

Allen A. Thomas, Ph.D.

Associate Professor

Department of Chemistry

University of Nebraska at Kearney

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Education

Ph.D., Organic Chemistry, May 2000

The Scripps Research Institute, La Jolla, CA

Advisor: K. Barry Sharpless, Ph.D., W.M. Keck Professor of Chemistry, 2001 Nobel Laureate in Chemistry

Dissertation: "I. Aminohydroxylation of Unsaturated Phosphonates: A Template for Molecular Diversity. II. Rapid Discoveries in Osmium (VIII) Catalysis Using Automation and Mass Spectrometry."

M.S., Organic Chemistry, May 1994

Baylor University, Waco, TX

Advisor: Charles Garner, Ph.D., Professor of Chemistry and Graduate Program Director

Thesis: "Toward Terpene-Derived C₂-Chiral Cyclic Boranes and Auxiliaries and Metalation Studies of Endocyclic and Exocyclic Alkenes."

B.S., Chemistry, ACS Certified, May 1992

Baylor University, Waco, TX

Summa Cum Laude, Phi Beta Kappa, Highest Ranking Student in College of Arts and Sciences (GPA: 4.0/4.0)

Professional Experience

2014-present University of Nebraska at Kearney. Associate Professor (Aug 2018-present), Assistant Professor (Aug 2014-Aug 2018), Department of Chemistry

Areas of Interest: Bio-organic and medicinal chemistry; designing drugs that target the central nervous system (CNS); brain cancer; adenosine signaling; membrane transporter proteins.

2013-2014 Community College of Denver. Chemistry Instructor

2000-2013 Array BioPharma, Medicinal Chemistry, Boulder and Longmont, CO. Senior Research Investigator (2012-2013); Research Investigator (2006-2012); Senior Research Scientist (2003-2006); Research Scientist (2000-2003)

Optimization of small molecule drug candidates in multiple therapeutic areas including cancer, Alzheimer's disease, pain, and inflammatory diseases. Collaborated within multidisciplinary teams to integrate data from *in vitro* and *in vivo* experiments to obtain a compound currently in human clinical trials (Erk/cancer), and two compounds that progressed to pre-clinical toxicology studies (BACE/Alzheimer's and Met/cancer). Highly skilled synthetic organic chemist having prepared thousands of compounds involving up to 14-step syntheses, including compounds with multiple chirality centers.

Management and mentoring of junior scientists, including written performance reviews and establishing semiannual goals. My associates were consistently outstanding contributors, and they were inventors and authors of multiple patents, presentations and publications.

1997-1998 Access Pharmaceuticals (now Abeona Therapeutics), Drug Delivery, Dallas, TX. Scientist

Used NMR and analytical chemistry techniques to determine the chemical structure of a cis-platinum labeled polymer that progressed to human clinical trials for cancer.

Teaching and Mentoring

University of Nebraska at Kearney

1. Fall 2014	CHEM250	Elementary Organic Chemistry
2. Fall 2014	CHEM250L	Elementary Organic Chemistry Lab
3. Fall 2014	CHEM160L	General Chemistry Laboratory, 1 st Semester (2 sections)
4. Spring 2015	CHEM160	General Chemistry, 1 st Semester
5. Spring 2015	CHEM150	Introduction to Organic and Biochemistry
6. Spring 2015	CHEM160L	General Chemistry Laboratory, 1 st Semester
7. Fall 2015	CHEM360	Organic Chemistry, 1 st Semester
8. Fall 2015	CHEM360L	Organic Chemistry Laboratory (2 sections)
9. Fall 2015	CHEM160L	General Chemistry Laboratory, 1 st Semester
10. Spring 2016	CHEM361	Organic Chemistry, 2 nd Semester
11. Spring 2016	CHEM361L	Organic Chemistry Laboratory (2 sections)
12. Spring 2016	CHEM161L	General Chemistry Laboratory, 2 nd Semester
13. Fall 2016	CHEM360	Organic Chemistry, 1 st Semester
14. Fall 2016	CHEM360L	Organic Chemistry Laboratory (2 sections)
15. Fall 2016	CHEM388	Brewing Science Lecture and Lab (Capstone Course)
16. Spring 2017	CHEM361	Organic Chemistry, 2 nd Semester
17. Spring 2017	CHEM361L	Organic Chemistry Laboratory (2 sections)
18. Fall 2017	CHEM160	General Chemistry, 1 st Semester
19. Fall 2017	CHEM160L	General Chemistry Laboratory, 1 st Semester (3 sections)
20. Spring 2018	CHEM161L	General Chemistry Laboratory, 2 nd Semester (2 sections)
21. Fall 2018	CHEM160	General Chemistry, 1 st Semester
22. Fall 2018	CHEM160L	General Chemistry Laboratory, 1 st Semester (2 sections)
23. Fall 2018	CHEM269	Sophomore Seminar in Chemistry
24. Spring 2019	CHEM160	General Chemistry, 1 st Semester
25. Spring 2019	CHEM160L	General Chemistry Laboratory, 1 st Semester (2 sections)

Community College of Denver

1. April-May 2013	CHE111	General College Chemistry I (lecture and lab)
2. April-May 2013	CHE109	General, Organic & Biochemistry
3. Fall 2013	CHE111	General College Chemistry I (3 sections, lecture and lab)
4. Spring 2014	CHE111	General College Chemistry I (2 sections, lecture and lab)

University of Nebraska at Kearney Undergraduate Research Students (27)

Sydney Miller (F14-S15)	Laura Stoner (S16-Sum17)	Alyssa Wells (S18-present)
Karissa Finke (F14-S17)	Barbara Calvert (S16)	Hannah Wolfe (S18-present)
Evan Augustyn (F14-F16)	Zach Sutton (S16)	Cesar Alvarado Sandoval (S18-F18)
Nathan Heeren (F14-F15)	Emily Dethlefs (S16)	Alex Duncan (S18-present)
Logan Hansen (S15-S16)	Justine Bauer (S16-Sum16)	Kasey Merklin (S18-present)
Libby Norvell (S15)	Seth Springer (F16-S18)	Hannah Way (S18-present)
Andrew Flint (F15-S17)	Colton Hall (S17-S19)	Gideon Lass (F18)
Chris Hernandez (S16-F17)	Brooklynn Venteicher (Sum17-present)	Justin Engberg (F18-present)
Abby Anthony (S16-S17)	Joseph Griffith (S18-present)	Audra Kippes (F18-S19)

University of Nebraska at Kearney Chemistry Major Advisees (13)

Emily Dethlefs (F15-S16)	Jared Hunke (F16-present)	Autumn Ickler (F17)
Justine Bauer (F15-S16)	Seth Springer (F16-S18)	Stephanie Gomez (F17)
Cassidy Bruns (F15-S18)	Tara Buettner (F17)	Kasey Merklin (F18-present)
Breanna Attema (F15-F16)	Samantha Rau (F17-present)	
Kyle Sutton (F15-F17)	Allison Riley (F17-S18)	

Array BioPharma Associates (6)

Michael Weiser, B.S. (2002-2003)	Gabrielle Kolakowski, M.A. (2007-2009)
Jason De Meese, M.S. (2004-2009)	Douglas Sammond, M.S. (2009-2011)
Alicia Skuza, B.A. (2007)	Brad Newhouse, M.S. (2011-2013)

Baylor University Summer Undergraduate Research Program Mentees (2)

Gloria Loungeway (summer 1992)

Christina Arnold (summer 1993)

Awards, Honors, and Media Features

Awards and Honors

1. UNK New Frontiers Award and Magazine Article for cancer research, 2019
2. UNK Sigma Xi "Chapter of Excellence" awarded by the national Sigma Xi Scientific Research Honor Society, 2018
3. UNK Sigma Xi "Program of Excellence" awarded by the national Sigma Xi Scientific Research Honor Society for "The Great American Solar Eclipse Panel Discussion", 2017
4. Poster entitled "3-Amino-4-oxy-pyrazolopyridines: Inhibitors of the kinase Met with in vivo efficacy in TGI studies" was selected for a talk at CHI's Next-Gen Kinase Inhibitors Conference, 2010
5. National Science Foundation Graduate Research Fellowship, Honorable Mention, 1992
6. Phi Beta Kappa (1991) and Alpha Chi (1990) Honor Societies Inductee, Baylor University
7. Summa Cum Laude and Highest Ranking Student in the College of Arts and Sciences, Baylor University, 1992
8. CRC Outstanding Freshman Chemistry Achievement Award, Baylor University, 1989

Media Features

1. IDeA EPSCoR Nebraska, 2017 Annual Report: "Small College, Big Horizons." March 2018.
2. NTV ABC Nebraska.TV article and interview: "UNK Science Research Honor Society Wins Prestigious Award for Solar Eclipse Panel." 2 February 2018.
3. NTV ABC Nebraska.TV article and interview: "Grant Allows UNK Professor to Work Toward Brain Disorder Treatments." 8 October 2017.
4. Kearney Hub article: "UNK's Allen Thomas Gets \$399K for Cancer Research." 29 September 2017.
5. Chemical & Engineering News article: "A Reaction Under Scrutiny." 3 November 1997.
6. Chemical & Engineering News article: "NMR Used to Determine Small Kinetic Isotope Effects." 18 September 1995.

