEK1-ERK1/2-MMP2 signaling. *Cancer Lett 409,* 30-41. **PMC5718050**
26. Sun, B., Dwivedi, N., Bechtel, T.J, Paulsen, J.L. Muth, A., Bawadekar, M., Li, G., **Thompson, P.R.**, Shelef, M.A., Schiffer, C.A., Weerapana, E., Ho, I-C. (2017) Citrullination of NF-κB p65 promotes its nuclear localization and TLR-induced expression of IL-1βand TNFα. *Sci Immun 2,* eaal3062. **PMC5718838**
27. Horibata S, Rogers KE, Sadegh D, Anguish LJ, McElwee JL, Shah P, **Thompson PR**, Coonrod SA. (2017) Role of peptidylarginine deiminase 2 (PAD2) in mammary carcinoma cell migration. *BMC Cancer* 17, 378. **PMC5446677**
28. Kenny EF, Herzig A, Krüger R, Muth A, Mondal S, **Thompson PR**, Brinkmann V, Von Bernuth H, Zychlinsky A. (2017) Diverse stimuli engage different neutrophil extracellular trap pathways. doi: 10.7554/eLife.24437. PMID: 28574339 **PMC5496738**
29. Carmona-Rivera, C., Carlucci, P. M., Moore, E., Lingampalli, N., Uchtenhagen, H., James, E., Liu, Y., Bicker, K. L., Wahamaa, H., Hoffmann, V., Catrina, A. I., **Thompson, P. R.**, Buckner, J. H., Robinson, W. H., Fox, D. A., and Kaplan, M. J. (2017) Synovial fibroblast-neutrophil interactions promote pathogenic adaptive immunity in rheumatoid arthritis, *Sci Immun 2*, eaag3358. **Highlighted by Nature Reviews Immunology. PMC5479641**
30. Kosgodage, U.S., Trindade, R.P., **Thompson, P.R.**, Inal, J.M., Lange, S. (2017) Chloramidine/Bisindolylmaleimide-I-Mediated Inhibition of Exosome and Microvesicle Release and Enhanced Efficacy of Cancer Chemotherapy. *Int J Mol Sci.* 2017 May 9;18(5). pii: E1007. doi: 10.3390/ijms18051007. **PMC5454920**
31. Clancy, K.W., Russell, A.M., Subramanian, V., Nguyen, H., Qian, Y., Campbell, R.M., and **Thompson, P.R.** (2017) Citrullination/methylation crosstalk on histone H3 regulates ER-target gene transcription. *ACS Chem Biol 12,* 1691-1702.. *PMID: 28485572*. **PMC5536191**
32. Muth, A., Subramanian, V., Beaumont, E., Nagar, M., Kerry, P., McEwan, P., Srinath, H., Clancy, K. W., Parelkar, S. S., and **Thompson, P. R.** (2017) Development of a selective inhibitor of Protein Arginine Deiminase 2, *J Med Chem. 60,* 3198-3211. **PMC5477668**
33. Foyn, H., **Thompson, P.R.**, and Arnesen, T. (2017) DTNB-Based Quantification of In Vitro Enzymatic N-Terminal Acetyltransferase Activity, *Methods Mol Biol 1574,* 9-15. **PMID:28315240**
34. Cau, L., Pendaries, V., Lhuillier, E., Thompson, P.R., Serre, G., Takahara, H., Méchin, M.C., Simon, M. (2017) Lowering relative humidity level increases epidermal protein deimination and drives human filaggrin breakdown. *J. Dermatol Sci. J Dermatol Sci. 2017 doi: 10.1016/j.jdermsci.2017.02.280.* **PMC5476296**
35. Zhang, X., Liu, X., Zhang, M., Li, T., Muth, A., **Thompson P.R.**, Coonrod, S.A., Zhang, X. (2016) Peptidylarginine deiminase 1-catalyzed histone citrullination is essential for early embryo development. *Sci Rep 6,* 38727. **PMC5144008**

36. Hosseinzadeh, A., **Thompson, P.R.**, Segal, B.H., Urban, C.F. (2016) Nicotine induces neutrophil extracellular traps. *J Leukoc Biol. 100,* 1105-1112. **PMC5069087**

37. Papadaki, G., Kambas, K., Choulaki, C., Vlachou, K., Drakos, E., Bertsias, G., Ritis, K., Boumpas, D.T., **Thompson, P.R.**, Verginis, P., and Sidiropoulos, P. (2016) Neutrophil extracellular traps exacerbate Th1-mediated autoimmune responses in rheumatoid arthritis by promoting DC maturation. *Eur J Immunol. 46*, 2542-2554. **PMC5476297**

38. Chang, H.H. Liu, G-Y., Dwivedi, N., Sun, B., Okamoto, Y., Kinslow, J.D., Deane, K.D., Demoruelle, M.K., Norris, J.M. **Thompson, P.R.**, Sparks, J.A., Rao, D.A., Karlson, E.W., Hung, H.-C., Holers, V.M., Ho I.-C. (2016) A molecular signature of preclinical rheumatoid arthritis triggered by dysregulated PTPN22. *JCI Insight 1*, e90045. **PMC5070957**

