

## Paul R Thompson

Department of Biochemistry and Molecular Pharmacology  
UMass Medical School  
Worcester, MA, 01605

Voice: (508) 856-8492  
FAX: (508) 856-6215  
Email: [paul.thompson@umassmed.edu](mailto:paul.thompson@umassmed.edu)

### PROFESSIONAL PREPARATION

<u>Institution</u>	<u>Major Area</u>	<u>Degree &amp; Year</u>
McMaster University	Biochemistry	Honors B.S.c. – 1994
McMaster University	Biochemistry	Ph.D. – 2000
Johns Hopkins University SOM	Pharmacology	PDF – 2000-2003

### PROFESSIONAL EXPERIENCE

<u>Dates</u>	<u>Title</u>	<u>Institution</u>	<u>Department</u>
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 Field Services Engineer, Waters Corp.
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 Obianyoye, 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
21. Inna Shcherbakova, 02/01/2015 – 07/15/2015 (Principal Scientist, Flagship Pioneering VL58)
22. Son Nguyen, 03/15/2015 – 07/31/2018 (Assistant Professor, Hollins University)
23. Mitesh Nagar, 01/15/2016 – 1/5/2020 (Scientist, Paraza Pharma, Inc.)
24. Li Zheng, 05/15/2016 – 09/21/2018 (Investigator, GSK)
25. Venkatesh Nemmara, 07/15/2016 – 08/31/2019 (Tenure track Assistant Professor, Rowan University)
26. Ronak Tivawala, 08/15/2016 – 08/17/2020 (Assistant Professor, University of Kansas)
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 – 11/25/2020 (Sr. Scientist, BMS)
30. Sudeshna Sen, 04/30/2017 - present
31. Archie Reyes, 10/01/2018 – present
32. Leonard Barasa, 11/2/2020 – 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 Obiano, 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 Obiano (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), 11/15/11-06/30/11
5. Hema Srinath (Technician), 01/15/2015 – 02/28/2016 (Abbvie, Worcester, MA)

#### **PUBLICATIONS (167 total)**

1. Sodr , F. M. C., Bissenova, S., Bruggeman, Y., Tilwawala, R., Cook, D. P., Berthault, C., Mondal, S., Callebaut, A., You, S., Scharfmann, R., Mallone, R., **Thompson, P. R.**, Mathieu, C., Buitinga, M., and Overbergh, L. (2020) Peptidylarginine Deiminase Inhibition Prevents Diabetes Development in NOD Mice, Diabetes. DOI: 10.2337/db20-0421
2. Mondal, S., Wang, S., Zheng, Y., Sen, S., Chatterjee, A., and Thompson, P. R. (2020) Site-Specific Incorporation of Citrulline into Proteins in Mammalian Cells, bioRxiv, 2020.2006.2006.137885. **Accepted for publication at Nature Communications.**
3. Tian, Y., Qu, S., Alam, H. B., Williams, A. M., Wu, Z., Deng, Q., Pan, B., Zhou, J., Liu, B., Duan, X., Ma, J., Mondal, S., **Thompson, P. R.**, Stringer, K. A., Standiford, T. J., and Li, Y. (2020) Peptidylarginine deiminase 2 has potential as both a biomarker and therapeutic target of sepsis, *JCI Insight* 5
4. Loring, H.S. and **Thompson, P.R.** (2020) A liquid to solid phase transition enhances the catalytic activity of SARM1. BioRxiv doi: <https://doi.org/10.1101/2020.08.28.272377> submitted to ELife for review.
5. Humphries, F., Shmuel-Galia, L., Ketelut-Carneiro, N., Li, S., Wang, B., Nemmara, V. V., Wilson, R., Jiang, Z., Khalighinejad, F., Muneeruddin, K., Shaffer, S. A., Dutta, R., Ionete, C., Pesiridis, S., Yang, S., **Thompson, P. R.**, and Fitzgerald, K. A. (2020) Succination inactivates gasdermin D and blocks pyroptosis, *Science*. doi: 10.1126/science.abb9818.
6. Loring, H.S., Parelkar, S.S., Mondal, S., and **Thompson, P.R.** (2020) Identification of the first non-competitive SARM1 inhibitors. *Bioorgan Med Chem* 28, 115644.
7. Li, G., Young, C. H., Snow, B., Christensen, A. O., Demoruelle, M. K., Nemmara, V. V., **Thompson, P. R.**, Rothfuss, H. M., and Cherrington, B. D. (2020) Identification and Characterization of the Lactating Mouse Mammary Gland Citrullinome, *Int J Mol Sci* 21.
8. Wu, Z., Deng, Q., Pan, B., Alam, H. B., Tian, Y., Bhatti, U. F., Liu, B., Mondal, S., **Thompson, P. R.**, and Li, Y. (2020) Inhibition of PAD2 Improves Survival in a Mouse Model of Lethal LPS-Induced Endotoxic Shock, *Inflammation*. 43, 1436-1445.

9. Uysal-Onganer, P., MacLatchy, A., Mahmoud, R., Kraev, I., **Thompson, P. R.**, Inal, J. M., and Lange, S. (2020) Peptidylarginine Deiminase Isozyme-Specific PAD2, PAD3 and PAD4 Inhibitors Differentially Modulate Extracellular Vesicle Signatures and Cell Invasion in Two Glioblastoma Multiforme Cell Lines, *Int J Mol Sci* 21, E1495.
10. Loring, H.S., Icsó, J.D., Nemmara, V.V., **Thompson, P.R.** (2020) Initial Kinetic Characterization of Sterile Alpha and Toll/Interleukin Receptor Motif-Containing Protein 1 *Biochemistry* 59, 933-942. PMID: 32049506
11. Salinger, A. J., Dubuke, M. L., Carmona-Rivera, C., Maurais, A. J., Shaffer, S. A., Weerapana, E., **Thompson, P. R.**, and Kaplan, M. J. (2020) Technical comment on "Synovial fibroblast-neutrophil interactions promote pathogenic adaptive immunity in rheumatoid arthritis", *Sci Immun* 5, eaax5672.
12. Loring, H.S. and **Thompson, P.R.** (2020) Emergence of SARM1 as a Potential Therapeutic Target for Wallerian-type Diseases. *Cell Chem Biol* 27, 1-13.
13. Sun, B., Chang, H.H, Salinger, A. Tomita, B., Bawadekar, M., Holmes, C.L., Shelef, M.A., Weerapana, E., **Thompson, P.R.**, and Ho, I.C. (2019) Reciprocal regulation of Th2 and Th17 cells by PAD2-mediated citrullination. *JCI Insight* 4, e129687.
14. Li, F., Miao, L., Xue, T., Qin, H., Mondal, S., Thompson, P. R., Coonrod, S. A., Liu, X., and Zhang, X. (2019) Inhibiting PAD2 enhances the anti-tumor effect of docetaxel in tamoxifen-resistant breast cancer cells, *J Exp Clin Cancer Res* 38, 414.
15. 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**
16. 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.* 125, 507-519. **Highlighted in Circulation Research.**
17. 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.* 58, 12476-12480.
18. 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.
19. 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-1 $\beta$  Maturation and ASC Speck Formation in Macrophages, *J Immunol* 203, 795-800.
20. 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, PMCID: PMC6644700
21. 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.* 139, 1889-1897.
22. Nagar, M., Tilvawala, R., and **Thompson, P. R.** (2019) Thioredoxin Modulates Protein Arginine Deiminase 4 (PAD4)-Catalyzed Citrullination, *Front Immunol* 10, 244.
23. Mondal, S., and **Thompson, P.R.** (2019) Protein Arginine Deiminases (PADs): Biochemistry and Chemical Biology of Protein Citrullination. *Account Chem Res* 52, 818-832.

24. Tilvawala, R., and **Thompson, P. R.** (2019) Peptidyl arginine deiminases: detection and functional analysis of protein citrullination, *Curr Opin Struct Biol*. doi: 10.1016/j.sbi.2019.01.024.
25. 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.
26. 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.
27. Nemmara, V. V., and **Thompson, P. R.** (2019) Development of Activity-Based Proteomic Probes for Protein Citrullination, *Curr Top Microbiol Immunol*. 420, 233-251
28. Loring, H. S., and **Thompson, P. R.** (2018) Kinetic Mechanism of Nicotinamide N-Methyltransferase, *Biochemistry* 57,5524-5532.
29. 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**
30. 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*. 38, e00084-18. **PMC6146832**
31. 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**.
32. 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**
33. 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, pii: eaar3701.
34. 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**
35. 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**
36. 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**.