Service

Chemistry Department Service

- Safety Committee, Member (Fall 2014-Summer 2017)
- General Chemistry Lab (CHEM160L), Coordinator (Fall 2017, 2018)
- Infrastructure Committee, Member (Fall 2016-present), charged with allocating space for labs
- Outreach Committee, Member (Fall 2017-present)
- Assessments Committee, Member (Fall 2018-present)
- NMR instrument, share responsibility for maintenance (Fall 2014-present)
- LC-MS instrument, Caretaker (Fall 2017-Summer 2018)
- Preparative HPLC instrument, Caretaker (Spring 2015-Summer 2018)
- Science Day Assistant, supervised high school students doing lab experiments (Fall 2014-2017, Spring and Fall 2018, Spring 2019)
- Hastings High School visit to UNK chemistry department, Instructor/Assistant (Spring 2015-2018)
- UNK Majors & Organizations Fair, Volunteer (April 2016, October 2018)
- UNK Daycare 3-Day Chemistry Camp, Assistant and Lab Preparation (June 2016)
- UNK ChemClub demonstration to Kearney High School students, supervised experiments (April 2017)

College Service

- Search Committee for Dean of College of A&S, Member (Sep 2018-Feb 2019)
- Arts & Sciences Merger Committee, Committees Structure and Policy, Member (Fall 2017)
- Fall Retreat, Break-Out Session Moderator (Aug 2018)

University Service

- UNK Title IX Conduct Board, Member (Mar 2019-present)
- University of Nebraska Big Ideas Initiative, Reviewer of 10 proposals (Feb 2019)
- University of Nebraska President's Faculty Excellence Awards Committee, Member (2019-2022)
- UNK Faculty Senate, Member (April 2016-April 2019)
- UNK Education Association, Negotiator & Executive Committee Member (May 2017-present)

- UNK Student Conduct and Appeals Board, Member (Aug 2018-present)
- UNK Student Research Day, Room Monitor (March 2018)
- Faculty Senate Sponsored Movie "Starving the Beast", Volunteer at World Theater (Feb 2018)
- ORCA Undergraduate Research Mixer, Volunteer (Sept 2017)
- UNK Solar Eclipse Watch Party, Walking Tours Volunteer (Aug 2017)
- Summer Student Research Program (SSRP) Trip to Omaha, Chaperone (May 2017)
- UNK Trip to National Conference on Undergraduate Research (NCUR) in Memphis, Chaperone (April 2017)
- Blue&Gold Faculty Conversations with new students, Volunteer (Aug 2016, 2017, 2018)
- Late-Night Study Break, Volunteer to serve food to students during finals week (Dec 2016)

Professional Service

- Sigma Xi Scientific Research Honor Society - UNK Chapter, Vice-President (May 2018-present)
- Sigma Xi Scientific Research Honor Society - UNK Chapter, President (May 2016-May 2018)
- Sigma Xi Scientific Research Honor Society – Committee on Qualifications and Membership (July 2018-2021)
- Sigma Xi Scientific Research Honor Society – Ad Hoc Committee on Chapter Revitalization (July 2018-)
- Sigma Xi Program Committee Member for the Sigma Xi Annual Conference and Ethics Panel Discussion Organizer and Moderator (April 2018-Oct 2018)
- Sigma Xi Annual Meeting Participant in Panel Discussion on Chapter Best Practices (2018)
- Sigma Xi American Scientist Magazine – Editorial Advisor (March 2018-present)
- Sigma Xi Annual Meeting and Student Research Conference, Poster Judge (Nov 2016, Oct 2018)
- Sigma Xi Student Research Showcase (online), Presentation Judge (April 2017, 2018)
- Presentation "Getting Drugs into the Brain", Sigma Xi Science Café (Oct 2014)
- Grant reviewer
 - Great Plains IDeA-CTR Scholar, 2017 (1)
 - Great Plains IDeA-CTR Pilot Program, 2017 (1)
- Scientific article reviewer
 - *ACS Medicinal Chemistry Letters*, 2018 (1)
 - *Bioorganic and Medicinal Chemistry*, 2017 (1), 2018 (1)
 - *Bioorganic and Medicinal Chemistry Letters*, 2016 (1), 2018 (2)
 - *Cellular Physiology and Biochemistry*, 2017 (1)
 - *Chemical Science*, 2015 (1)
 - *ChemMedChem*, 2015 (1)
 - *European Journal of Medicinal Chemistry*, 2007 (2), 2015 (1)
 - *Journal of Medicinal Chemistry*, 2016 (1), 2018 (2)
 - *MedChemComm*, 2017 (1)
 - *Medicinal Research Reviews*, 2015 (1)
 - *Molecular Pharmaceutics*, 2018 (1)
 - *Proceedings of the National Conference on Undergraduate Research Journal*, 2016 (1), 2018 (1)
- UNK Faculty Senate Artists and Lecturers Grant Awards:
 - Bring Dr. Phil Plait (aka The Bad Astronomer) to the Great American Solar Eclipse Panel Discussion hosted by the Sigma Xi UNK Chapter, co-PI with Ken Trantham, \$500, 2016
 - Bring Professor Patrick Kiser (Northwestern) to Kearney to give lectures entitled "Long Acting Drug Delivery Systems in the Global Fight against HIV" and "Five Mysteries of Mucus", hosted by Sigma Xi UNK Chapter, PI, \$500, 2017
 - Bring Dr. Greg Forbes (Weather Channel) to Kearney for panel discussion entitled "Climate Change and its Impact on Severe Weather", hosted by Sigma Xi UNK Chapter, PI, \$307, 2018
 - Bring Dr. Shane McFeely (Gallup Org) to UNK to give a lecture entitled "Bridging the Gap Between Workplace Science and Practice," hosted by Sigma Xi UNK Chapter, co-PI with Evan Hill, \$440, 2018

Community Service

- Presentation "Treating Brain Cancer: How to Get Drugs into the Brain?" to Golden K Kiwanis (Feb 2018)

Community College of Denver Service

- Free tutoring and in class/lab assistance, General College Chemistry I (Spring 2013)

Professional Affiliations

- American Chemical Society, 1991-present (Divisions of Organic Chem., Medicinal Chem., and Chemical Education)
- Sigma Xi Scientific Research Honor Society, 2015-present
- Nebraska Academy of Sciences, 2016-present
- American Association for the Advancement of Science, 2017-present
- Nebraska State Education Association (NSEA), 2014-present
- International Association of Torch Clubs, 2018-present

Research

Funded Grants (9)