39. Khan, S.A., Edwards, B.S., Muth, A., **Thompson, P.R.**, Cherrington, B.D., Navratil, A.M. (2016) GnRH stimulates peptidylarginine deiminase catalyzed histone citrullination in gonadotrope cells. *Mol Endocrinol. 10,* 1081-1091. **PMC5045497**

40. Fuhrmann, J., Subramanian, V., Kojetin, D.J., **Thompson, P.R**. (2016) Activity-Based Profiling Reveals a Regulatory Link between Oxidative Stress and Protein Arginine Phosphorylation. *Cell Chem Biol. 23*, 967-977. **PMC5157131**

41. Bawadekar, M., Gendron-Fitzpatrick, A., Rebernick, R., Shim, D., Warner, T.F., Nicholas, A.P., Lundblad, L.K., **Thompson, P.R.**, Shelef, M.A. (2016). Tumor necrosis factor alpha, citrullination, and peptidylarginine deiminase 4 in lung and joint inflammation. *Arthritis Res Ther. 18*, 173. **PMC4957385**

42. Kawalkowska, J.; Quirke, A. M.; Ghari, F.; Davis, S.; Subramanian, V.; **Thompson, P. R.**; Williams, R. O.; Fischer, R.; La Thangue, N. B.; Venables, P. J. (2016) Abrogation of collagen-induced arthritis by a peptidyl arginine deiminase inhibitor is associated with modulation of T cell-mediated immune responses. *Sci Rep 6,* 26430. **PMC4876390**

43. Ghari, F.; Quirke, A. M.; Munro, S.; Kawalkowska, J.; Picaud, S.; McGouran, J.; Subramanian, V.; Muth, A.; Williams, R. O.; Kessler, B.; **Thompson, P. R.**; Fillipakopoulos, P.; Knapp, S.; Venables, P. J.; La Thangue, N. B. (2016) Citrullination-acetylation interplay guides E2F-1 activity during the inflammatory response. *Sci. Adv. 2,* e1501257. **PMC4788482**

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(Patents)

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2. **Thompson, P.R.** and Knuckley, B. Methods to identify protein arginine deiminase 4 inhibitors. US Patent 8007996. Issued on Aug 30, 2011
3. **Thompson, P.R.**, Osborne, T.C., Obianyo, O., Causey, C.P. Chloroacetamidine Based Inhibitors and Activity Based Probes for the Protein Arginine Methytransferases. US Patent 8569005 Issued on October 29, 2013.
4. **Thompson, P.R.**, Bicker, K.L., Subramanian, V. The Design, Synthesis, and Method Development of Novel Phenyl Glyoxal Probes: Tools for the Investigation of Cellular Citrullination. Issued May 28, 2015 .
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(Non-Peer Reviewed)