37. 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**
38. 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.**
39. 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**
40. 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- $\kappa$ B p65 promotes its nuclear localization and TLR-induced expression of IL-1 $\beta$  and TNF $\alpha$ . *Sci Immun* 2, eaal3062. **PMC5718838**
41. 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**
42. 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**
43. 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**
44. 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**
45. 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**
46. 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**
47. 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**
48. 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.* 86, 106-113. **PMC5476296**
49. 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**
50. Hosseinzadeh, A., **Thompson, P.R.**, Segal, B.H., Urban, C.F. (2016) Nicotine induces neutrophil extracellular traps. *J Leukoc Biol.* 100, 1105-1112. **PMC5069087**

51. Papadaki, G., Kambas, K., Choulaki, C., Vlachou, K., Drakos, E., Bertias, 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**
52. 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**
53. 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**
54. 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**
55. 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**
56. 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**
57. 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**
58. Li, G.; Hayward, I. N.; Jenkins, B. R.; Rothfuss, H. M.; Young, C. H.; Nevalainen, M. T.; Muth, A.; **Thompson, P. R.**; Navratil, A. M.; Cherrington, B. D. (2016) Peptidylarginine Deiminase 3 (PAD3) Is Upregulated by Prolactin Stimulation of CID-9 Cells and Expressed in the Lactating Mouse Mammary Gland. *PLoS One* 11, e0147503. **PMC4723263**
59. Fuhrmann, J., **Thompson, P.R.** (2016) Protein Arginine Methylation and Citrullination in Epigenetic Regulation. *ACS Chem Biol* 11, 654-668 **PMC4802296.**
60. Clancy, K. W.; Weerapana, E.; Thompson, P. R. (2016) Detection and identification of protein citrullination in complex biological systems. *Curr Opin Chem Biol* 30, 1-6. **PMC4731267**
61. Witalison, E. E.; Cui, X.; Causey, C. P.; Thompson, P. R.; Hofseth, L. J. (2015) Molecular targeting of protein arginine deiminases to suppress colitis and prevent colon cancer. *Oncotarget* 6, 36053-62. **PMC4742161**
62. Fuhrmann, J., Subramanian, V., **Thompson, P.R.** (2015). Synthesis and use of a phosphonate-amidine to generate an anti-phosphoarginine specific antibody. *Angew Chem Int Ed Engl* 54, 14715-8. **PMC7415515**
63. Lewallen, D. M.; Bicker, K. L.; Subramanian, V.; Clancy, K. W.; Slade, D. J.; Martell, J.; Dreyton, C. J.; Sokolove, J.; Weerapana, E.; **Thompson, P. R.** (2015) A chemical proteomic platform to identify citrullinated proteins. *ACS Chem Biol* 10, 2520-2528. **PMC4729336**
64. Kholia, S., Jorfi, S., Thompson, P.R., Causey, C.P., Nicholas, A.P., Inal, J.M., Lange, S. (2015) A novel role for peptidylarginine deiminases in microvesicle release reveals therapeutic potential of PAD inhibition in sensitizing prostate cancer cells to chemotherapy. *J Extracell Vesicles* 4, 26192. doi: 10.3402/jev.v4.26192. **PMC4475687**
65. Fuhrmann, J., Clancy, K., **Thompson, P.R.** (2015) Chemical Biology of Protein Arginine Modifications in Epigenetic Regulation. *Chem. Rev.* 115, 5413-5461. **PMC4463550**



66. Witalison, E.E., **Thompson, P.R.**, and Hofseth, L.J. (2015) Protein Arginine Deiminases and Associated Citrullination: Physiological Functions and Diseases Associated with Dysregulation. *Curr Drug Targets* 16, 700-710. **PMC4520219**
67. Witalison, E.E., Cui, X., Hofseth, A.B., Subramanian, V., Causey, C.P., **Thompson, P.R.**, Hofseth L.J. (2015) Inhibiting protein arginine deiminases has anti-oxidant consequences. *J Pharmacol Exp Ther.* 353, 64-70. **PMC4366755**
68. Slade, D.J., Fang, P., Dreyton, C.J., Zhang, Y., Fuhrmann, J., Rempel, D., Bax, B., Coonrod, S.A., Lewis, H., Guo, M., Gross, M., **Thompson, P.R.** (2015) Protein Arginine Deiminase 2 Binds Calcium in an Ordered Fashion: Implications for Inhibitor Design. *ACS Chem Bio* 10, 1043-1053. **Highlighted by C&E News. Cover of ACS Chemical Biology. PMC4569063**
69. Subramanian, V., Knight, J.S., Parelkar, S., Anguish, L., Coonrod, S.A., Kaplan, M.J., and **Thompson, P.R.** (2015) Design, synthesis and biological evaluation of tetrazole analogs of Cl-amidine as protein arginine deiminase inhibitors. *J. Med. Chem.* 58, 1337-1344. **PMC4610306**
70. Lewis, H.D., Liddle, J., Coote, J.E., Atkinson, S.J., Barker, M.D., Bax, B.D., Bicker, K.L., Bingham, R.P., Campbell, M., Chen, Y.H., Chung, C., Craggs, P.D., Davis, R.P., Eberhard, D., Joberty, G., Lind, K.E., Locke, K., Maller, C., Martinod, K., Patten, C., Polyakova, O., Rise, C.E., Rüdiger, M., Sheppard, R.J., Slade, D.J., Thomas, P., Thorpe, J., Yao, G., Drewes, G., Wagner, D.D., **Thompson, P.R.**, Prinjha, R.K., and Wilson, D.M. (2015) Inhibition of PAD4 activity is sufficient to disrupt mouse and human NET formation. *Nat Chem Bio* 11, 189-191. **Highlighted by C&E News. PMC4397581**
71. Wang, M., Fuhrmann, J., **Thompson, P.R.** (2014) PRMT5 Catalyzes Substrate Dimethylation in a Distributive Fashion. *Biochemistry* 53, 7884-7892. **PMID25485739**
72. Horibata, S., Vo, T.V., Subramanian, V., **Thompson, P.R.**, Coonrod, S.A. (2014) Utilization of the soft agar colony formation assay to identify inhibitors of tumorigenicity in breast cancer cells. *JoVE* 99, e52727. **PMC4542786**
73. Knight, J.S.,\* Subramanian, V.\*, O'Dell, A.A., Yalavarthi, S., Zhao, W., Smith, C.K., Hodgins, J.B., **Thompson, P.R.** and Kaplan, M.J. (2015) Peptidylarginine deiminase inhibition disrupts NET formation and protects against kidney, skin, and vascular disease in lupus-prone MRL/lpr mice. *Ann Rheum Dis* 74, 2199-2206. \* **co-first authors. PMC4320672**
74. Dreyton, C.J., Knuckley, B., Jones, J.E., Lewallen, D.M., Thompson, P.R. (2014). Mechanistic Studies of Protein Arginine Deiminase 2: Evidence for a Substrate-Assisted Mechanism. *Biochemistry* 53, 426-433. **PMC4100781**
75. Smith C.K., Vivekanandan-Giri A., Tang C., Knight J.S., Mathew A., Padilla R.L., Gillespie B.W., Carmona-Rivera C., Liu X., Subramanian V., Hasni S., **Thompson P.R.**, Heinecke J.W., Saran R., Pennathur S., Kaplan, M.J. (2014) Neutrophil extracellular trap-derived enzymes oxidize high-density lipoprotein: An additional proatherogenic mechanism in systemic lupus erythematosus. *Arthritis Rheumatol.* 66, 2532-2544 **PMC4146708**
76. Lange S., Rocha-Ferreira E., Thei L., Mawjee P., Bennett, K., Thompson, P.R., Subramanian, V., Nicholas, A.P., Peebles, D., Hristova, M., Raivich, G. (2014) Peptidylarginine Deiminases (PADs) - Novel Drug Targets for Prevention of Neuronal Damage following Hypoxic Ischemic Insult (HI) in Neonates. *J. Neurochemistry* 130, 555-562. **PMID24762056**
77. Slade, D.J., Horibata, S., Coonrod, S.A., and **Thompson, P.R.** (2014) A novel role for protein arginine deiminase 4 in pluripotency: The emerging role of citrullinated histone H1 in cellular programming. *BioEssays* 36, 736-740. **PMC4151298**
78. Slade, D.J., Subramanian, V., and Thompson, P.R. (2014) Citrullination unravels Stem Cells. *Nature Chem. Bio.* 10, 327-328. **Invited commentary. PMC4632640**
79. U, K.P., Subramanian, V., Nicholas, A.P., **Thompson, P.R.**, and Ferretti, P. (2014) Modulation of calcium-induced cell death in human neural stem cells by the novel peptidylarginine deiminase-AIF pathway. *Biochim Biophys Acta.* 1843, 1162-1171. **PMC3996523**