1. Nebraska EPSCoR Undergraduate Research Experience in Small Colleges and Universities, PI, 5/13/2019-12/6/2019, \$5,000, "1,2,3-Triazole Analogs of Ribavirin to Probe the CNT2 Binding Site".
2. NIH (NINDS) R15 NS099981, PI, 9/18/2017-9/17/2020, \$399,082, "Identification of New LAT-1 Transporter Substrates for Drug Delivery".
3. Nebraska EPSCoR Undergraduate Research Experience in Small Colleges and Universities, PI, 5/22/2017-9/29/2017, \$5,000, "Alpha-Substituted Phenylalanine Analogs to Probe the Activity of LAT1 Transporter Substrates".
4. Nebraska Research Initiative, Lab Equipment Grant, co-PI, 5/19/2017, \$188,515, "New High Performance Liquid Chromatograph – Mass Spectrometer to Enhance Research Capability at UNK".
5. Nebraska EPSCoR Major Research Instrumentation (MRI), co-PI, 8/17/2016, \$200,000, "New 400MHz NMR to Enhance Research and Teaching at UNK".
6. Nebraska EPSCoR Undergraduate Research Experience in Small Colleges and Universities, PI, 5/23/2016-9/15/2016, \$5,000, "Identification of Functional Groups to Improve LAT-1 Substrate Activity of Amino Acid Analogs".
7. Nebraska EPSCoR Undergraduate Research Experience in Small Colleges and Universities, PI, 5/26/2015-8/31/2015, \$5,000, "Probing Large-Neutral Amino Acid Transporter 1 (LAT1) to Identify Substrates for Drug Delivery".
8. Nebraska Research Initiative, Lab Equipment Grant, PI, 4/20/2015, \$25,000, "Probing Large-Neutral Amino Acid Transporter 1 (LAT1) to Identify Substrates for use in Drug Delivery".
9. University of Nebraska Kearney, Research Services Council Seed Grant, PI, 10/1/2014-6/30/2015, \$10,201, "Probing Large-Neutral Amino Acid Transporter 1 (LAT1) to Identify Substrates for use in Drug Delivery".

Publications, Patents and Conference Presentations

Peer-Reviewed Publications (24)

1. Chien, H.-C.; Colas, C.; Finke, K.; Springer, S.; Stoner, L.; Zur, A. A.; Flint, A.; Augustyn, E.; Venteicher, B.; Campbell, J.; Hall, C.; Hernandez, C.; Heeren, N.; Hansen, L.; Anthony, A.; Bauer, J.; Fotiadis, D.; Schlessinger, A.; Giacomini, K. M.; Thomas, A. A., "Reevaluating the substrate specificity of the L-type amino acid transporter (LAT1)." *J. Med. Chem.* **2018**, *61*, 7358.
2. Zur, A.A.; Chien, H.-C.; Augustyn, E.; Flint, A.; Heeren, N.; Finke, K.; Hernandez, C.; Hansen, L.; Miller, S.; Lin, L.; Giacomini, K.M.; Colas, C.; Schlessinger, A.; Thomas, A.A., "LAT1 activity of carboxylic acid bioisosteres: Evaluation of hydroxamic acids as substrates." *Bioorg. Med. Chem. Lett.* **2016**, *26*, 5000.
3. Augustyn, E.; Finke, K.; Zur, A.A.; Hansen, L.; Heeren, N.; Lin, L.; Chien, H.-C.; Giacomini, K.M.; Colas, C.; Schlessinger, A.; Thomas, A.A., "LAT-1 activity of meta-substituted phenylalanine and tyrosine analogs." *Bioorg. Med. Chem. Lett.* **2016**, *26*, 2616.
4. Diaz, D.; Dambach, D.M.; Siu, M.; Hunt W.K.; Thomas A.A.; Lyssikatos, J.P.; Liu, X.; Lewin-Koh, S.; McCray, B.; Ford, K.A., "Mitigation of opioid off-target effects and identification of structural drivers of opioid receptor engagement for BACE-1 small molecule inhibitors." *Toxicol. Mech. Methods* **2015**, *25*, 478.
5. Thomas, A.A.; Hunt, K.W.; Newhouse, B.; Watts, R.J.; Liu, X.; Vigers, G.; Smith, D.; Rhodes, S.P.; Brown, K.D.; Otten, J.N.; Burkard, M.; Cox, A.A.; Geck Do, M.K.; Dutcher, D.; Rana, S.; DeLisle, R.K.; Regal, K.; Wright, A.D.; Groneberg, R.; Liao, J.; Searce-Levie, K.; Siu, M.; Purkey, H.E.; Lyssikatos, J.P., "8-Tetrahydropyran-2-yl