1. "Mechanistic Insights into the Regulation of Protein Arginine Deiminases 2 and 4," 23rd Enzyme Mechanisms Conference, Coronado, CA, January 5th, 2013
2. **Thompson**, **P.R.** (2009) "Chemical approaches to studying PAD4 function," Abstracts of Papers, 237st ACS National Meeting, Salt Lake City, UT, USA, March 22-26, 2009.
3. Obianyo, O., Osborne, T.C., Causey, CP, Young Ho Lee, Michael Stallcup, and **Thompson, P.R.** "Mechanism and Inhibition of Protein Arginine Methyltransferase 1," 21st Enzyme Mechanisms Conference, Tucson, AZ, January 3-7, 2009.
4. Knuckley, B. and **Thompson, P.R.** (2008) "Mechanism and Inhibition of Protein Arginine Deiminases," 21st Enzyme Mechanisms Conference, Tucson, AZ, January 3-7, 2009.
5. **Thompson**, **P.R.,** Osborne, T.C. and Obianyo, O. Kinetic characterization of Protein Arginine Methyltransferase 1. Gordon Research Conference: Enzymes, coenzymes, and Metabolic Pathways, University of New England, Biddeford, ME, July 8-13, 2007.
6. Bhatia, M, and **Thompson, P.R.** Kinetic characterization and substrate specificity studies of Protein Arginine Deiminase (PAD4). *FASEB J.* **21**, A642, FASEB Meeting, Washington, DC, USA, April 28 - May 2, 2007
7. **Thompson**, **P.R.,** Bhatia, M., Luo, Y., Knuckley, B., Arita, K., Sato, M., Lee, Y.H., and Stallcup, M.R. Haloacetamidine based inactivators and activity based protein profiling reagents for Protein Arginine Deiminase 4. Gordon Research Conference: Enzymes, coenzymes, and Metabolic Pathways, University of New England, Biddeford, ME, July 16-21, 2006.
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5. Zou, Y., Lavigne, J.J., Broughton, D.L., and **Thompson**, **P.R.** Synthesis and development of Peptide-based Borono-Lectins (PBLs) for selective saccharide sensing. Abstracts of Papers, 231st ACS National Meeting, Atlanta, GA, USA, March 26-30, 2006.
6. **Thompson**, **P.R.**. Inhibitors/Inactivators of Protein Arginine Deiminase 4. Abstracts of Papers, 231st ACS National Meeting, Atlanta, GA, USA, March 26-30, 2006
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8. **Thompson**, **P.R.**, Bhatia, M., Luo, Y., Jones, N., Glascock, M., Kearney, P. Protein Arginine Deiminase 4: Purification and initial kinetic and mechanistic characterization. Gordon Research Conference: Enzymes, coenzymes, and Metabolic Pathways, Kimball Union Academy, Meriden, NH, July 17-22, 2005.
9. **Thompson**, **P.R.**, Bhatia, M., Jones, N., Glascock, M., Kearney, P., Craft, J., and Ferguson, P.L. Protein Arginine Deiminase 4: Purification and initial kinetic and mechanistic characterization. Gordon Research Conference: Enzymes, coenzymes, and Metabolic Pathways, Kimball Union Academy, Meriden, NH, July 18-23, 2004.
10. **Thompson**, **P.R.**, Wang, D., Wang, L., Fulco, M., Pediconi, N., Ge, Q., Levrero, M., Sartorelli, V., Cotter, R., and Cole, P.A.. Regulation of the p300 HAT Domain via a Novel Activation Loop. Gordon Research Conference: Enzymes, coenzymes, and Metabolic Pathways, Kimball Union Academy, Meriden, NH, July 13-18, 2003.
11. **Thompson**, **P.R.** and Cole, P.A. Transcriptional coactivator protein p300: Kinetic characterization of its histone acetyltransferase activity. Gordon Research Conference: Enzymes, coenzymes, and Metabolic Pathways, Kimball Union Academy, Meriden, NH, July 21-26, 2001.
12. DeLaBarre, B., **Thompson**, **P.R.**, Wright, G.D., and Berghuis, A.M. The Structure of Homoserine Dehydrogenase Reveals a Novel Oxidoreductase Fold Thirteenth Symposium of the Protein Society, Boston, MA, 1999.
13. **Thompson**, **P.R.** and Wright, G.D. Mechanism of Phosphoryl Transfer by Aminoglycoside (3')-Phosphotransferase ASBMB Symposia: Phosphoryl Transfer: A Molecular Basis for Signaling, Lake Tahoe, California 1998.
14. **Thompson**, **P.R.**, Hughes, D.W., Cianciotto, N.P., and Wright,G.D. Characterization of Spectinomycin phosphotransferase from Legionella pneumophila, Canadian Bacterial Disease Network Centre of Excellence Annual Meeting, Banff, Alberta 1998.
15. McKay, G.A., **Thompson**, **P.R.**, and Wright, G.D. Molecular mechanism of the 3'-aminoglycoside phosphotransferase-IIIa, Keystone Symposium on Antibiotic Resistance, March 2006.
16. **Thompson**, **P.R.**, Hughes, D.W., and Wright, G.D. Regiospecificity of Phosphorylation by Aminoglycoside Phosphotransferase APH(3')-IIIa, 78th Canadian Society for Chemistry Conference, Guelph, Ont, 2005.

RESEARCH SUPPORT:

Agencies that have supported Thompson's research at UMass Medical School, The Scripps Research Insitute, and the University of South Carolina

1. National Institutes of Health/National Institute of General Medical Sciences Maximizing Investigator's Research Award. **Chemical Approaches to Decipher PAD Biology** (R35: 118112: 2016-2021) -- $5,000,000
2. Disarm Therapeutics. **Disarm Therapeutics Compound Characterization** (2019) -- $18,795
3. Celgene Corporation. **Identification of Citrullinated Proteins elevated in a murine model for Rheumatoid Arthritis** (2018-2019) – $39,896
4. Padlock Therapeutics. **Unlocking the Padlock.** (2015-2017) --$200,000.
5. Alzheimer's Disease Drug Discovery Foundation. **Inhibiting Neutrophil Extracellular Trap (NET) Formation as a Novel Therapeutic Approach to Alzheimer's Disease** (2016) -- $150,000
6. Janssen Pharmaceuticals (a Johnson and Johnson subsidiary). **Identification of citrullinated biomarkers of RA** (2014-2016) – $200,000.

7. Eli Lilly & Co. **Interrogating the Regulatory Importance of Protein Arginine Deiminases.** (22014-2017) – $100,000.
8. National Institutes of Health/National Institute of General Medical Sciences. (R01 110394: 2014-2017) **Identification of citrullinated biomarkers of cancer.** $1,700,000.
9. National Institutes of Health/National Institute of General Medical Sciences. **Chemical Probes Targeting the Protein Arginine Deiminases.** (R01 GM079357: 2007-2016) – $3,578,000
10. Department of Defense. **Synthetic Lectins: New Tools for Detection and Management of Prostate Cancer.** (W81XWH-11-PCRP-SIDA: 2012 - 2015) – $750,000
11. National Institutes of Health/National Cancer Institute (R01 CA151304: 2011-2016) – $542,040
12. National Institutes of Health/NIH Heart Lung Blood Institute (R01: 2013-2014) – $304,180
13. Camille Dreyfus Teacher Scholar Award (2009-2016) – $75,000
14. National Institutes of Health/National Center for Research Resources/COBRE (P20: 2007-2010) – Candidate's portion -- $275,000
15. National Institutes of Health/National Institute of General Medical Sciences (RO1 Supplement: 2007-2008) – $53,265
16. National Institutes of Health/National Institute of General Medical Sciences (RO1 Supplement: 2007-2008) – $15,717
17. National Institutes of Health/National Institute of General Medical Sciences (RO1 Supplement: 2009-2011) – $73,920
18. National Institutes of Health/National Institute of General Medical Sciences (RO1 Supplement: 2009-2011) – $56,550
19. American College of Rheumatology: Within Our Reach Campaign (2008-2010) – $400,000
20. American Heart Association (2005-2007) – $132,000
21. National Science Foundation (CRC: 2005-2008) – Candidate's portion ~ $18,915
22. USC sponsored funding (USC Research Foundation Award (2006), Research and Productive Scholarship Award (2005), NanoCenter Seed Award (2005), COBRE Seed Award (2006), and Magellan Scholars (2006)) – $127,000 total