80. Dwivedi, N., Neeli, I., Schall, N., Wan, H., Desiderio, D.M. Csernok, E., **Thompson, P.R.**, Dali, H., Briand, J.P., Muller, S., and Radic, M. (2014) Deimination of Linker Histones Links Neutrophil Extracellular Trap Release with Autoantibodies in Systemic Autoimmunity. *FASEB J.* **PMC4756806**
81. Lewallen, D.M., Bicker, K.L., Maddoux, F., Chase, P., Anguish, L., Coonrod, S.A., Hodder, P., Thompson, P.R. (2014) A FluoPol-ABPP PAD2 high-throughput screen identifies the first calcium site inhibitor targeting the PADs. *ACS Chem Biol* 9, 913-921. **PMC4108211**
82. Knight, J.S. Luo, W., O'Dell, A.A., Zhao, W., Subramanian, V., Guo, C., Grenn, R.C., **Thompson, P.R.**, Eitzman, D.T., and Kaplan, M.J. (2014) Peptidylarginine deiminase inhibition reduces vascular damage and modulates innate immune responses in murine models of atherosclerosis. *Circulation Res.* 114, 947-956. **Highlighted by Circulation Research. PMC4185401**
83. Rust, H.L., Subramanian, V., West, G.M., Young, D.D., Schultz, P.G., Thompson, P.R. (2014). Using Unnatural Amino Acid Mutagenesis to Probe the Regulation of PRMT1. *ACS Chem. Biol.* 9, 649-655. **Highlighted by ACS Chem Bio and featured on the cover PMC4505744**
84. Dreyton, C.J., Anderson, E.D., Subramanian, V., Boger, D.L. Thompson, P.R. (2014). Insights into the Mechanism of Streptonigrin-Induced Protein Arginine Deiminase Inactivation. *Bioorg & Med Chem* 22, 1362-1369. **PMC3954981**
85. Lewallen, D.M., Sreelatha, A., Dharmarajan, V., Madoux, F., Chase, P., Griffin, P.R., Orth, K., Hodder, P., and **Thompson, P.R.** (2014). Inhibiting AMPylation: A novel screen to identify the first small molecule inhibitors of protein AMPylation. *ACS Chem. Biol.* 9, 433-442. **Highlighted by C&E News. PMC3944102**
86. Dillon, M.B.C., Rust, H.L., **Thompson, P.R.** and Mowen, K.A. (2013). Automethylation of Protein Arginine Methyltransferase 8 Regulates Activity by Impeding AdoMet Sensitivity. *J. Biol. Chem.* 288, 27872-80. **PMC3784702**
87. Wang, M., Xu, R.-M., **Thompson, P.R.** (2013). Substrate Specificity, Processivity, and Kinetic Mechanism of Protein Arginine Methyltransferase 5. *Biochemistry* 52, 5430-40. **PMID23866019**
88. Fuhrmann, J., Subramanian, V., **Thompson, P.R.** (2013). Targeting the arginine phosphatase YwIe with a catalytic redox-based inhibitor. *ACS Chem. Bio.* 8, 2024-32. **PMID23p838530**
89. Knight, JS, Zhao, W, Luo, W, Subramanian, V, O'Dell, AA, Yalavarthi, S, Hodgin, JB, Eitzman, DT, **Thompson, P.R.**, and Kaplan, MJ. (2013). Inhibition of peptidylarginine deiminase activity suppresses neutrophil extracellular trap formation and type I interferons, while improving vascular function and prothrombotic risk in murine lupus. *J. Clin. Invest.* 123, 2981-2993. **PMC3696545**
90. Slade, D.J., Subramanian, V., Fuhrmann, J., and **Thompson, P.R.** (2013) Chemical and biological methods to detect posttranslational modifications of arginine. *Biopolymers in press* **doi: 10.1002/bip.22256. Cover Article. PMC3900596**
91. Khandpur, R., Carmona-Rivera, C., Vivekanandan-Giri, A., Gizinski, A., Yalavarthi, S., Knight, J. S., Friday, S., Li, S., Patel, R. M., Subramanian, V., **Thompson, P.**, Chen, P., Fox, D. A., Pennathur, S., and Kaplan, M. J. (2013). NETs Are a Source of Citrullinated Autoantigens and Stimulate Inflammatory Responses in Rheumatoid Arthritis, *Sci Trans Med* 5, 178ra140. **PMC3727661**
92. Foyn, H., Jones, J.E., Lewallen, D., Narawane, R., Varhaug, J.E. **Thompson, P.R.**, and Arnesen, T. (2013). Design, synthesis and kinetic characterization of Protein N-terminal acetyltransferase inhibitors. *ACS Chem Bio* 8, 1121-1127. **PMID23557624**
93. Cui, X., Witalison, E.E., Chumanevich, A.P., Chumanevich, A.A., Poudyal, D., Subramanian, V., Schetter, A.J., Harris, C.C., **Thompson, P.R.** Hofseth, L.J. (2013) The induction of microRNA-16 in colon cancer cells by protein arginine deiminase inhibition causes a p53-dependent cell cycle arrest. *PLOS One*, 8, e53791. **PMC3538596**

94. Bicker, K.L. and **Thompson, P.R.** (2013) The protein arginine deiminases (PADs): Structure, Function, Inhibition, and Disease. *Biopolymers*, 99, 155-163. **PMC3507426**
95. Rohrbach, A., Slade, D.J., **Thompson, P.R.**, Mowen, K.A. (2012) Activation of PAD4 in NET formation. *Frontiers in Molecular Innate Immunity*, 3, 360. **PMC3525017**
96. McElwee, J.L., Mohanan, S., Griffith, O.L., Breuer, H.C., Anguish, L.J., Cherrington, B.D., Palmer, A.M., Howe, L.R., Subramanian, V., Causey, C.P., **Thompson, P.R.**, Gray., J.W., Coonrod, S.A. (2012) Identification of PADI2 as a potential breast cancer biomarker and therapeutic target. *BMC Cancer*, 12, 500. **PMC3571905**
97. Bicker, K.L., Anguish, L., Chumanevich, A.A., Cameron, M.D., Cui, X., Witalison, E., Subramanian, V., Zhang, X., Chumanevich, A.P., Hofseth, L.J., Coonrod, S.A., **Thompson, P.R.** (2012) D-amino acid based protein arginine deiminase inhibitors: Synthesis, pharmacokinetics, and in cellulo efficacy. *ACS Med Chem Lett* 3, 1081-1085. **PMC3572853**
98. Bicker, K.L., Subramanian, V., Chumanevich, A., Hofseth, L.J., and **Thompson, P.R.** (2012) Seeing Citrulline: Development of a phenylglyoxal-based probe to visualize protein citrullination. *J Am Chem Soc*, 134, 17015-17018. **Highlighted by C&E News, NIGMS, Florida Weekly, ACS Chemical Biology.** **PMC3572846**
99. Mohanan, S., Cherrington, B.D., Horibata, S., McElwee, J.L., **Thompson, P.R.** and Coonrod, S.A. (2012) Potential Role of Peptidylarginine Deiminase Enzymes (PADs) and Protein Citrullination in Cancer Pathogenesis. *Biochemistry Research International* 2012, 895343. **PMC3457611**
100. Zhang, X., Bolt, M., Guertin, M. J., Chen, W., Zhang, S., Cherrington, B. D., Slade, D. J., Dreyton, C. J., Subramanian, V., Bicker, K. L., **Thompson, P.R.**, Mancini, M. A., Lis, J. T., and Coonrod, S. A. (2012) Peptidylarginine deiminase 2-catalyzed histone H3 arginine 26 citrullination facilitates estrogen receptor alpha target gene activation, *Proc Natl Acad Sci U S A* 109, 13331-13336. **PMC3421185**
101. Kan, R., Jin, M., Subramanian, V., Causey, C.P., **Thompson, P.R.** and Coonrod, S.A. (2012) Potential role for PADI-mediated histone citrullination in preimplantation development. *BMC Developmental Biology* 12, 19. **PMC3430579**
102. Lewallen, D.M., Steckler, C.J., Knuckley, B. Chalmers, M.J. and **Thompson, P.R.** (2012) Probing adenylation: Using a fluorescently labelled ATP probe to directly label and immunoprecipitate VopS substrates. *Mol. Biosyst.* 8, 1701-1706. **PMID: 22456874**
103. Evjenth, R.H., Brenner, A.K., **Thompson, P.R.**, Thomas Arnesen, T., Froystein, N.A., and Lillehaug, J.R. (2012) The human protein N-terminal acetyltransferase hNaa50p (hNat5/hSan) follows an ordered sequential catalytic mechanism: A combined kinetic and NMR study. *J. Biol. Chem.* 287, 10081-10088. **PMC3323058**
104. Mohamed, B.M., Verma, N.K., Davies, A.M., McGowan, A., Staunton, K.C., Prina-Mello, A., Kelleher, D., Botting, C.H., Causey, C.P., **Thompson, P.R.**, Pruijn, G.J.M., Kisin, E.R., Tkach, A.V., Shvedova, A.A., Volkov, Y. (2012) Citrullination of proteins: a common post-translational modification pathway induced by different nanoparticles in vitro and in vivo. *Nanomedicine*, 7, 1181-1195. **PMC3465773**
105. Obianyo, O., and **Thompson, P.R.** (2012). Kinetic mechanism of protein arginine methyltransferase 6. *J. Biol. Chem.* 287, 6062-6071. **PMC3325592**
106. Bicker, K.L. Sun, J., Harrell, M., Zhang, Y., Pena, M.M., **Thompson, P.R.** and Lavigne, J.J. (2012). Synthetic Lectin Arrays for the Detection and Discrimination of Cancer Associated Glycans and Cell Lines. *Chemical Sciences*, 3, 1147-1156.
107. Dwivedi, N.; Upadhyay, J.; Neeli, I.; Khan, S.; Pattanaik, D., Myers L., Kirou K.A., Hellmich B., Knuckley, B., **Thompson, P.R.**, Crow M.K., Mikuls, T.R., Csernok, E., Radic, M. (2012) Felty's syndrome autoantibodies bind to deiminated histones and neutrophil extracellular traps. *Arthritis Rheum*, 64, 982-992. **PMC4729190**