- chromans: highly selective beta-site amyloid precursor protein cleaving enzyme 1 (BACE1) inhibitors." *J. Med. Chem.* **2014**, *57*, 10112.
6. Thomas, A.A.; Hunt, K.W.; Volgraf, M.; Watts, R.J.; Liu, X.; Vigers, G.; Smith, D.; Sammond, D.; Tang, T.P.; Rhodes, S.P.; Metcalf, A.T.; Brown, K.D.; Otten, J.N.; Burkard, M.; Cox, A.A.; Geck Do, M.K.; Dutcher, D.; Rana, S.; DeLisle, R.K.; Regal, K.; Wright, A.D.; Groneberg, R.; Searce-Levie, K.; Siu, M.; Purkey, H.E.; Lyssikatos, J.P.; Gunawardana, I., "Discovery of 7-tetrahydropyran-2-yl chromans: β -site amyloid precursor protein cleaving enzyme 1 (BACE1) inhibitors that reduce amyloid β -protein (A β) in the central nervous system." *J. Med. Chem.* **2014**, *57*, 878.
 7. Volgraf, M.; Chan, L.; Huestis, M.P.; Purkey, H.E.; Burkard, M.; Geck Do M.; Harris, J.; Hunt, K.W.; Liu, X.; Lyssikatos, J.P.; Rana, S.; Thomas, A.A.; Vigers, G.P.; Siu, M., "Synthesis, characterization, and PK/PD studies of a series of spirocyclic pyranochromene BACE1 inhibitors." *Bioorg. Med. Chem. Lett.* **2014**, *24*, 2477.
 8. Blake, J.F.; Gaudino, J.J.; De Meese, J.; Mohr, P.; Chicarella, M.; Tian, H.; Garrey, R.; Thomas, A.; Siedem, C.S.; Welch, M.B.; Kolakowski, G.; Kaus, R.; Burkard, M.; Martinson, M.; Chen, H.; Dean, B.; Dudley, D.A.; Gould, S.E.; Pacheco, P.; Shahidi-Latham, S.; Wang, W.; West, K.; Yin, J.; Moffat, J.; Schwarz, J.B., "Discovery of 5,6,7,8-tetrahydropyrido[3,4-d]pyrimidine inhibitors of Erk2." *Bioorg. Med. Chem. Lett.* **2014**, *24*, 2635.
 9. Liu, X.; Wong, H.; Searce-Levie, K.; Watts, R.J.; Coraggio, M.; Shin, Y.G.; Peng, K.; Wildsmith, K.R.; Atwal, J.K.; Mango, J.; Schauer, S.P.; Regal, K.; Hunt, K.W.; Thomas, A.A.; Siu, M.; Lyssikatos, J.; Deshmukh, G.; Hop, C.E., "Mechanistic pharmacokinetic-pharmacodynamic modeling of BACE1 inhibition in monkeys: Development of a predictive model for amyloid precursor protein processing." *Drug Metab. Dispos.* **2013**, *41*(7), 1319.
 10. Hunt, K.W.; Cook, A.W.; Watts, R.J.; Clark, C.T.; Vigers, G.; Smith, D.; Metcalf, A.T.; Gunawardana, I.W.; Burkard, M.; Cox, A.A.; Geck Do, M.K.; Dutcher, D.; Thomas, A.A.; Rana, S.; Kallan, N.C.; DeLisle, R.K.; Rizzi, J.P.; Regal, K.; Sammond, D.; Groneberg, R.; Siu, M.; Purkey, H.; Lyssikatos, J.P.; Marlow, A.; Liu, X.; Tang, T.P., "Spirocyclic β -site amyloid precursor protein cleaving enzyme 1 (BACE1) inhibitors: From hit to lowering of cerebrospinal fluid (CSF) amyloid β in a higher species." *J. Med. Chem.* **2013**, *56*(8), 3379.
 11. Thomas, A.A.; Le Huerou, Y.; De Meese, J.; Gunawardana, I.; Kaplan, T.; Romoff, T.T.; Gonzales, S.S.; Condroski, K.; Boyd, S.A.; Ballard, J.; Bernat, B.; DeWolf, W.; Han, M.; Lee, P.; Lemieux, C.; Pedersen, R.; Pheneger, J.; Poch, G.; Smith, D.; Sullivan, F.; Weiler, S.; Wright, S.K.; Lin, J.; Brandhuber, B.; Vigers, G., "Synthesis, *in vitro* and *in vivo* activity of thiamine antagonist transketolase inhibitors." *Bioorg. Med. Chem. Lett.* **2008**, *18*(6), 2206.
 12. Thomas, A.A.; De Meese, J.; Le Huerou, Y.; Boyd, S.A.; Romoff, T.T.; Gonzales, S.S.; Gunawardana, I.; Kaplan, T.; Sullivan, F.; Condroski, K.; Lyssikatos, J. P.; Aicher, T.D.; Ballard, J.; Bernat, B.; DeWolf, W.; Han, M.; Lemieux, C.; Smith, D.; Weiler, S.; Wright, S.K.; Vigers, G.; Brandhuber, B., "Non-charged thiamine analogs as inhibitors of enzyme transketolase." *Bioorg. Med. Chem. Lett.* **2008**, *18*(2), 509.
 13. Le Huerou, Y.; Gunawardana, I.; Thomas, A.A.; Boyd, S.A.; De Meese, J.; DeWolf, W.; Gonzales, S.S.; Han, M.; Hayter, L.; Kaplan, T.; Lemieux, C.; Lee, P.; Pheneger, J.; Poch, G.; Romoff, T.T.; Sullivan, F.; Weiler, S.; Wright, S.K.; Lin, J., "Prodrug thiamine analogs as inhibitors of the enzyme transketolase." *Bioorg. Med. Chem. Lett.* **2008**, *18*(2), 505.
 14. Eichenbaum, K.D.; Thomas, A.A.; Eichenbaum, G.M.; Gibney, B.R.; Needham, D.; Kiser, P. F., "Oligo- α -hydroxy ester cross-linkers: Impact of cross-linker structure on biodegradable hydrogel networks." *Macromolecules* **2005**, *38*(26), 10757.
 15. Thomas, A.A.; Kim, I.-T.; Kiser, P.F., "Symmetrical biodegradable crosslinkers for use in polymeric devices." *Tetrahedron Lett.* **2005**, *46*(51), 8921.
 16. Dupau, P.; Epple, R.; Thomas, A.A.; Fokn, V.V.; Sharpless, K.B., "Osmium-catalyzed dihydroxylation of olefins in acidic media: Old process, new tricks." *Advanced Synthesis and Catalysis* **2002**, *344*(3+4), 421.
 17. Singleton, D.A.; Schulmeier, B.E.; Hang, C.; Thomas, A.A.; Leung, S.-W.; Merrigan, S.R., "Isotope effects and the distinction between asynchronous, and stepwise Diels-Alder reactions." *Tetrahedron* **2001**, *57*, 5149.
 18. Thomas, A.A.; Monk, K.A.; Abraham, S.; Lee, S.; Garner, C.M., "Rearrangement of methylenecamphor during electrophilic bromination: Remarkably clean access to the unnatural fenchyl (1,3,3-trimethylbicyclo[2.2.1]heptane) system." *Tetrahedron Lett.* **2001**, *42*, 2261.
 19. Kiser, P.F.; Thomas, A.A.; Eichenbaum, G.M.; Needham, D.; Kim, I., "Design and performance of poly(HPMA) hydrogels containing symmetrical biodegradable crosslinkers composed of oligo-lactate and oligo-glycolate esters." *Polym. Prepr.* **2000**, *41*, 712.
 20. Thomas, A.A.; Sharpless, K.B., "The catalytic asymmetric aminohydroxylation (AA) of unsaturated phosphonates." *J. Org. Chem.* **1999**, *64*, 8379.
 21. Singleton, D.A.; Merrigan, S.R.; Thomas, A.A., "Stereochemical labeling at natural abundance. Stereochemistry, isotope effects, and mechanism of the Diels-Alder reaction of hexachlorocyclopentadiene with ethyl vinyl ether." *Tetrahedron Lett.* **1999**, *40*, 639.

22. DelMonte, A.J.; Haller, J.; Houk, K.N.; Sharpless, K.B.; Singleton, D.A.; Strassner, T.; Thomas, A.A., "Experimental and theoretical kinetic isotope effects for asymmetric dihydroxylation. Evidence supporting a rate-limiting "(3+2)" cycloaddition." *J. Am. Chem. Soc.* **1997**, *119*, 9907.
23. Garner, C.M.; Thomas, A.A., "Allylic metalation of endo- and exo-cyclic alkenes: Anomalous high reactivity of β -pinene." *J. Org. Chem.* **1995**, *60*, 7051.
24. Singleton, D.A.; Thomas, A.A., "High-precision simultaneous determination of multiple small kinetic isotope effects at natural abundance." *J. Am. Chem. Soc.* **1995**, *117*, 9357.

Patents (7 issued patents + 8 applications)

1. Blake, J.F.; Brandhuber, B.J.; Haas, J.; Newhouse, B.; Thomas, A.A.; Winski, S.L., "N-(Arylkyl)-N'-pyrazolyl-urea, thiourea, guanidine and cyanoguanidine compounds as TrkA kinase inhibitors." U.S. Patent 9,969,694, issued 2018.
2. Blake, J.F.; Cook, A.; Gunawardana, I.W.; Hunt, K.W.; Lyon, M.; Metcalf, A.T.; Mohr, P.J.; Moreno, D.A.; Newhouse, B.; Ren, L.; Tang, T.P.; Thomas, A.A.; Schwarz, J.; Schmidt, J.; Gazzard, L.; Chen, H. "Serine/threonine kinase inhibitors." U.S. Patent 9,763,942, issued 2017.
3. Blake, J.F.; Chen, H.; Chicarelli, M.J.; DeMeese, J.; Garrey, R.; Gaudino, J.J.; Kaus, R.J.; Kolakowski, G.R.; Marlow, A.L.; Mohr, P.J.; Ren, L.; Schwarz, J.; Siedem, C.S.; Thomas, A.A.; Wallace, E.; Wenglowsky, S.M.; Boyd, S., "Serine/threonine kinase inhibitors." U.S. Patent 9,133,187, issued 2015.
4. Allen, S.; Andrews, S.W.; Blake, J.F.; Brandhuber, B.J.; Haas, J.; Jiang, Y.; Kercher, T.; Kolakowski, G.R.; Thomas, A.A.; Winski, S.L., "Bicyclic urea, thiourea, guanidine and cyanoguanidine compounds useful for the treatment of pain." PCT Int. Appl. (2014) WO2014078454.
5. Cook, A.; Gunawardana, I.W.; Huestis, M.; Hunt, K.W.; Kallan, N.C.; Metcalf, A.T.; Newhouse, B.; Siu, M.; Tang, T.P.; Thomas, A.A.; Volgraf, M., "Heterocyclic inhibitors of beta-secretase for the treatment of neurodegenerative diseases." PCT Int. Appl. (2012) WO2012071458.
6. Hunt, K.W.; Tang, T.P.; Thomas, A.A., "Compounds for treating neurodegenerative diseases." PCT Int. Appl. (2012) WO2012040641.
7. Clark, C.T.; Cook, A.; Gunawardana, I.W.; Hunt, K.W.; Kallan, N.C.; Siu, M.; Thomas, A.A.; Volgraf, M., "Compounds for treating neurodegenerative diseases." PCT Int. Appl. (2011) WO2011123674.
8. Blake, J.F.; Boyd, S.; De Meese, J.; Gaudino, J.J.; Marlow, A.L.; Seo, J.; Thomas, A.A.; Tian, H., "Heterobicyclic thiophene compounds and methods of use." U.S. Patent 8,003,662, issued 2011.
9. Boyd, S.A.; Condroski, K.R.; Thomas, A.; Gonzales, S.S.; Gunawardana, I.W.; Huerou, Y.L.; Romoff, T.T.; Sullivan, F.X., "Thioalkeneamides as transketolase inhibitors." U.S. Patent 7,879,885, issued 2011.
10. Blake, J.F.; Boyd, S.A.; De Meese, J.; Fong, K.C.; Gaudino, J.J.; Kaplan, T.; Marlow, A.L.; Seo, J.; Thomas, A.A.; Tian, H.; Cohen, F.; Young, W.B., "Heterobicyclic pyrazole compounds and methods of use." U.S. Patent 7,723,330, issued 2010.
11. Boyd, S.A.; Condroski, K.R.; De Meese, J.; Gonzalez, S.S.; Gunawardana, I.W.; Kaplan, T.; Le Huerou, Y.; Lyssikatos, J.; Romoff, T.T.; Sullivan, F.X.; Thomas, A., "Thiazoliums as transketolase inhibitors." PCT Int. Appl. (2005) WO2005095391.
12. Boyd, S.A.; De Meese, J.; Gunawardana, I.; Jacobson, I.C.; Le Huerou, Y.; Lupher, Jr., M.L.; McLaughlin, M.; Miller, S.; Thomas, A.; Thorsett, E.; Xu, R.; Yanik, M.; Zhang, G., "Aryl piperidine derivatives as VLA-1 integrin antagonists and uses thereof." PCT Int. Appl. (2005) WO2005019200.
13. Boyd, S.A.; Miller, S.; Thomas, A.; Xu, R.; Le Huerou, Y.; Gunawardana, I.; Zhang, G.; De Meese, J.; McLaughlin, M.; Yanik, M.; Lupher, Jr., M.L.; Jacobson, I.C.; Thorsett, E., "Aminopiperidine amide derivatives as VLA-1 integrin antagonists and uses thereof." PCT Int. Appl. (2005) WO2005019177.
14. Boyd, S.A.; Miller, S.; Thomas, A.; Xu, R.; Le Huerou, Y.; Gunawardana, I.; Zhang, G.; De Meese, J.; McLaughlin, M.; Yanik, M.; Lupher, Jr., M.L.; Jacobson, I.C.; Thorsett, E.D.; Farouz, F.S.; Kasar, R.A., "Acrylamide derivatives as VLA-1 integrin antagonists and uses thereof." PCT Int. Appl. (2005) WO2005016883.
15. Kiser, P.F.; Thomas, A.A., "Biodegradable cross-linkers having a polyacid connected to reactive groups for cross-linking polymer filaments." U.S. Patent 6,521,431, issued 2003.