Total – $ 13,810,000

SEMINARS PRESENTED (116 total):

1. "Citrullination in Inflammation" Department of Chemistry, Johns Hopkins University, Baltimore, MD, February 20, 2019
2. "Chemical probes to study protein citrullination" Department of Chemistry, University of South Florida, Tampa, FL, January 24, 2019
3. "Chemical probes to study protein citrullination" Department of Chemistry, Boston University, Boston, MA, November 8, 2018
4. "At the Crossroads: Citrullination and Nicotinamide Methylation," Epigenetics Club, University of Massachusetts Medical School, November 7, 2018
5. "Chemical probes to study protein citrullination," Department of Chemistry, Texas A&M, College Station, Texas, October 25, 2018
6. "Development of a PAD1 specific inhibitor," University of Massachusetts Medical School Retreat, Amherst, MA, September 21, 2018.
7. "Chemical Probes to Study Protein Citrullination," Department of Molecular Medicine, University of Massachusetts Medical School, Worcester, MA, September 17, 2018.
8. "Chemical Probes to Study Protein Citrullination," Department of Chemistry, Worcester Polytechnic University, Worcester, MA, September 12, 2018.

9. “The Rheumatoid Arthritis Associated Citrullinome,” American Society for Biochemistry and Molecular Biology Annual Meeting, San Diego, CA, April 22, 2018.
10. “Picking the Padlock: Chemical Strategies to interrogate the Protein Arginine Deiminases.” Department of Medicinal Chemistry, Purdue University, Purdue, IN, April 13, 2018.
11. “The Rheumatoid Arthritis Associated Citrullinome,” Celgene, Cambridge, MA, April 3, 2018.
12. “Picking the Padlock: Chemical Strategies to interrogate the Protein Arginine Deiminases.” Celgene, Cambridge, MA, March 2, 2018
13. “Picking the Padlock: Chemical Strategies to interrogate the Protein Arginine Deiminases.” Department of Chemical Biology, Memorial Sloan Kettering Cancer Center, New York, NY, January 9, 2018.
14. “Picking the Padlock: Chemical Strategies to interrogate the Protein Arginine Deiminases.” Center for Drug Design, University of Minnesota, Minneapolis, MN, December 19, 2017.
15. “Picking the Padlock: Chemical Strategies to interrogate the Protein Arginine Deiminases.” Lady Davis Institute, McGill University School of Medicine, November 3, 2017.
16. “Picking the Padlock: Chemical Strategies to interrogate the Protein Arginine Deiminases.” Center for Cancer Epigenetics, MD Anderson, Smithville, TX, May 5, 2017.
17. “Picking the Padlock: Chemical Strategies to interrogate the Protein Arginine Deiminases.” Chemical Biology, Yale University West Campus, April 25, 2017.
18. “The Protein Arginine Deiminases: Therapeutic Targets for Inflammatory Disease and Cancer.” ACS Meeting, San Francisco, April 5, 2017.
19. “The Protein Arginine Deiminases: Therapeutic Targets for Inflammatory Disease and Cancer.” Department of Chemistry, Syracuse University, Syracuse, NY, March 28, 2017.
20. “The Protein Arginine Deiminases: Therapeutic Targets for Inflammatory Disease and Cancer.” Department of Chemistry, Temple University, Philadelphia, PA, February 16, 2017.
21. “The Protein Arginine Deiminases: Therapeutic Targets for Inflammatory Disease and Cancer.” Department of Physiology and Pharmacology, Oregon Health Sciences University, Portland, OR, February 2, 2017.
22. “The Protein Arginine Deiminases: Therapeutic Targets for Inflammatory Disease and Cancer.” Department of Chemistry, University of Pittsburg, Pittsburg, PA, January 26, 2017.
23. “The Protein Arginine Deiminases: Therapeutic Targets for Inflammatory Disease and Cancer.” Department of Pharmacology and Pharmaceutical Sciences, University of Southern California, Los Angeles, CA, January 13, 2017.
24. “The Protein Arginine Deiminases: Therapeutic Targets for Inflammatory Disease and Cancer.” The Kennedy Institute of Rheumatology at Oxford University, Oxford, UK, November 10, 2016.
25. “The Protein Arginine Deiminases: Therapeutic Targets for Inflammatory Disease and Cancer.” Program in Molecular Medicine, University of Massachusetts Medical School, Worcester, MA, September 19, 2016.
26. “Inhibiting Neutrophil Extracellular Trap (NET) Formation as a Novel Therapeutic Approach to Alzheimer's Disease.” Alzheimer’s Disease Drug Discovery Foundation Meeting, Jersey City, NJ, September 12, 2016
27. “Picking the PADlock: Chemical Probes To Characterize PAD Biology.” The Structural Genomics Consortium, University of Toronto, Toronto, ON, Canada, July 8, 2016.
28. “Oxidative Regulation of PRMT1 Activity” 2016 *Biological Methylation* Conference, Lisbon, Portugal, June 21.
29. “Picking the PADlock: Chemical Probes To Characterize PAD Biology.” Bristol Meyers Squibb, Princeton, NJ, May 17, 2016.
30. “Picking the PADlock: Chemical Probes To Characterize PAD Biology.”PacificChem, Honolulu, HI, December 16, 2015
31. “Small Molecule Screening Identifies a Nanomolar Inhibitor of the Protein Arginine Deiminases.” Dartmouth Medical School, December 2, 2015
32. “Picking the PADlock: Chemical Probes To Characterize PAD Biology.” Department of Chemistry, MIT, Cambridge, MA, September 28, 2015.
33. “Picking the PADlock: Chemical Probes To Characterize PAD Biology.” Department of Chemistry, UMass Amherst, Amherst, MA, September 17, 2015.
34. “Picking the PADlock: Chemical Probes To Characterize PAD Biology.” Department of Chemistry, UCONN, Mansfield, CT, May 13, 2015.