108. Jones, J.E., Slack, J.L., Fang, P., Zhang, X., Subramanian, V., Causey, C.P., Coonrod, S.A., Guo, M., **Thompson, P.R.** (2012) Synthesis and screening of a haloacetamide containing library to identify PAD4 selective inhibitors. *ACS Chem Biol.*, 7, 160-165. **PMC3262960**
109. Causey, C.P., Jones, J.E., Slack, J.L., Kamei, D., Jones, L.E., Subramanian, V., Knuckley, B., Ebrahimi, P., Chumanevich, A.A., Luo, Y., Hashimoto, H., Sato, M., Hofseth, L.J., and **Thompson, P.R.** (2011) The development of *N*- $\alpha$ -(2-carboxyl)benzoyl-*N*<sup>5</sup>-(2-fluoro-1-iminoethyl)-L-ornithine amide (*o*-F-amidine) and *N*- $\alpha$ -(2-carboxyl)benzoyl-*N*<sup>5</sup>-(2-Chloro-1-iminoethyl)-L-ornithine amide (*o*-Cl-amidine) as second generation Protein Arginine Deiminase (PAD) inhibitors. *J. Med. Chem.* 54, 6919-6935. **PMC3196593**
110. Taki, H., Gomi, T., Knuckley, B., **Thompson, P.R.**, Vugrek, O., Hirata, K., Miyahara, T., Shinoda, K., Hounoki, H., Sugiyama, E., Usui, I., Urakaze, M., Tobe, K., Ishimoto, T., Inoue, R., Tanaka, A., Mano, H., Ogawa, H., Mori, H. (2011) Purification of enzymatically inactive peptidylarginine deiminase type 6 from mouse ovary that reveals hexameric structure different from other dimeric isoforms. *Advances in Bioscience and Biotechnology*, 2, 304-310.
111. Obianyo, O., Causey, C.P., Jones, J.E., **Thompson, P.R.** (2011) Activity-Based Protein Profiling of Protein Arginine Methyltransferase 1, *ACS Chem Biol.*, 6, 1127-1135. **PMC3199286**
112. Rust, H.L., and **Thompson, P.R.** (2011) Kinase Consensus Sequences: A Breeding Ground for Crosstalk, *ACS Chem Biol.* 6, 881-892. **PMC3176959**
113. Lange, S., Goegel, S., Leung, K-Y., Nicholas, A.P., Causey, C.P., **Thompson, P.R.**, Greene, N.D.E., and Ferretti, P. (2011) Protein deiminases: New players in the developmentally regulated loss of neural regenerative ability. *Developmental Biology* 355, 205-214. **PMC4768803**
114. Zhang, X., Gamble, M.J., Stadler, S., Cherrington, B.D., Causey, C.P., **Thompson, P.R.**, Allis, C.D., Kraus, W.L, and Coonrod, S.A. (2011) Genome Wide Analysis Reveals PADI4 to be Predictive of Subsets of Actively Transcribed Genes in Breast Cancer Cells. *PLoS Genetics* 7, e1002112. **PMC3107201**
115. Slack, J.L., Jones, L.E., Bhatia, M., and **Thompson, P.R.** (2011) Autodeimination of Protein Arginine Deiminase 4 alters protein-protein interactions but not activity. *Biochemistry* 50, 3997-4010. **PMC3091952**
116. Rust, H.L., Zurita-Lopez, C.I., Clarke, S., and **Thompson, P.R.** (2011). Mechanistic studies on the transcriptional coactivator Protein Arginine Methyltransferase 1. *Biochemistry* 50, 3332-3345. **PMC3582369**
117. Bicker, K., Sun, J., Lavigne, J.J., and **Thompson, P.R.** (2011) Boronic acid functionalized peptidyl synthetic lectins: Combinatorial library design, peptide sequencing, and selective glycoprotein recognition. *ACS Combinatorial Science*, 13, 232-243. **PMC3090474**
118. Chumanevich, A.A., Causey, C. P., Knuckley, B. A., Jones, J. E., Poudyal, D., Chumanevich, A. P., Davis, T., Matesic, L. E., **Thompson, P.R.**, and Hofseth, L. J. (2011) Suppression of colitis in mice by Cl-amidine: a novel peptidylarginine deiminase (PAD) inhibitor. *American Journal of Physiology - Gastrointestinal and Liver Physiology*, 300, G929-38. PMID: 21415415. **PMC3119113.**
119. Slack, J., Causey, C.P., Luo, Y, **Thompson, P.R.** (2011) The Development and Use of Clickable Activity Based Protein Profiling Agents for Protein Arginine Deiminase 4. *ACS Chem Biol.* 6, 466-476. **PMC3098906**
120. Willis, V, Gizinski, A., Knuckley, B., Causey, C.P., Luo, Y., Banda, N., Holers, V.M., **Thompson, P.R.** (2011) Efficacy of Cl-amidine in the collagen induced model of rheumatoid arthritis. *J. Immuno* 186, 4396-4404. **PMC3085980**
121. Slack, J.L., Causey, C.P., and Thompson, P.R. (2011) Protein arginine deiminase 4: a target for an epigenetic cancer therapy, *Cell Mol Life Sci.* 68, 709-720. **PMC3815436**