Conference Presentations (66 + 2 pending)

1. Venteicher, B.; Griffith, J.; Finke, K.; Springer, S.; Stoner, L.; Augustyn, E.; Campbell, J.; Hall, C.; Chien, H.-C.; Zur, A.; Colas, C.; Giacomini, K.; Schlessinger, A.; Thomas, A. A., "Challenges of using rational design to optimize substrate specificity for the surprisingly promiscuous L-type amino acid transporter (LAT1)." Proceedings of the 129th Annual Meeting of the Nebraska Academy of Sciences, Lincoln, NE, **2019**; CHEM-XX, talk.

2. Way, H.; Merklin, K.; Campbell, J.; Venteicher, B.; Chien, H.-C.; Colas, C.; Schlessinger, A.; Giacomini, K.; Thomas, A. A., "Optimizing the linker for LAT1-targeted prodrugs to improve potency and cellular uptake." Proceedings of the 129th Annual Meeting of the Nebraska Academy of Sciences, Lincoln, NE, **2019**; CHEM-XX, talk.
3. Thomas, A. A.; Giacomini, K. M.; Schlessinger, A.; Chien, H.-C.; Colas, C.; Zur, A. A.; Finke, K.; Augustyn, E.; Springer, S.; Stoner, L.; Heeren, N.; Flint, A.; Anthony, A.; Hansen, L.; Hernandez, C.; Bauer, J., "New insights on using the LAT1 membrane transporter for drug delivery." Sigma Xi Scientific Research Honor Society National Meeting, Burlingame, CA, **2018**; PR-18, poster.
4. Thomas, A. A., "Challenges of sharing data in long-distance collaboration." Sigma Xi Scientific Research Honor Society National Meeting, Burlingame, CA, **2018**; talk.
5. Thomas, A. A.; Saha, Subrata; Gouin, C.; Mathur, P. D., "Ethical issues and challenges in research." Sigma Xi Scientific Research Honor Society National Meeting, Burlingame, CA, **2018**; panel discussion participant and moderator.
6. Venteicher, B.; Finke, K.; Springer, S.; Stoner, L.; Augustyn, E.; Campbell, J.; Hall, C.; Chien, H.-C.; Zur, A.; Colas, C.; Giacomini, K.; Schlessinger, A.; Thomas, A. A., "Challenges of using rational design to optimize substrate specificity for the surprisingly promiscuous L-type amino acid transporter (LAT1)." Abstracts of Papers, 53rd Midwest Regional Meeting of the American Chemical Society, Ames, IA, **2018**; MWRM-25, talk.
7. Duncan, A.; Hall, C.; Thomas, A. A., "Stability studies of glycolysis inhibitor prodrugs for cancer." Abstracts of Papers, 53rd Midwest Regional Meeting of the American Chemical Society, Ames, IA, **2018**; MWRM-426, poster.
8. Wells, A.; Wolfe, H.; Hall, C.; Chien, H.-C.; Colas, C.; Schlessinger, A.; Giacomini, K.; Thomas, A. A., "Triazole analogs of histidine via click chemistry to probe the L-type amino acid transporter (LAT1) binding site." Abstracts of Papers, 53rd Midwest Regional Meeting of the American Chemical Society, Ames, IA, **2018**; MWRM-494, poster.
9. Venteicher, B.; Alvarado, A.; Griffith, J.; Way, H.; Merklin, K.; Springer, S.; Finke, K.; Stoner, L.; Augustyn, E.; Chien, H.-C.; Zur, A. A.; Colas, C.; Schlessinger, A.; Giacomini, K.; Thomas, A. A., "Assessing substituent size for meta-substituted phenylalanine analogs to guide the design of L-type amino acid transporter (LAT1) targeted prodrugs." Abstracts of Papers, 53rd Midwest Regional Meeting of the American Chemical Society, Ames, IA, **2018**; MWRM-496, poster.
10. Way, H.; Merklin, K.; Campbell, J.; Venteicher, B.; Chien, H.-C.; Colas, C.; Schlessinger, A.; Giacomini, K.; Thomas, A. A., "Optimizing the linker for LAT1-targeted prodrugs to improve potency and cellular uptake." Abstracts of Papers, 53rd Midwest Regional Meeting of the American Chemical Society, Ames, IA, **2018**; MWRM-313, poster.
11. Thomas, A. A.; Giacomini, K. M.; Schlessinger, A.; Chien, H.-C.; Colas, C.; Zur, A. A.; Finke, K.; Augustyn, E.; Springer, S.; Stoner, L.; Heeren, N.; Flint, A.; Anthony, A.; Hansen, L.; Hernandez, C.; Bauer, J., "Reevaluating substrate specificity for LAT1: New Insights." Gordon Conference: Transmembrane Transporters in Health to Disease, Newry, ME, **2018**, poster.
12. Venteicher, B.; Campbell, J.; Hall, C.; Hernandez, C.; Flint, A.; Chien, H.-C.; Giacomini, K. M.; Colas, C.; Schlessinger, A.; Thomas, A. A., "Alpha-substituted phenylalanine analogs as potential LAT1 transporter substrates." 36th National Medicinal Chemistry Symposium, Nashville, TN, **2018**, poster.
13. Venteicher, B.; Hall, C.; Campbell, J.; Hernandez, C.; Flint, A.; Chien, H.-C.; Giacomini, K. M.; Colas, C.; Schlessinger, A.; Thomas, A. A., "Synthesis and structure-activity relationship of α -quaternary amino acids as LAT1 substrates." Nebraska Science Festival: Nebraska Undergraduate Poster Presentation, Omaha, NE, **2018**, poster.
14. Stoner, L.; Finke, K.; Springer, S.; Anthony, A.; Hernandez, C.; Bauer, J.; Flint, A.; Chien, H.-C.; Giacomini, K. M.; Colas, C.; Schlessinger, A.; Thomas, A. A., "Phenylalanine derivatives containing polar substituents as LAT1 substrates for use in drug delivery." 32nd Annual National Conference on Undergraduate Research, Edmond, OK, **2018**, poster.
15. Venteicher, B.; Hall, C.; Campbell, J.; Hernandez, C.; Flint, A.; Chien, H.-C.; Giacomini, K. M.; Colas, C.; Schlessinger, A.; Thomas, A. A., "Synthesis and structure-activity relationship of α -quaternary amino acids as LAT1 substrates." 32nd Annual National Conference on Undergraduate Research, Edmond, OK, **2018**, poster.
16. Thomas, A. A.; Chien, H.-C.; Zur, A. A.; Giacomini, K. M.; Colas, C.; Schlessinger, A.; Lin, L.; Finke, K.; Augustyn, E.; Springer, S.; Stoner, L.; Flint, A.; Heeren, N.; Hansen, L.; Anthony, A.; Hernandez, C.; Venteicher, B.; Campbell, J.; Hall, C., "LAT1 membrane transporter: reevaluating the meaning of L and A." Abstracts of Papers, 255th National Meeting of the American Chemical Society, New Orleans, LA, **2018**; MEDI 315, talk.
17. Venteicher, B.; Hall, C.; Campbell, J.; Hernandez, C.; Flint, A.; Chien, H.-C.; Giacomini, K. M.; Colas, C.; Schlessinger, A.; Thomas, A. A., "Synthesis and structure-activity relationship of α -quaternary phenylalanine analogs as LAT1 substrates." Abstracts of Papers, 255th National Meeting of the American Chemical Society, New Orleans, LA, **2018**; MEDI 165, poster.
18. Hall, C.; Venteicher, B.; Chien, H.-C.; Giacomini, K. M.; Colas, C.; Schlessinger, A.; Thomas, A. A., "LAT1 membrane transporter selectivity for L and D amino acids." Abstracts of Papers, 255th National Meeting of the American Chemical Society, New Orleans, LA, **2018**; BIOL 222, poster.