35. “Picking the PADlock: Chemical Probes To Characterize PAD Biology.” Mini workshop on PAD inhibition for inflammatory and malignant disease. Oxford, UK, April 13, 2015.
36. “Picking the PADlock: Chemical Probes To Characterize PAD Biology.” ASBMB Meeting, Boston, MA, March 30, 2015.
37. “Picking the PADlock: Chemical Probes To Characterize PAD Biology.” Department of Chemistry, Wesleyan University, Middletown, CT, March 27, 2015.
38. “Epigenetics of Protein Citrullination.” Epigentics Club.” UMASS Medical School, Worcester, MA, March 3, 2015
39. “Picking the PADlock: Chemical Probes To Characterize PAD Biology.” National Cancer Institute, Frederick, MD, February 12, 2015.
40. “The Chemical Biology of Protein Arginine Phosphorylation” IDR Chalk Talk, UMASS Medical School, Worcester, MA, January 9, 2015
41. “Chemical Probes Targeting the Protein Arginine Deiminases (PADs): Unlocking the PADlock.” Genomic Instability and Cancer Seminar Series, UMASS Medical School, Worcester, MA, January 6, 2015.
42. “Picking the PADlock: Chemical Probes To Characterize PAD Biology.” UMASS Research Retreat, UMASS Amherst, Amherst, MA, November 3, 2014.
43. “Picking the PADlock: Chemical probes targeting the Protein Arginine Deiminases.” NET Symposium, Biogen Idec, Cambridge, MA, October 31, 2014
44. “Picking the PADlock: Chemical probes targeting the Protein Arginine Deiminases.” Steenbock Symposium, University of Wisconsin, Madison, WI, June 5-7, 2014
45. “Picking the PADlock: Chemical probes targeting the Protein Arginine Deiminases.” PAD Summit, Hotel Palomar, Washington, DC, May 6-7, 2014
46. “Picking the PADlock: Chemical probes targeting the Protein Arginine Deiminases.” Cambridge Healthtech Institute Drug Discovery Chemistry 2014 conference, San Diego, CA, April 23-24, 2014.
47. “Picking the PADlock: Chemical probes targeting the Protein Arginine Deiminases.” Department of Chemistry, University of Washington, Seattle, WA, February 6, 2014
48. “Chemical probes of Arginine Modifying Enzymes.” Department of Biochemistry, University of Massachusetts School of Medicine, Worcester, MA, January 29, 2014
49. “Picking the PADlock,” Janssen Pharmaceuticals, Radnor, PA, December 10, 2013.
50. “Picking the PADlock,” The Sigma-Aldrich Seminar at the Department of Medicinal Chemistry, College of Pharmacy, University of Utah, Salt Lake City, Utah, November 7, 2013.
51. “Picking the PADlock,” 4th CPA-RSC Symposium on Medicinal Chemistry, Jinan, China, November 2, 2013.
52. “Biology of Citrullination,” American College of Rheumatology 2013 Annual Meeting, San Diego, CA, October 29, 2013.
53. “Picking the PADlock,” Department of Biochemistry, University of Massachusetts School of Medicine, Worcester, MA, October 23, 2013.
54. “Picking the PADlock,” Department of Chemistry, University of Colorado, Boulder, CO, October 14th, 2013
55. “Picking the PADlock,” Department of Chemistry, University of Florida, Gainesville, FL, September 27th, 2013.
56. “Chemical Probes targeting Protein Arginine Deiminase activity: Seeing the Citrillinome," Bioorganic Gordon Research Conference, Proctor Academy, June 11, 2013.
57. “Picking the PADlock,” Department of Pharmacology, University of Florida School of Medicine, Gainesville, FL, February 21, 2013.
58. “Picking the PADlock,” School of Pharmacy, University of North Carolina, January 22, 2013.
59. “Picking the PADlock,” Gerard D Wright 20th Anniversary Symposium, Department of Biochemistry, McMaster University, Hamilton, ON, Canada, January 25th, 2013.
60. “Picking the PADlock,” Department of Chemistry, The Scripps Research Institute, La Jolla, CA, January 8th, 2013.
61. “Mechanistic Insights into the Regulation of Protein Arginine Deiminases 2 and 4,” 23rd Enzyme Mechanisms Conference, Coronado, CA, January 5th, 2013
62. “Validating the Protein Arginine Deiminases as therapeutic targets for Rheumatoid Arthritis, Colitis, and Cancer,” Institute for Biological Chemistry, Academica Sinica, Taipei, Taiwan, October 18, 2012.