122. Bicker, K.L., Obianyoy, O., Rust, H.L., and **Thompson, P.R.** (2011) A combinatorial approach to characterize the substrate specificity of protein arginine methyltransferase 1, *Mol Biosyst* 7, 48-51. **PMC2999663**
123. Dreyton, CJ, Jones, JE, Knuckley, BA, Subramanian, V, Anderson, ED, Brown, SJ, Fernandez-Vega, V, Eberhart, C, Spicer, T, Zuhl, AM, Ferguson, J, Speers, AE, Wang, C, Boger, DL, Thompson, P, Cravatt, BF, Hodder, P, and Rosen, H. (2010) Optimization and characterization of a pan protein arginine deiminase (PAD) inhibitor, In *Probe Reports from the NIH Molecular Libraries Program*, Bethesda (MD).
124. Jones, J.E., Dreyton, C.J., Flick, H., Causey, C.P., and **Thompson, P.R.** (2010) Mechanistic studies of agmatine deiminase from multiple bacterial species, *Biochemistry* 49, 9413-9423. **PMC2964429**
125. Obianyoy, O., Causey, C.P., Osborne, T.C., Jones, J. E., Lee, Y.H., Stallcup, M.R., and **Thompson, P.R.** (2010) A chloroacetamide-based inactivator of protein arginine methyltransferase 1: design, synthesis, and in vitro and in vivo evaluation, *Chembiochem* 11, 1219-1223. **PMC3060404**
126. Knuckley, B., Jones, J.E., Bachovchin, D.A., Slack, J., Causey, C.P., Brown, S.J., Rosen, H., Cravatt, B.F., and **Thompson, P.R.** (2010) A fluopol-ABPP HTS assay to identify PAD inhibitors, *Chem Commun (Camb)* 46, 7175-7177. **PMC2943038.**
127. Knuckley, B., Causey, C.P., Pellechia, P.J., Cook, P.F., and **Thompson, P.R.** (2010) Haloacetamide-based inactivators of protein arginine deiminase 4 (PAD4): evidence that general acid catalysis promotes efficient inactivation, *Chembiochem* 11, 161-165. **PMC3056394**
128. Knuckley, B., Causey, C.P., Jones, J.E., Bhatia, M., Dreyton, C.J., Osborne, T.C., Takahara, H., and **Thompson, P.R.** (2010) Substrate specificity and kinetic studies of PADs 1, 3, and 4 identify potent and selective inhibitors of protein arginine deiminase 3, *Biochemistry* 49, 4852-4863. **PMC2884139.**
129. Jones, J.E., Causey, C.P., Lovelace, L., Knuckley, B., Flick, H., Lebioda, L., and **Thompson, P.R.** (2010) Characterization and inactivation of an agmatine deiminase from *Helicobacter pylori*, *Bioorg Chem* 38, 62-73. **PMC2823940**
130. Jones, J.E., Causey, C.P., Knuckley, B., Slack, J.L., and **Thompson, P.R.** (2009) Protein arginine deiminase 4 (PAD4): Current understanding and future therapeutic potential, *Curr Opin Drug Discov Devel* 12, 616-627. **PMC3771078**
131. Malinowski, R., Higgins, R., Luo, Y., Piper, L., Nazir, A., Bajwa, V., Clouse, S.D., **Thompson, P.R.**, Stratmann, J.W. (2009) The tomato brassinosteroid receptor BRI1 increases binding of systemin to tobacco plasma membranes, but is not involved in systemin signaling. *Plant Mol. Biol.* 70, 603-616. **PMID: 19404750**
132. Obianyoy, O., Osborne, T.C., and **Thompson, P.R.** (2008) Kinetic mechanism of Protein Arginine Methyltransferase 1. *Biochemistry* 47, 10420-10427. **PMC2933744**
133. Yao, H., Li, P., Venters, P., Zheng, S., **Thompson, P.R.**, Pugh, B.F., and Wang, Y. (2008) Histone Arg modifications and p53 regulate the expression of OKL38, a mediator of apoptosis. *J. Biol. Chem.*, **283**, 20060-20068. **PMC2459274**
134. Li, P., Yao, H., Zhang, Z., Li, M., Luo, Y, **Thompson, P.R.**, Gilmour, D. and Wang, Y. (2008) Targeting peptidylarginine deiminase 4 by p53 for gene regulation. *Mol. Cell. Biol.*, **28**, 4745-4758. **PMC2493360**
135. Arnesen, T. **Thompson, P.R.**, Varhaug, J.E., and Lillehaug, J.R. (2008) The protein acetyltransferase ARD1: a novel cancer drug target? *Current Cancer Drug Targets.* **8**, 545-553.
136. Causey, C., and Thompson, P.R. (2008) An improved synthesis of haloacetamide-based inactivators of protein arginine deiminase 4 (PAD4). *Tetrahedron Lett*, **49**, 4383-4385.

137. Osborne, T.C., Weller, R., Rajski, S.R., and **Thompson, P.R.** (2008) *In Situ* Generation of a Bisubstrate Analog for Protein Arginine Methyltransferase 1. *J Am Chem Soc*, **130**, 4574-4575. **Highlighted in Faculty of 1000 – Biology PMC2723811**
138. Knuckley, B., Luo, Y., and **Thompson, P.R.** (2008) Profiling Protein Arginine Deiminase 4 (PAD4): A Novel Screen to Identify PAD4 Inhibitors. *Bioorg Med Chem* **16**, 739-745.
139. Liu, X., Wang, L., Zhao, K., **Thompson, P.R.**, Hwang, Y., Marmorstein, R., Cole, P.A. (2008) The Structural Basis of Protein Acetylation by the p300/CBP Transcriptional Coactivator. *Nature* **451**, 846-850.
140. Hwang, Y., **Thompson, P.R.**, Wang, L., Jiang, L., Kelleher, N.L., and Cole, P.A. (2007) A Selective Chemical Probe for Coenzyme-A Requiring Enzymes. *Angew Chem Int Ed Engl* **46**, 7621-7624.
141. Osborne, T.C., Obianyano, O., Zhang, X., Cheng, X., and **Thompson, P.R.** (2007) Protein Arginine Methyltransferase 1: Positively charged residues in substrate peptides distal to the site of methylation are important for substrate binding and catalysis. *Biochemistry* **46**, 13370-13381.
142. Zou, Y., Broughton, D.L., Bicker, K., **Thompson, P.R.**, and Lavigne, J.J. (2007) Peptide Borono-Lectins (PBLs): New Glycomics Tool for Cancer Diagnostics. *Chembiochem* **8**, 2048-2051. **Highlighted in Faculty of 1000 – Biology**
143. Bhatia, M., **Thompson, P.R.** (2007) Methyl lysine analogs: rewriting the code. *Nature Chem. Biol.* **3**, 249-250.
144. Knuckley, B., Bhatia, M., **Thompson, P.R.** (2007) Protein Arginine Deiminase 4: Evidence for a reverse protonation mechanism. *Biochemistry* **46**, 6578-6587.
145. Luo, Y., Knuckley, B., Bhatia, M., **Thompson, P.R.** (2006) Activity Based Protein Profiling Reagents for Protein Arginine Deiminase 4 (PAD4): Synthesis and in vitro Evaluation of a Fluorescently-labeled Probe. *J Am Chem Soc* **128**, 1092-1093. **Highlighted in Faculty of 1000 – Biology**
146. Luo, Y., Arita, K., Bhatia, M., Knuckley, B., Lee, Y.H., Stallcup, M.R. Sato, M., **Thompson, P.R.** (2006) Inhibitors and Inactivators of Protein Arginine Deiminase 4: Functional and structural characterization. *Biochemistry* **45**, 11727-11736. **Highlighted by ACS Chemical Biology**
147. **Thompson, P.R.** and Fast, W. (2006) Histone citrullination by protein arginine deiminase: Is arginine methylation a green light or a roadblock? *ACS Chem. Biol* **1**, 433-441.
148. Luo, Y., Knuckley, B., Lee, Y.H., Stallcup, M.R., and **Thompson, P.R.**, (2006). A Fluoro-Acetamide Based Inactivator of Protein Arginine Deiminase 4 (PAD4): Design, Synthesis, and in vitro and in vivo Evaluation. *J Am Chem Soc* **128**, 1092-1093. **Highlighted in Faculty of 1000 – Biology**
149. Kearney, P.L., Bhatia, M., Jones, N.G., Yuan, L., Glascock, M.C., Catchings, K.L., Yamada, M., and **Thompson, P.R.**, (2005). Kinetic characterization of protein arginine deiminase 4: a transcriptional corepressor implicated in the onset and progression of rheumatoid arthritis. *Biochemistry* **44**, 10570-10582.
150. Wang, D., **Thompson, P.**, Cole, P.A., and Cotter, R.J., (2005). Structural analysis of a highly acetylated protein using a curved-field reflectron mass spectrometer. *Proteomics* **5**, 2288-2296.
151. **Thompson, P.R.**, Wang, D., Wang, L., Fulco, M., Pediconi, N., Zhang, D., An, W., Ge, Q., Roeder, R.G., Wong, J., Levrero, M., Sartorelli, V., Cotter, R.J., and Cole, P.A., (2004). Regulation of the p300 HAT domain via a novel activation loop. *Nat Struct Mol Biol* **11**, 308-315. **Highlighted by Nat Struct. Mol. Biol. and in Faculty of 1000 – Biology**