19. Springer, S.; Stoner, L.; Finke, K.; Anthony, A.; Flint, A.; Bauer, J.; Hernandez, C.; Chien, H.-C.; Giacomini, K. M.; Colas, C.; Schlessinger, A.; Thomas, A. A., "Optimization of LAT1 affinity for meta-substituted phenylalanine analogs." Abstracts of Papers, 255th National Meeting of the American Chemical Society, New Orleans, LA, **2018**; MEDI 166, poster.
20. Stoner, L.; Finke, K.; Anthony, A.; Bauer, J.; Flint, A.; Chien, H.-C.; Giacomini, K.; Colas, C.; Schlessinger, A.; Thomas, A. A., "Phenylalanine derivatives containing polar substituents as LAT1 substrates for use in drug delivery." Abstracts of Papers, 52nd Midwest Regional Meeting of the American Chemical Society, Lawrence, KS, **2017**; MWRM-93, poster.
21. Venteicher, B.; Hall, C.; Campbell, J.; Hernandez, C.; Giacomini, K.; Chien, H.-C.; Colas, C.; Schlessinger, A.; Thomas, A. A., "Synthesis of α -quaternary amino acids as potential LAT1 substrates." Abstracts of Papers, 52nd Midwest Regional Meeting of the American Chemical Society, Lawrence, KS, **2017**; MWRM-76, poster.
22. Stoner, L.; Hernandez, C.; Springer, S.; Chien, H.-C.; Giacomini, K.; Colas, C.; Schlessinger, A.; Thomas, A. A., "Synthesis and structure-activity relationship (SAR) of carboxyl-substituted phenylalanine derivatives as LAT1 substrates." Abstracts of Papers, 52nd Midwest Regional Meeting of the American Chemical Society, Lawrence, KS, **2017**; MWRM-66, poster.
23. Anthony, A.; Flint, A.; Thomas, A.A., "Pursuit of heterocyclic analogs of histidine via palladium-catalyzed cross coupling." Proceedings of the 127th Annual Meeting of the Nebraska Academy of Sciences, Lincoln, NE, **2017**; CHEM-A2, talk.
24. Flint, A.; Zur, A.A.; Augustyn, E.; Finke, K.; Heeren, N.; Chien, H.-C.; Lin, L.; Giacomini, K.; Colas, C.; Schlessinger, A.; Thomas, A.A., "Discovery of hydroxamic acids as LAT1 substrates for drug delivery." Proceedings of the 127th Annual Meeting of the Nebraska Academy of Sciences, Lincoln, NE, **2017**; CHEM-A7, talk.
25. Stoner, L.; Bauer, J.; Finke, K.; Anthony, A.; Flint, A.; Springer, S.; Thomas, A.A., "Optimization of Negishi coupling to prepare phenylalanine analogs containing polar functional groups." Proceedings of the 127th Annual Meeting of the Nebraska Academy of Sciences, Lincoln, NE, **2017**; CHEM-A13, talk.
26. Springer, S.; Augustyn, E.; Finke, K.; Hansen, L.; Thomas, A.A., "Synthesis of oxazolidinone-protected amino acids for use in Negishi coupling reactions." Proceedings of the 127th Annual Meeting of the Nebraska Academy of Sciences, Lincoln, NE, **2017**; CHEM-A12, talk.
27. Flint, A.; Finke, K.; Zur, A.A.; Chien, H.-C.; Augustyn, E.; Heeren, N.; Hernandez, C.; Hansen, L.; Miller, S.; Lin, L.; Giacomini, K.M.; Colas, C.; Schlessinger, A.; Thomas, A.A., "Discovery of amino acid bioisosteres that are transported by the LAT1 protein for use in drug delivery." 31st Annual National Conference on Undergraduate Research, Memphis, TN, **2017**, poster.
28. Springer, S.; Augustyn, E.; Finke, K.; Hansen, L.; Thomas, A.A., "Negishi coupling reactions of oxazolidinone-protected amino acids." 31st Annual National Conference on Undergraduate Research, Memphis, TN, **2017**, poster.
29. Thomas, A.A.; Zur, A.A.; Chien, H.-C.; Augustyn, E.; Flint, A.; Heeren, N.; Finke, K.; Hernandez, C.; Hansen, L.; Miller, S.; Lin, L.; Giacomini, K.M.; Colas, C.; Schlessinger, A.; "Discovery of amino acid bioisosteres that are transported by the LAT1 protein for use in drug delivery." Sigma Xi Scientific Research Society National Meeting, Atlanta, GA, **2016**; PR-CBB-182, poster.
30. Stoner, L.; Bauer, J.; Finke, K.; Colas, C.; Schlessinger, A.; Thomas A.A., "Synthesis of phenylalanine analogs containing polar substituents using the Negishi coupling reaction." Abstracts of Papers, 51st Midwest Regional Meeting of the American Chemical Society, Manhattan, KS, **2016**; MWRM-356, poster.
31. Flint, A.; Anthony, A.; Colas, C.; Schlessinger, A.; Thomas, A.A., "Investigation of palladium-catalyzed cross coupling reactions to prepare heterocyclic analogs of histidine." Abstracts of Papers, 51st Midwest Regional Meeting of the American Chemical Society, Manhattan, KS, **2016**; MWRM-358, poster.
32. Hernandez, C.; Finke, K.; Hansen, L.; Kiser, P.F.; Thomas, A.A., "Synthesis of tenofovir prodrugs for LAT1 mediated drug delivery." Abstracts of Papers, 51st Midwest Regional Meeting of the American Chemical Society, Manhattan, KS, **2016**; MWRM-195, poster.
33. Augustyn, E.; Finke, K.; Hansen, L.M.; Heeren, N.; Zur, A.A.; Lin, L.; Giacomini, K.; Thomas, A.A., "Substituted amino acids as LAT-1 substrates for use in drug delivery." 30th Annual National Conference on Undergraduate Research, Asheville, NC, **2016**, poster.
34. Hansen, L.M.; Zur, A.A.; Augustyn, E.; Finke, K.; Heeren, N.; Chien, H.-C.; Lin, L.; Giacomini, K.; Colas, C.; Schlessinger, A.; Thomas, A.A., "Substituted amino acids as large-neutral amino acid transporter 1 (LAT-1) substrates for drug delivery." Proceedings of the 126th Annual Meeting of the Nebraska Academy of Sciences, Lincoln, NE, **2016**; CHEM-A9, talk.
35. Thomas, A.A. "Treating Alzheimer's disease: Approaches to getting drugs into the brain." American Chemical Society Nebraska Section Lectureship, Kearney, NE, **2015**, talk.