63. “Chemical Probes targeting Protein Arginine Deiminase activity: Seeing the Citrillinome," ASBMB Symposium: Transcriptional Regulation: Chromatin and RNA polymerase II, October 6, 2012, Snowbird, UT.
64. “Chemical Probes of Protein Arginine Methyltransferase Function,” FASEB Summer Research Conference entitled: "Biological Methylation: From DNA to Histones", Aspen, Colorado, August 15, 2012.
65. “Validating the Protein Arginine Deiminases as therapeutic targets for Rheumatoid Arthritis, Colitis, and Cancer,” Roche Pharmaceuticals, April 13, 2012, Rutherford, NJ.
66. “Validating the Protein Arginine Deiminases as therapeutic targets for Rheumatoid Arthritis, Colitis, and Cancer,” Takeda San Diego, March 2, 2012, San Diego, CA.
67. “The Protein Arginine Deiminases,” Epizyme, November 8, 2011, Boston, MA.
68. “The Protein Arginine Deiminases,” Constellation Pharma, November 7, 2011, Boston, MA.
69. “Chemical Probes of Arginine Modifying Enzymes,” Department of Chemistry, University of North Florida, October 21, 2011, Jacksonville, FL.
70. “The Protein Arginine Deiminases,” Department of Chemistry, The Scripps Research Institute, March 23, 2011, Jupiter, FL.
71. “PAD Inhibition: A novel Therapeutic Approach for Rheumatoid Arthritis, Colitis, Cancer, Neural Regeneration, and Multiple Sclerosis: Five Diseases, One Drug” Merck Research Laboratories, NJ.
72. “PAD Inhibition: A novel Therapeutic Approach for Rheumatoid Arthritis, Colitis, Cancer, Neural Regeneration, and Multiple Sclerosis: Five Diseases, One Drug” SGC Oxford Symposium on Epigenetic Mechanisms in Health and Disease, December 10, 2010, Oxford, UK.
73. “PAD Inhibition: A novel Therapeutic Approach for Rheumatoid Arthritis, Colitis, Cancer, Neural Regeneration, and Multiple Sclerosis: Five Diseases, One Drug” Society for Neuroscience 2010 annual meeting, November 16, 2010, San Diego, CA.
74. “Cl-amidine: A novel Therapeutic for Rheumatoid Arthritis, Colitis, and Cancer,” Department of Biomedical Sciences, College of Veterinary Medicine, Cornell University, October 19, 2010.
75. “Cl-amidine: A novel Therapeutic for Rheumatoid Arthritis, Colitis, and Cancer,” Johnson and Johnson/Centocor, Radnor, PA, September 17, 2010.
76. "Chemical Probes for Protein Arginine Methyltransferase 1" FASEB Summer Research Conference entitled: "Biological Methylation: From DNA to Histones", Carefree, Arizona, June 10, 2010
77. “Cl-amidine: A novel Therapeutic for Rheumatoid Arthritis?,” Within Our Reach Meeting, American College of Rheumatology, Fort Worth, TX, June 4, 2010.
78. “Chemical Probes for Arginine Modifying Enzymes,” University of Minnesota, Department of Chemistry, Minneapolis, MN, February 24th, 2010.
79. “PAD Inhibition: A novel Therapeutic Approach for Rheumatoid Arthritis.” Johns Hopkins University School of Medicine, Division of Rheumatology, Baltimore, MD, December 11th, 2009.
80. “Chemical Probes for Arginine Modifying Enzymes,” Scripps Florida, Jupiter, FL, November 11th, 2009.
81. “Chemical Probes for Arginine Modifying Enzymes,” Wake Forest, Department of Chemistry, Winston-Salem, NC, October 28th, 2009.
82. “Chemical Probes for Arginine Modifying Enzymes,” University of South Carolina, School of Medicine, Columbia, SC, September 26th, 2009.
83. "Design and Synthesis of PRMT1 selective inhibitors and chemical probes" University of South Carolina, Department of Chemistry and Biochemistry, Columbia, SC, September 8th, 2009.