152. Sagar, V., Zheng, W., **Thompson, P.R.**, and Cole, P.A., (2004). Bisubstrate analogue structure-activity relationships for p300 histone acetyltransferase inhibitors. *Bioorg Med Chem* **12**, 3383-3390.
153. Zheng, Y., **Thompson, P.R.**, Cebrat, M., Wang, L., Devlin, M.K., Alani, R.M., and Cole, P.A., (2004). Selective HAT inhibitors as mechanistic tools for protein acetylation. *Methods Enzymol* **376**, 188-199.
154. Cebrat, M., Kim, C.M., **Thompson, P.R.**, Daugherty, M., and Cole, P.A., (2003). Synthesis and analysis of potential prodrugs of coenzyme A analogues for the inhibition of the histone acetyltransferase p300. *Bioorg Med Chem* **11**, 3307-3313.
155. **Thompson, P.R.**, Boehr, D.D., Berghuis, A.M., and Wright, G.D., (2002). Mechanism of aminoglycoside antibiotic kinase APH(3')-IIIa: role of the nucleotide positioning loop. *Biochemistry* **41**, 7001-7007.
156. **Thompson, P.R.**, Kurooka, H., Nakatani, Y., and Cole, P.A., (2001). Transcriptional coactivator protein p300. Kinetic characterization of its histone acetyltransferase activity. *J Biol Chem* **276**, 33721-33729.
157. **Thompson, P.R.** and Cole, P.A., (2001). Probing the mechanism of enzymatic phosphoryl transfer with a chemical trick. *Proc Natl Acad Sci U S A* **98**, 8170-8171.
158. Boehr, D.D.,\* **Thompson, P.R.**,\* and Wright, G.D., (2001). Molecular mechanism of aminoglycoside antibiotic kinase APH(3')-IIIa: roles of conserved active site residues. *J Biol Chem* **276**, 23929-23936. \*Co-first authors.
159. DeLaBarre, B., **Thompson, P.R.**, Wright, G.D., and Berghuis, A.M., (2000). Crystal structures of homoserine dehydrogenase suggest a novel catalytic mechanism for oxidoreductases. *Nat Struct Biol* **7**, 238-244.
160. **Thompson, P.R.**, Schwartzenhauer, J., Hughes, D.W., Berghuis, A.M., and Wright, G.D., (1999). The COOH terminus of aminoglycoside phosphotransferase (3')-IIIa is critical for antibiotic recognition and resistance. *J Biol Chem* **274**, 30697-30706.
161. Daigle, D.M., McKay, G.A., **Thompson, P.R.**, and Wright, G.D., (1999). Aminoglycoside antibiotic phosphotransferases are also serine protein kinases. *Chem Biol* **6**, 11-18.
162. Wright, G.D. and **Thompson, P.R.**, (1999). Aminoglycoside phosphotransferases: proteins, structure, and mechanism. *Front Biosci* **4**, D9-21.
163. **Thompson, P.R.**, Hughes, D.W., Cianciotto, N.P., and Wright, G.D., (1998). Spectinomycin kinase from *Legionella pneumophila*. Characterization of substrate specificity and identification of catalytically important residues. *J Biol Chem* **273**, 14788-14795.
164. Hon, W.C., McKay, G.A., **Thompson, P.R.**, Sweet, R.M., Yang, D.S., Wright, G.D., and Berghuis, A.M., (1997). Structure of an enzyme required for aminoglycoside antibiotic resistance reveals homology to eukaryotic protein kinases. *Cell* **89**, 887-895.
165. **Thompson, P.R.**, Hughes, D.W., and Wright, G.D., (1996). Mechanism of aminoglycoside 3'-phosphotransferase type IIIa: His188 is not a phosphate-accepting residue. *Chem Biol* **3**, 747-755.
166. **Thompson, P.R.**, Hughes, D.W., and Wright, G.D., (1996). Regiospecificity of aminoglycoside phosphotransferase from Enterococci and Staphylococci (APH(3')-IIIa). *Biochemistry* **35**, 8686-8695.
167. McKay, G.A., **Thompson, P.R.**, and Wright, G.D., (1994). Broad spectrum aminoglycoside phosphotransferase type III from *Enterococcus*: overexpression, purification, and substrate specificity. *Biochemistry* **33**, 6936-6944.

#### (Patents)

1. **Thompson, P.R.** and Luo, Y. Synthesis and use of novel inhibitors and inactivators of protein arginine deiminases. US Patent 7964636. Issued on June 21, 2011.

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., Obiany, O., Causey, C.P. Chloroacetamide Based Inhibitors and Activity Based Probes for the Protein Arginine Methyltransferases. 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 .
5. **Thompson, P.R.**, Causey, C.P. Protein Arginine Deiminase inhibitors as novel therapeutics for rheumatoid arthritis and cancer. US Patent 8,921,595. Issued on December 30, 2014.
6. **Thompson, P.R.**, Hofseth, L.J., Knuckley, B.A. Detecting Protein Arginine Deiminase (PAD) Activity in Human Tissues and Sera. US Patent Application 13/476,379. Publication date May 21, 2012.

(Non-Peer Reviewed)

1. "Mechanistic Insights into the Regulation of Protein Arginine Deiminases 2 and 4," 23<sup>rd</sup> Enzyme Mechanisms Conference, Coronado, CA, January 5<sup>th</sup>, 2013
2. **Thompson, P.R.** (2009) "Chemical approaches to studying PAD4 function," Abstracts of Papers, 237<sup>th</sup> ACS National Meeting, Salt Lake City, UT, USA, March 22-26, 2009.
3. Obiany, O., Osborne, T.C., Causey, CP, Young Ho Lee, Michael Stallcup, and **Thompson, P.R.** "Mechanism and Inhibition of Protein Arginine Methyltransferase 1," 21<sup>st</sup> Enzyme Mechanisms Conference, Tucson, AZ, January 3-7, 2009.
4. Knuckley, B. and **Thompson, P.R.** (2008) "Mechanism and Inhibition of Protein Arginine Deiminases," 21<sup>st</sup> Enzyme Mechanisms Conference, Tucson, AZ, January 3-7, 2009.
5. **Thompson, P.R.**, Osborne, T.C. and Obiany, 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. Haloacetamide 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.
4. Broughton, D.L., Zou, Y., Lavigne, J.J., and **Thompson, P.R.** Peptide-based borono-lectins (PBLs) as selective saccharide sensors. Abstracts of Papers, 231<sup>st</sup> ACS National Meeting, Atlanta, GA, USA, March 26-30, 2006.
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, 231<sup>st</sup> ACS National Meeting, Atlanta, GA, USA, March 26-30, 2006.
6. **Thompson, P.R.**. Inhibitors/Inactivators of Protein Arginine Deiminase 4. Abstracts of Papers, 231<sup>st</sup> ACS National Meeting, Atlanta, GA, USA, March 26-30, 2006
7. Luo, Y., and **Thompson, P.R.**. Protein Arginine Deiminase 4: Synthesis of Mechanism-based Inactivators. Abstracts of Papers, 230<sup>th</sup> ACS National Meeting, Washington, DC, United States, August 28-September 01, 2005.
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 Institute, 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. National Institutes of Health/National Center for Advancing Translational. **BU-CMD Chemical Library Consortium: Fostering Collaborations Between Chemists and Biologists for Translational Discovery** (U01 TR002625, 2020-2023) -- \$292,254
3. Disarm Therapeutics. **Disarm Therapeutics Compound Characterization** (2019) -- \$18,795
4. Celgene Corporation. **Identification of Citrullinated Proteins elevated in a murine model for Rheumatoid Arthritis** (2018-2019) -- \$39,896
5. Padlock Therapeutics. **Unlocking the Padlock.** (2015-2017) --\$200,000.
6. Alzheimer's Disease Drug Discovery Foundation. **Inhibiting Neutrophil Extracellular Trap (NET) Formation as a Novel Therapeutic Approach to Alzheimer's Disease** (2016) -- \$150,000
7. Janssen Pharmaceuticals (a Johnson and Johnson subsidiary). **Identification of citrullinated biomarkers of RA** (2014-2016) -- \$200,000.
8. Eli Lilly & Co. **Interrogating the Regulatory Importance of Protein Arginine Deiminases.** (2014-2017) -- \$100,000.