36. Thomas, A.A.; Augustyn, E.; Finke, K.; Hansen, L.M.; Heeren, N.; Miller, S.; Zur, A.A.; Lin, L.; Giacomini, K., "Large-neutral amino acid transporter 1 (LAT-1) for drug delivery to the brain." Abstracts of Papers, 50th Midwest Regional Meeting of the American Chemical Society, St. Joseph, MO, **2015**; MWRM-3, invited talk.
37. Finke, K.; Hansen, L.M.; Augustyn, E.; Zur, A.A.; Lin, L.; Giacomini, K.; Thomas, A.A., "Substituted amino acids as LAT-1 substrates for use in drug delivery." Abstracts of Papers, 50th Midwest Regional Meeting of the American Chemical Society, St. Joseph, MO, **2015**; MWRM-275, poster.
38. Augustyn, E.; Heeren, N.; Miller, S.; Zur, A.A.; Lin, L.; Giacomini, K.; Thomas, A.A. "Synthesis and activity of amino acid bioisosteres as LAT-1 substrates." Abstracts of Papers, 50th Midwest Regional Meeting of the American Chemical Society, St. Joseph, MO, **2015**; MWRM-279, poster.
39. Hunt, K.W.; Vigers, G.; Smith, D.; Geck-Do, M.; Dutcher, D.; Cook, A.W.; Thomas, A.A.; Tang, T.P.; Watts, R.J.; Clark, C.T.; Diaz, D.; Metcalf, A.T.; Gunawardana, I.W.; Kallan, N.C.; DeLisle, R.K.; Purkey, H.; Siu, M.; Burkard, M.; Lyssikatos, J.P.; Groneberg, R.; Regal, K., "Discovery of cathepsin D-selective BACE1 inhibitors." Abstracts of Papers, 245th National Meeting of the American Chemical Society, New Orleans, LA, **2013**; MEDI-36, talk.
40. Sutherlin, D.; Gaudino, J.; Thomas, A.; Kaus, B.; Young, W.; Diaz, D.; Harstad, E.; Liederer, B.; Merchant, M.; Stumpf, A.; Siedem, C.; Kim, A.; Eigenbrot, C.; Shia, S.; Blake, J.; Tsui, V.; Boyd, S., "Big changes from a small atom: Effects of fluorine substitution on small molecule MET inhibitors." Abstracts of Papers, 245th National Meeting of the American Chemical Society, New Orleans, LA, **2013**; MEDI-257, talk.
41. Thomas, A.A.; Hunt, K.; Burkard, M.; Cox, A.; DeLisle, K.; Dutcher, D.; Geck Do, M.; Liu, X.; Metcalf, A.; Rana, S.; Regal, K.; Sammond, D.M.; Searce-Levie, K.; Smith, D.; Vigers, G., "Discovery of BACE1 inhibitors that reduce Abeta in the CNS despite high efflux." Gordon Research Conference, Medicinal Chemistry, New London, NH, August 5-10, **2012**, poster.
42. Meiland, W.; Atwal, J.; Solanoy, H.; Hoyte, K.; Luk, W.; Lu, Y.; Watts, R.; Searce-Levie, K.; Burkard, M.; Hunt, K.; Thomas, A.A., "Role of BACE1 and BACE2 in the production of endogenous mouse β -amyloid." Alzheimer's Association International Conference, Vancouver, Canada, July 14-19, **2012**, P1-249, poster.
43. Kolakowski, G.R.; Neitzel, A.; Gauthier, C.; Siedem, C.; Marlow, A.L.; Thomas, A.A.; Young, W.B.; Eigenbrot, C.; Shia, S.; Blake, J.F.; Opie, L.P.; Eberhardt, C.; Winski, S.; Anderson, D.; Dinkel, V.; Dean, B.; Kim, A.; Sutherlin, D.; Gaudino, J.J.; Boyd, S.A., "Discovery of 4-aminopyrazolopyridines as potent, selective inhibitors of the kinase cMet." 21st International Symposium on Medicinal Chemistry, Brussels, Belgium, September 5-9, **2010**, poster.
44. Thomas, A.A.; Seo, J.; Lunghofer, P.; Marlow, A.L.; Kaplan, T.; Kaus, B.; Fong, K. C.; Welch, M.; Siedem, C.; De Meese, J.; Tian, H.; Kolakowski, G.; Peng, J.; Merchant, M.; Young, W.B.; Cohen, F.; Stumpf, A.; Wong, B.; Liederer, B.M.; Mamounas, M.; Eigenbrot, C.; Blake, J.F.; Opie, L.P.; Eberhardt, C.; Winski, S.; Anderson, D.; Dinkel, V.; Dean, B.; Shia, S.; Kim, A.; Poon, K.A.; Sutherlin, D.; Gaudino, J.J.; Boyd, S.A., "3-Amino-4-oxy-pyrazolopyridines: Inhibitors of the kinase Met with *in vivo* efficacy in TGI studies." Cambridge Healthtech Institute's Next-Gen Kinase Inhibitors: Oncology and Beyond, Cambridge, MA, June 21-23, **2010**, Abstract #1, poster and selected for a talk.
45. Thomas, A.A.; Xu, R.; Miller, S.; Boyd, S.; Condroski, K.; Gunawardana, I.; Zhang, G.; Lupher, Jr., M.L.; Farouz, F. S.; Jacobson, I.C.; Staunton, D.S.; Thorsett, E.D., "VLA1 integrin inhibitors: Diaminopropionic acid derivatives." Abstracts of Papers, 233rd National Meeting of the American Chemical Society, Chicago, IL, **2007**; MEDI-392, poster.
46. Thomas, A.A.; Miller, S.; Boyd, S.; Condroski, K.; De Meese, J.; Gunawardana, I.; Xu, R.; Zhang, G.; Lupher, Jr., M.L.; Farouz, F.S.; Jacobson, I.C.; Staunton, D.S.; Thorsett, E.D., "VLA1 integrin inhibitors: Aminopiperidine amides." Abstracts of Papers, 233rd National Meeting of the American Chemical Society, Chicago, IL, **2007**; MEDI-393, poster.
47. Thomas, A.A.; Ballard, J.; Bernat, B.; Boyd, S.A.; Brandhuber, B.; Condroski, K.; De Meese, J.; DeWolf, W.; Gonzales, S.S.; Gunawardana, I.; Han, M.; Kaplan, T.; Le Huerou, Y.; Lemieux, C.; Romoff, T.T.; Sullivan, F.; Weiler, S.; Wright, S.K.; Vigers, G.; Smith, D., "Non-charged thiamine analogues as inhibitors of enzyme transketolase." Abstracts of Papers, 230th National Meeting of the American Chemical Society, Washington, DC, **2005**; MEDI-327, poster.
48. Romoff, T.T.; Ballard, J.; Bernat, B.; Boyd, S. A.; Brandhuber, B.; Condroski, K.; De Meese, J.; DeWolf, W.; Gonzales, S.S.; Gunawardana, I.; Han, M.; Le Huerou, Y.; Lee, P.; Kaplan, T.; Lemieux, C.; Pedersen, R.; Pheneger, J.; Poch, G.; Smith, D.; Sullivan, F.; Thomas, A.A.; Weiler, S.; Wright, S.K.; Vigers, G., "Potent and selective thiamine antagonists that inhibit transketolase." Abstracts of Papers, 230th National Meeting of the American Chemical Society, Washington, DC, **2005**; MEDI-326, poster.
49. Gunawardana, I.; Ballard, J.; Bernat, B.; Boyd, S. A.; Brandhuber, B.; Condroski, K.; De Meese, J.; DeWolf, W.; Gonzales, S.S.; Han, M.; Kaplan, T.; Le Huerou, Y.; Lemieux, C.; Romoff, T.T.; Smith, D.; Sullivan, F.; Thomas, A.A.; Weiler, S.; Wright, S.K.; Vigers, G., "Thiamine mimetics as inhibitors of enzyme transketolase." Abstracts of Papers, 230th National Meeting of the American Chemical Society, Washington, DC, **2005**; MEDI-325, poster.