84. “Chemical approaches to studying PAD4 function,” Sanofi-Aventis, Bridgewater, NJ, August 6, 2009.
85. “Chemical Probes for Arginine Modifying Enzymes,” Enzymes, coenzymes, and metabolic pathways, Gordon Research Conference, Waterville Valley Resort, NH, July 8, 2009.
86. “Cl-amidine: A novel Therapeutic for Rheumatoid Arthritis?,” Within Our Reach Meeting, American College of Rheumatology, San Diego, CA, June 29, 2009.
87. “Chemical approaches to studying PAD4 function,” 237st ACS National Meeting, Salt Lake City, UT, USA, March 23, 2009.
88. “Chemical Approaches to Studying PAD4 Function,” *Webinar for* Johnson & Johnson Pharmaceuticals, March 5, 2009.
89. “Chemical Approaches to Studying PAD4 Function,” Albert Einstein School of Medicine, Department of Biochemistry, New York, NY, February 24, 2009.
90. “Cl-amidine: A novel Therapeutic for Rheumatoid Arthritis?” University of Colorado School of Medicine, Division of Rheumatology, Denver, CO, October 14, 2008.
91. “Chemical Approaches to Studying PAD4 Function,” University of South Carolina, Department of Chemistry and Biochemistry, Columbia, SC, August 29, 2008.
92. "Haloacetamidine Based Inactivators and Activity Based Protein Profiling Reagents for Protein Arginine Deiminase 4: A Novel Target for the Treatment of Rheumatoid Arthritis" Bioorganic Chemistry, Gordon Research Conference, Proctor Academy, Andover, NH, June 16, 2008.
93. "Design and Synthesis of PRMT1 selective inhibitors" FASEB Summer Research Conference entitled: "Biological Methylation: From DNA to Histones", Carefree, Arizona, June 5, 2008
94. "Mechanism and Inhibition of Protein Arginine Deiminase 4 – A novel drug target for Rheumatoid Arthritis," Duke University, Department of Chemistry, Durham, NC, March 20, 2008.
95. "Mechanism and Inhibition of Protein Arginine Deiminase 4 – A novel drug target for Rheumatoid Arthritis," Medical University of South Carolina, South Carolina College of Pharmacy, Charleston, SC, February 12, 2008.
96. "Mechanism and Inhibition of Protein Arginine Deiminase 4 – A novel drug target for Rheumatoid Arthritis," Georgia State University, Department of Chemistry, Atlanta, GA, November 2, 2007.
97. "Mechanism and Inhibition of Protein Arginine Deiminase 4 – A novel drug target for Rheumatoid Arthritis," Johns Hopkins University School of Medicine, Department of Pharmacology and Molecular Sciences, Baltimore, MD, October 17, 2007.
98. "Mechanism and Inhibition of the Nα-Acetyltransferases," Nα-Acetyltransferase Symposium, University of Bergen, Bergen, Norway, May 24, 2007.
99. "Mechanism and Inhibition of Protein Arginine Deiminase 4 – A novel drug target for Rheumatoid Arthritis," University of Michigan, Department of Biological Chemistry, Ann Arbor, MI, April 10, 2007.
100. "Mechanism and Inhibition of Protein Arginine Deiminase 4 – A novel drug target for Rheumatoid Arthritis," Georgia Southern University, Department of Chemistry, Statesboro, GA, February 26, 2007.
101. "Mechanism and Inhibition of Protein Arginine Deiminase 4," McMaster University, Department of Biochemistry, Hamilton, Ontario, Canada, January 9, 2007.
102. "Haloacetamidine based inactivators and activity based protein profiling reagents for Protein Arginine Deiminase 4," Enzymes, coenzymes, and metabolic pathways, Gordon Research Conference, University of New England, July 17, 2006.
103. "Mechanism and Inhibition of Protein Arginine Deiminases," Division of Medicinal Chemistry, School of Pharmacy, University of Texas at Austin, Austin, TX, February 7, 2006.
104. "Mechanism and Inhibition of Protein Arginine Deiminases," School of Pharmacy, University of South Carolina, Columbia, SC, March 28, 2005.

105. "Target-Based Drug Design: Theory and its application to the development of rheumatoid arthritis treatments," Department of Chemistry & Biochemistry, College of Charleston, Charleston, SC, April 1, 2004.

106. "The molecular mechanism of p300: A transcriptional co-activator with histone acetyltransferase activity," Department of Molecular Pharmacology & Chemistry, Sloan-Kettering Institute, New York, NY, March, 2003.

107. "The molecular mechanism of p300: A transcriptional co-activator with histone acetyltransferase activity," Department of Medical Science, Indiana University, Bloomington, IN, February, 2003.

108. "The molecular mechanism of p300: A transcriptional co-activator with histone acetyltransferase activity," Department of Chemistry & Biochemistry, University of South Carolina, Columbia, SC, January, 2003.

109. "The molecular mechanism of p300: A transcriptional co-activator with histone acetyltransferase activity," Department of Biochemistry, Weill Medical College of Cornell University, New York, NY, January, 2003.

110. "The molecular mechanism of p300: A transcriptional co-activator with histone acetyltransferase activity," Department of Biochemistry & Molecular Biology, University of Nebraska Medical School, Omaha, NE, January, 2003.

111. "The molecular mechanism of p300: A transcriptional co-activator with histone acetyltransferase activity," Department of Pharmacology, Uniformed Services University of the Health Sciences, Bethesda, MD, January, 2003.