9. National Institutes of Health/National Institute of General Medical Sciences. (R01 110394: 2014-2017) **Identification of citrullinated biomarkers of cancer.** \$1,700,000.
10. National Institutes of Health/National Institute of General Medical Sciences. **Chemical Probes Targeting the Protein Arginine Deiminases.** (R01 GM079357: 2007-2016) – \$3,578,000
11. Department of Defense. **Synthetic Lectins: New Tools for Detection and Management of Prostate Cancer.** (W81XWH-11-PCRP-SIDA: 2012 - 2015) – \$750,000
12. National Institutes of Health/National Cancer Institute (R01 CA151304: 2011-2016) – \$542,040
13. National Institutes of Health/NIH Heart Lung Blood Institute (R01: 2013-2014) – \$304,180
14. Camille Dreyfus Teacher Scholar Award (2009-2016) – \$75,000
15. National Institutes of Health/National Center for Research Resources/COBRE (P20: 2007-2010) – Candidate’s portion -- \$275,000
16. National Institutes of Health/National Institute of General Medical Sciences (R01 Supplement: 2007-2008) – \$53,265
17. National Institutes of Health/National Institute of General Medical Sciences (R01 Supplement: 2007-2008) – \$15,717
18. National Institutes of Health/National Institute of General Medical Sciences (R01 Supplement: 2009-2011) – \$73,920
19. National Institutes of Health/National Institute of General Medical Sciences (R01 Supplement: 2009-2011) – \$56,550
20. American College of Rheumatology: Within Our Reach Campaign (2008-2010) – \$400,000
21. American Heart Association (2005-2007) – \$132,000
22. National Science Foundation (CRC: 2005-2008) – Candidate’s portion ~ \$18,915
23. 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 – \$ 14,102,000**

### **SEMINARS PRESENTED (119 total):**

1. “The role of protein citrullination in autoimmunity” Department of Chemistry, Tuft University, September 25, 2019
2. “At the Crossroads: Citrullination and Nicotinamide Methylation” TSRC Epigenetic Mechanisms Preliminary, July 9, 2019
3. “The Thompson Lab at UmassMed” UMMS/UMA Joint Cancer Research Retreat, June 18, 2019
4. “Citrullination in Inflammation” Department of Chemistry, Johns Hopkins University, Baltimore, MD, February 20, 2019
5. “Chemical probes to study protein citrullination” Department of Chemistry, University of South Florida, Tampa, FL, January 24, 2019
6. “Chemical probes to study protein citrullination” Department of Chemistry, Boston University, Boston, MA, November 8, 2018
7. “At the Crossroads: Citrullination and Nicotinamide Methylation,” Epigenetics Club, University of Massachusetts Medical School, November 7, 2018
8. “Chemical probes to study protein citrullination,” Department of Chemistry, Texas A&M, College Station, Texas, October 25, 2018
9. “Development of a PAD1 specific inhibitor,” University of Massachusetts Medical School Retreat, Amherst, MA, September 21, 2018.

10. "Chemical Probes to Study Protein Citrullination," Department of Molecular Medicine, University of Massachusetts Medical School, Worcester, MA, September 17, 2018.
11. "Chemical Probes to Study Protein Citrullination," Department of Chemistry, Worcester Polytechnic University, Worcester, MA, September 12, 2018.
12. "The Rheumatoid Arthritis Associated Citrullinome," American Society for Biochemistry and Molecular Biology Annual Meeting, San Diego, CA, April 22, 2018.
13. "Picking the Padlock: Chemical Strategies to interrogate the Protein Arginine Deiminases." Department of Medicinal Chemistry, Purdue University, Purdue, IN, April 13, 2018.
14. "The Rheumatoid Arthritis Associated Citrullinome," Celgene, Cambridge, MA, April 3, 2018.
15. "Picking the Padlock: Chemical Strategies to interrogate the Protein Arginine Deiminases." Celgene, Cambridge, MA, March 2, 2018
16. "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.
17. "Picking the Padlock: Chemical Strategies to interrogate the Protein Arginine Deiminases." Center for Drug Design, University of Minnesota, Minneapolis, MN, December 19, 2017.
18. "Picking the Padlock: Chemical Strategies to interrogate the Protein Arginine Deiminases." Lady Davis Institute, McGill University School of Medicine, November 3, 2017.
19. "Picking the Padlock: Chemical Strategies to interrogate the Protein Arginine Deiminases." Center for Cancer Epigenetics, MD Anderson, Smithville, TX, May 5, 2017.
20. "Picking the Padlock: Chemical Strategies to interrogate the Protein Arginine Deiminases." Chemical Biology, Yale University West Campus, April 25, 2017.
21. "The Protein Arginine Deiminases: Therapeutic Targets for Inflammatory Disease and Cancer." ACS Meeting, San Francisco, April 5, 2017.
22. "The Protein Arginine Deiminases: Therapeutic Targets for Inflammatory Disease and Cancer." Department of Chemistry, Syracuse University, Syracuse, NY, March 28, 2017.
23. "The Protein Arginine Deiminases: Therapeutic Targets for Inflammatory Disease and Cancer." Department of Chemistry, Temple University, Philadelphia, PA, February 16, 2017.
24. "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.
25. "The Protein Arginine Deiminases: Therapeutic Targets for Inflammatory Disease and Cancer." Department of Chemistry, University of Pittsburg, Pittsburg, PA, January 26, 2017.
26. "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.
27. "The Protein Arginine Deiminases: Therapeutic Targets for Inflammatory Disease and Cancer." The Kennedy Institute of Rheumatology at Oxford University, Oxford, UK, November 10, 2016.
28. "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.
29. "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
30. "Picking the PADlock: Chemical Probes To Characterize PAD Biology." The Structural Genomics Consortium, University of Toronto, Toronto, ON, Canada, July 8, 2016.
31. "Oxidative Regulation of PRMT1 Activity" 2016 *Biological Methylation* Conference, Lisbon, Portugal, June 21.
32. "Picking the PADlock: Chemical Probes To Characterize PAD Biology." Bristol Meyers Squibb, Princeton, NJ, May 17, 2016.
33. "Picking the PADlock: Chemical Probes To Characterize PAD Biology." PacificChem, Honolulu, HI, December 16, 2015
34. "Small Molecule Screening Identifies a Nanomolar Inhibitor of the Protein Arginine Deiminases." Dartmouth Medical School, December 2, 2015
35. "Picking the PADlock: Chemical Probes To Characterize PAD Biology." Department of Chemistry, MIT, Cambridge, MA, September 28, 2015.

36. "Picking the PADlock: Chemical Probes To Characterize PAD Biology." Department of Chemistry, UMass Amherst, Amherst, MA, September 17, 2015.
37. "Picking the PADlock: Chemical Probes To Characterize PAD Biology." Department of Chemistry, UCONN, Mansfield, CT, May 13, 2015.
38. "Picking the PADlock: Chemical Probes To Characterize PAD Biology." Mini workshop on PAD inhibition for inflammatory and malignant disease. Oxford, UK, April 13, 2015.
39. "Picking the PADlock: Chemical Probes To Characterize PAD Biology." ASBMB Meeting, Boston, MA, March 30, 2015.
40. "Picking the PADlock: Chemical Probes To Characterize PAD Biology." Department of Chemistry, Wesleyan University, Middletown, CT, March 27, 2015.
41. "Epigenetics of Protein Citrullination." Epigenetics Club." UMASS Medical School, Worcester, MA, March 3, 2015
42. "Picking the PADlock: Chemical Probes To Characterize PAD Biology." National Cancer Institute, Frederick, MD, February 12, 2015.
43. "The Chemical Biology of Protein Arginine Phosphorylation" IDR Chalk Talk, UMASS Medical School, Worcester, MA, January 9, 2015
44. "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.
45. "Picking the PADlock: Chemical Probes To Characterize PAD Biology." UMASS Research Retreat, UMASS Amherst, Amherst, MA, November 3, 2014.
46. "Picking the PADlock: Chemical probes targeting the Protein Arginine Deiminases." NET Symposium, Biogen Idec, Cambridge, MA, October 31, 2014
47. "Picking the PADlock: Chemical probes targeting the Protein Arginine Deiminases." Steenbock Symposium, University of Wisconsin, Madison, WI, June 5-7, 2014
48. "Picking the PADlock: Chemical probes targeting the Protein Arginine Deiminases." PAD Summit, Hotel Palomar, Washington, DC, May 6-7, 2014
49. "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.
50. "Picking the PADlock: Chemical probes targeting the Protein Arginine Deiminases." Department of Chemistry, University of Washington, Seattle, WA, February 6, 2014
51. "Chemical probes of Arginine Modifying Enzymes." Department of Biochemistry, University of Massachusetts School of Medicine, Worcester, MA, January 29, 2014
52. "Picking the PADlock," Janssen Pharmaceuticals, Radnor, PA, December 10, 2013.
53. "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.
54. "Picking the PADlock," 4<sup>th</sup> CPA-RSC Symposium on Medicinal Chemistry, Jinan, China, November 2, 2013.
55. "Biology of Citrullination," American College of Rheumatology 2013 Annual Meeting, San Diego, CA, October 29, 2013.
56. "Picking the PADlock," Department of Biochemistry, University of Massachusetts School of Medicine, Worcester, MA, October 23, 2013.
57. "Picking the PADlock," Department of Chemistry, University of Colorado, Boulder, CO, October 14<sup>th</sup>, 2013
58. "Picking the PADlock," Department of Chemistry, University of Florida, Gainesville, FL, September 27<sup>th</sup>, 2013.
59. "Chemical Probes targeting Protein Arginine Deiminase activity: Seeing the Citrillinome," Bioorganic Gordon Research Conference, Proctor Academy, June 11, 2013.
60. "Picking the PADlock," Department of Pharmacology, University of Florida School of Medicine, Gainesville, FL, February 21, 2013.
61. "Picking the PADlock," School of Pharmacy, University of North Carolina, January 22, 2013.
62. "Picking the PADlock," Gerard D Wright 20<sup>th</sup> Anniversary Symposium, Department of Biochemistry, McMaster University, Hamilton, ON, Canada, January 25<sup>th</sup>, 2013.
63. "Picking the PADlock," Department of Chemistry, The Scripps Research Institute, La Jolla, CA, January 8<sup>th</sup>, 2013.