50. Thomas, A.A.; De Meese, J.; Miller, S.C.; Boyd, S.; Lupher, Jr., M.; Staunton, D., "Toward VLA1 integrin inhibitors: parallel synthesis of novel hydantoin scaffolds." 29th National Medicinal Chemistry Symposium, Madison, WI, **2004**; P113, poster.
51. Thomas, A.A.; Baxter, I.; Williamson, J.R.; Epple, R.; Sharpless, K.B., "Triazole methylguanidines: A click chemistry approach toward incorporation of a synthetically difficult functional group." *Drugs Fut* 2002, 27(Suppl. A): XVIIth Int. Symp. Medicinal Chemistry: Barcelona, Spain, **2002**; P107, poster.
52. Thomas, A.A.; Epple, R.; Sharpless, K.B., "Rapid discoveries in Os(VIII) catalysis using automation and mass spectrometry." Abstracts of Papers, 221st National Meeting of the American Chemical Society, San Diego, CA; American Chemical Society: Washington, DC, **2001**; ORGN-619, poster.
53. Monk, K.A.; Thomas, A.A.; Abraham, S.; Lee, S.; Garner, C.M., "Rearrangement of methylenecamphor: Remarkably clean access to a brominated derivative of the unnatural fenchyl system." Abstracts of Papers, 220th National Meeting of the American Chemical Society, Washington, DC; American Chemical Society: Washington, DC, **2000**; ORGN-058, poster.
54. Thomas, A.A.; Sharpless, K.B., "Aminohydroxylation of unsaturated phosphonates: A template for structural diversity." Abstracts of Papers, 219th National Meeting of the American Chemical Society, San Francisco, CA; American Chemical Society: Washington, DC, **2000**; MEDI-220, poster.
55. Thomas, A.A.; Kiser, P.F.; Kim, I., "Symmetrical, biodegradable cross-linkers based on lactic or glycolic acid: preparation and hydrolysis rate studies." Abstracts of Papers, 219th National Meeting of the American Chemical Society, San Francisco, CA; American Chemical Society: Washington, DC, **2000**; ORGN-394, poster.
56. Kiser, P.F.; Thomas, A.A.; Eichenbaum, G.M.; Needham, D.; Kim, I., "Design and performance of poly(HPMA) hydrogels containing symmetrical biodegradable crosslinkers composed of oligo-lactate and oligo-glycolate esters." Abstracts of Papers, 219th National Meeting of the American Chemical Society, San Francisco, CA; American Chemical Society: Washington, DC, **2000**; POLY-362, talk.
57. Rice, J.R.; Shannon, K.F.; Callahan, E.H.; Jacob, J.E.; Thomas, A.A.; Luthy, C.L., "Chemical characterization of a therapeutic platinum-carrying polymer." Abstracts of Papers, 8th International Symposium on Platinum and Other Metal Coordination Compounds in Cancer Chemotherapy, Oxford, England, April **1999**, poster.
58. Thomas, A.A.; Burgess, S.C.; Luthy, C.L.; Roach, J.S.; Evagorou, E.; Buckley, R.; Duncan, R., "The unique and complex challenges of polymer therapeutics: Synthesis of AP 5070, a platinated polymer." Abstracts of Papers, 215th National Meeting of the American Chemical Society, Dallas, TX; American Chemical Society: Washington, DC, **1998**; MEDI-080, poster.
59. Rice, J.R.; Luthy, C.L.; Thomas, A.A.; Roach, J.S.; Shannon, K.F.; Jacob, J.E.; Eberhardt, G.E.; Callahan, E.H.; Evagorou, E.; Buckley, R.; Wasil, M.; Duncan, R., "The unique and complex challenges of polymer therapeutics: Purity characterization of AP 5070, a platinated polymer." Abstracts of Papers, 215th National Meeting of the American Chemical Society, Dallas, TX; American Chemical Society: Washington, DC, **1998**; ANYL-044, poster.
60. Burgess, S.C.; Thomas, A.A.; Luthy, C.L., "The unique and complex challenges of polymer therapeutics: Structural characterization of AP 5070, a platinated polymer." Abstracts of Papers, 215th National Meeting of the American Chemical Society, Dallas, TX; American Chemical Society: Washington, DC, **1998**; INOR-229, poster.
61. Luthy, C.L.; Thomas, A.A.; Callahan, E.H.; Van Inwegen, R.; Wilson, G.; Evagorou, E.; Gianasi, E.; Duncan, R., "Anti-tumor activity of a platinated polymer (AP5070)—Chemical optimization and confirmation of enhanced therapeutic ratio." Presented at the 25th International Symposium on Controlled Release of Bioactive Materials, Las Vegas, Nevada, June **1998**, talk.
62. Singleton, D.A.; Merrigan, S.R.; Thomas, A.A., "Stereochemical labeling at natural abundance! Stereochemistry, isotope effects, and mechanism of the Diels-Alder reaction of hexachlorocyclopentadiene with ethyl vinyl ether." Book of Abstracts, 214th National Meeting of the American Chemical Society, Las Vegas, NV; American Chemical Society: Washington, DC, **1997**; ORGN-069, poster.
63. Thomas, A.A.; Sharpless, K.B., " α -Hydroxy- β -aminophosphonates via the Sharpless catalytic asymmetric aminohydroxylation." Book of Abstracts, 213th National Meeting of the American Chemical Society, San Francisco, CA; American Chemical Society: Washington, DC, **1997**; ORGN-126, poster.
64. Thomas, A.A.; Garner, C.M., "Selective metalation of allylic systems: Comparison of reactivity of endo and exocyclic alkenes." Presented at the 207th National Meeting of the American Chemical Society, San Diego, CA, **1994**; ORGN-189, talk.
65. Thomas, A.A.; Garner, C.M., "Metalation of endo and exocyclic alkenes: Anomalous high reactivity of β -pinene." Presented at the 49th Southwest Regional Meeting of the American Chemical Society, Austin, TX, **1993**; ORGN-196, talk.
66. Thomas, A.A.; Garner, C.M., " C_2 -chiral cyclic dienes derived from β -pinene: Possible precursors to auxiliaries for asymmetric synthesis." Book of Abstracts, 49th Southwest Regional Meeting of the American Chemical Society, Austin, TX; American Chemical Society: Washington, DC, **1993**; ORGN-338, poster.

67. Thomas, A.A.; Garner, C.M., "The preparation of new C_2 -chiral dienes and cyclic boranes for asymmetric hydroboration." Book of Abstracts, 48th Southwest Regional Meeting of the American Chemical Society, Lubbock, TX; American Chemical Society: Washington, DC, **1992**; ORGN-253, poster.
68. Thomas, A.A.; Garner, C.M., "The preparation of dienes and cyclic boranes for asymmetric synthesis," Book of Abstracts, 47th Southwest Regional Meeting of the American Chemical Society, San Antonio, TX; American Chemical Society: Washington, DC, **1991**; ORGN-269, poster.

Other Conferences Attended

1. 12th International Conference on Alzheimer's Drug Discovery, Jersey City, NJ, **2011**.
2. Cancer Research: A Vital Partnership in Cancer Drug Discovery and Development., New Orleans, LA, **2009**.
3. 6th Int. Symposium on Targeted Anticancer Therapies, Bethesda, MD, **2008**.
4. Protein Kinase Targets (CHI), Boston, MA, **2007**.
5. Keystone Conference: Cancer and Kinases: Lessons from the Clinic, Santa Fe, NM, **2006**.
6. Gordon Research Conference: Fibronectin, Integrins and Related Molecules, Ventura, CA, **2005**.
7. Drew University Residential School on Medicinal Chemistry, Madison, NJ, **2003**.