112. "The molecular mechanism of p300: A transcriptional co-activator with histone acetyltransferase activity," Department of Biochemistry, University of Ottawa, Ottawa, Ont., Canada, December 2002.

113. "The molecular mechanism of p300: A transcriptional co-activator with histone acetyltransferase activity," Department of Chemistry, Syracuse University, Syracuse, NY, December, 2002.

114. "The molecular mechanism of p300: A transcriptional co-activator with histone acetyltransferase activity," Department of Biochemistry and Molecular Pharmacology, University of Massachusetts Medical School, Worcester, MA, November, 2002.

115. "The molecular mechanism of p300: A transcriptional co-activator with histone acetyltransferase activity," Department of Chemistry, McMaster University, Hamilton, Ont., Canada, April, 2002.

116. "The molecular mechanism of p300: A transcriptional co-activator with histone acetyltransferase activity," Department of Biochemistry, McMaster University, Hamilton, Ont., Canada, March, 2002.

OTHER PROFESSIONAL ACTIVITIES

Journal Refereeing

1. Nature
2. Proceedings of the National Academy of Sciences
3. Nature Communications
4. Biochemistry
5. Journal of the American Chemical Society
6. Proceedings of the National Academy of Sciences USA
7. Nature Structural and Molecular Biology
8. Chemistry & Biology
9. Bioorganic and Medicinal Chemistry
10. Journal of Biological Chemistry
11. Journal of Inorganic Biochemistry
12. BBA Proteins and Proteomics
13. Bioorganic and Medicinal Chemistry Letters

14. ChemMedChem
15. Journal of Antibiotics
16. ChemBioChem
17. Wiley Encyclopedia of Chemical Biology
18. Laboratory Investigation
19. Aging Cell
20. Journal of Proteome Research
21. Molecular Biosystems
22. Journal of Medicinal Chemistry
23. Structure
24. Molecular Biosystems
25. Epigenomics
26. Acta Crystallographica D
27. Current Opinion in Chemical Biology

Grant proposal reviewing

1. Biotechnology and Biological Sciences Research Council UK
2. Sheffield Hospitals Charitable Trust, UK
3. USC Research Foundation
4. NIH – SBCB Study Section (Ad Hoc Member: October, 2008; June 2013)
5. American College of Rheumatology Within Our Reach Campaign (Ad Hoc Member, March, 2009)
6. NIH – Challenge Grants (Mail in Reviewer, July 2009)
7. National Research Foundation of UAE (Mail in Reviewer October 2009)

Committee service

1. Chair of Faculty Search Committee, UMass Medical School, Department of Biochemistry and Molecular Pharmacology and Program in Chemical Biology, 2016 to 2017.
2. Director of Chemical Biology, UMass Medical School, 2014 to present.
3. Director of the Small Molecule Screening Facility at UMass Medical School, 2014 to present.
4. Florida Theme Committee for Graduate Program Accreditation, The Scripps Research Institute, Scripps Florida, 2010 to 2014.
5. Curriculum Committee, The Scripps Research Institute, 2011 to 2014.
6. Admissions Committee, The Scripps Research Institute, Scripps Florida, 2010 to 2013.
7. Department of Biology, USC, Faculty Search Committee, 2009
8. Center of Economic Excellence Cancer Biology Search Committee, South Carolina College of Pharmacy, 2009
9. Admissions Committee, Integrated Biomedical Graduate Program, current
10. Magellan Scholar Program, current
11. Industrial Advisory Board, current
12. Department of Chemistry & Biochemistry, Executive Committee, 07/01/08 - current
13. Ad Hoc Committee on Graduate Education
14. Mass Spectrometry Committee, current
15. Development of an Integrated Biomedical Graduate Program
16. Department of Chemistry & Biochemistry, Admissions Committee
17. Department of Chemistry & Biochemistry, Library Committee
18. Department of Chemistry & Biochemistry Chair Search Committee
19. Department of Chemistry & Biochemistry, Biochemistry Faculty Search Committee
20. Department of Chemistry & Biochemistry, Proteomics Faculty Search Committee

Other synergistic activities

1. Development of Cellular Biochemistry Course, UMass Medical School.
2. Development of an Undergraduate Biochemistry Major at USC.
3. Judge, Undergraduate Research Poster Competition, USC
4. Judge, Graduate Student Poster Competition, Department of Chemistry and Biochemistry, USC
5. Judge, Newton Symposium for Graduate Research, USC School of Medicine

CLASSES TAUGHT

1. BBS719 – Cellular Biochemistry (Graduate, Umass Medical School)
2. BP715 – Chemical Biology (Graduate, UMass Medical School)
3. Core Course – Block 1 (Graduate, UMass Medical School)
4. RAPS session, (Graduate, UMass Medical School).
5. ERM 331 – Enzyme Reaction Mechanisms (Graduate, TSRI)
6. CHEM D650 – Medical Biochemistry (1st year Medical Students, USC)
2. CHEM 701 – Biochemistry Seminar (Graduate, USC)
3. CHEM 752/BIOL718 – Regulation and Integration of Metabolism (Graduate, USC)
4. CHEM 759 – Special Topics in Gene Regulation (Graduate, USC)
5. CHEM 759/739 – Organic Biochemistry (Graduate, USC)