64. "Mechanistic Insights into the Regulation of Protein Arginine Deiminases 2 and 4," 23<sup>rd</sup> Enzyme Mechanisms Conference, Coronado, CA, January 5<sup>th</sup>, 2013
65. "Validating the Protein Arginine Deiminases as therapeutic targets for Rheumatoid Arthritis, Colitis, and Cancer," Institute for Biological Chemistry, Academia Sinica, Taipei, Taiwan, October 18, 2012.
66. "Chemical Probes targeting Protein Arginine Deiminase activity: Seeing the Citrillinome," ASBMB Symposium: Transcriptional Regulation: Chromatin and RNA polymerase II, October 6, 2012, Snowbird, UT.
67. "Chemical Probes of Protein Arginine Methyltransferase Function," FASEB Summer Research Conference entitled: "Biological Methylation: From DNA to Histones", Aspen, Colorado, August 15, 2012.
68. "Validating the Protein Arginine Deiminases as therapeutic targets for Rheumatoid Arthritis, Colitis, and Cancer," Roche Pharmaceuticals, April 13, 2012, Rutherford, NJ.
69. "Validating the Protein Arginine Deiminases as therapeutic targets for Rheumatoid Arthritis, Colitis, and Cancer," Takeda San Diego, March 2, 2012, San Diego, CA.
70. "The Protein Arginine Deiminases," Epizyme, November 8, 2011, Boston, MA.
71. "The Protein Arginine Deiminases," Constellation Pharma, November 7, 2011, Boston, MA.
72. "Chemical Probes of Arginine Modifying Enzymes," Department of Chemistry, University of North Florida, October 21, 2011, Jacksonville, FL.
73. "The Protein Arginine Deiminases," Department of Chemistry, The Scripps Research Institute, March 23, 2011, Jupiter, FL.
74. "PAD Inhibition: A novel Therapeutic Approach for Rheumatoid Arthritis, Colitis, Cancer, Neural Regeneration, and Multiple Sclerosis: Five Diseases, One Drug" Merck Research Laboratories, NJ.
75. "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.
76. "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.
77. "Cl-amidine: A novel Therapeutic for Rheumatoid Arthritis, Colitis, and Cancer," Department of Biomedical Sciences, College of Veterinary Medicine, Cornell University, October 19, 2010.
78. "Cl-amidine: A novel Therapeutic for Rheumatoid Arthritis, Colitis, and Cancer," Johnson and Johnson/Centocor, Radnor, PA, September 17, 2010.
79. "Chemical Probes for Protein Arginine Methyltransferase 1" FASEB Summer Research Conference entitled: "Biological Methylation: From DNA to Histones", Carefree, Arizona, June 10, 2010
80. "Cl-amidine: A novel Therapeutic for Rheumatoid Arthritis?," Within Our Reach Meeting, American College of Rheumatology, Fort Worth, TX, June 4, 2010.
81. "Chemical Probes for Arginine Modifying Enzymes," University of Minnesota, Department of Chemistry, Minneapolis, MN, February 24<sup>th</sup>, 2010.
82. "PAD Inhibition: A novel Therapeutic Approach for Rheumatoid Arthritis." Johns Hopkins University School of Medicine, Division of Rheumatology, Baltimore, MD, December 11<sup>th</sup>, 2009.
83. "Chemical Probes for Arginine Modifying Enzymes," Scripps Florida, Jupiter, FL, November 11<sup>th</sup>, 2009.
84. "Chemical Probes for Arginine Modifying Enzymes," Wake Forest, Department of Chemistry, Winston-Salem, NC, October 28<sup>th</sup>, 2009.

85. "Chemical Probes for Arginine Modifying Enzymes," University of South Carolina, School of Medicine, Columbia, SC, September 26<sup>th</sup>, 2009.
86. "Design and Synthesis of PRMT1 selective inhibitors and chemical probes" University of South Carolina, Department of Chemistry and Biochemistry, Columbia, SC, September 8<sup>th</sup>, 2009.
87. "Chemical approaches to studying PAD4 function," Sanofi-Aventis, Bridgewater, NJ, August 6, 2009.
88. "Chemical Probes for Arginine Modifying Enzymes," Enzymes, coenzymes, and metabolic pathways, Gordon Research Conference, Waterville Valley Resort, NH, July 8, 2009.
89. "Cl-amidine: A novel Therapeutic for Rheumatoid Arthritis?," Within Our Reach Meeting, American College of Rheumatology, San Diego, CA, June 29, 2009.
90. "Chemical approaches to studying PAD4 function," 237st ACS National Meeting, Salt Lake City, UT, USA, March 23, 2009.
91. "Chemical Approaches to Studying PAD4 Function," *Webinar for Johnson & Johnson Pharmaceuticals*, March 5, 2009.
92. "Chemical Approaches to Studying PAD4 Function," Albert Einstein School of Medicine, Department of Biochemistry, New York, NY, February 24, 2009.
93. "Cl-amidine: A novel Therapeutic for Rheumatoid Arthritis?" University of Colorado School of Medicine, Division of Rheumatology, Denver, CO, October 14, 2008.
94. "Chemical Approaches to Studying PAD4 Function," University of South Carolina, Department of Chemistry and Biochemistry, Columbia, SC, August 29, 2008.
95. "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.
96. "Design and Synthesis of PRMT1 selective inhibitors" FASEB Summer Research Conference entitled: "Biological Methylation: From DNA to Histones", Carefree, Arizona, June 5, 2008
97. "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.
98. "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.
99. "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.
100. "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.
101. "Mechanism and Inhibition of the N $\alpha$ -Acetyltransferases," N $\alpha$ -Acetyltransferase Symposium, University of Bergen, Bergen, Norway, May 24, 2007.
102. "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.
103. "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.
104. "Mechanism and Inhibition of Protein Arginine Deiminase 4," McMaster University, Department of Biochemistry, Hamilton, Ontario, Canada, January 9, 2007.
105. "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.

106. "Mechanism and Inhibition of Protein Arginine Deiminases," Division of Medicinal Chemistry, School of Pharmacy, University of Texas at Austin, Austin, TX, February 7, 2006.
107. "Mechanism and Inhibition of Protein Arginine Deiminases," School of Pharmacy, University of South Carolina, Columbia, SC, March 28, 2005.
108. "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.
109. "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.
110. "The molecular mechanism of p300: A transcriptional co-activator with histone acetyltransferase activity," Department of Medical Science, Indiana University, Bloomington, IN, February, 2003.
111. "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.
112. "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.
113. "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.
114. "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.
115. "The molecular mechanism of p300: A transcriptional co-activator with histone acetyltransferase activity," Department of Biochemistry, University of Ottawa, Ottawa, Ont., Canada, December 2002.
116. "The molecular mechanism of p300: A transcriptional co-activator with histone acetyltransferase activity," Department of Chemistry, Syracuse University, Syracuse, NY, December, 2002.
117. "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.
118. "The molecular mechanism of p300: A transcriptional co-activator with histone acetyltransferase activity," Department of Chemistry, McMaster University, Hamilton, Ont., Canada, April, 2002.
119. "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 (1<sup>st</sup> year Medical Students, USC)
2. CHEM 701 – Biochemistry Seminar (Graduate, USC)
3. CHEM 752/BIO718 – 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)