

# ROMAN MANETSCH

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Associate Professor

Department of Chemistry and Chemical Biology and Department of Pharmaceutical Sciences, and  
Faculty Fellow Center for Drug Discovery, Northeastern University  
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## EDUCATION / EMPLOYMENT HISTORY

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### Education

- 6/1998 Diploma in Chemistry, University of Basel (Switzerland), Studies in Chemistry (main subject) and Biology (minor subject), Advisor: Professor Wolf-Dietrich Woggon  
Thesis: *Synthesis of Potential Inhibitors of the Enzyme Carotene Oxygenase*
- 10/2002 Ph.D. in Chemistry, Institute of Organic Chemistry at the University of Basel (Switzerland); Advisor Professor Wolf-Dietrich Woggon and Co-Advisor Professor Jean-Louis Reymond (Department of Chemistry and Biochemistry at the University of Bern (Switzerland))  
Thesis: *Transition State Analogues for the Identification of the Enzyme Tocopherol Cyclase and for the Preparation of Catalytic Monoclonal Antibodies*

### Employment

- 11/2002 - 05/2005 Postdoctoral Fellow with K. Barry Sharpless, The Scripps Research Institute, La Jolla (CA)
- 08/2005 - 07/2011 Assistant Professor, Department of Chemistry, College of Arts and Science, University of South Florida, Tampa (FL)
- 08/2011 - 08/2014 Associate Professor, Department of Chemistry, College of Arts and Science, University of South Florida, Tampa (FL)
- 12/2012 - 10/2013 Sabbatical Visitor, Center for Proteomic Research, Novartis Pharma AG, Basel, Switzerland
- 09/2014 - present Associate Professor, Department of Chemistry and Chemical Biology, College of Science and Department of Pharmaceutical Sciences, Bouvé College of Health Sciences, Northeastern University, Boston (MA)

### Honors and Awards

- 2002 Ph.D. Summa Cum Laude
- 2003 Swiss National Science Foundation, Postdoctoral Fellowship
- 2003 Novartis Foundation (formerly the Ciba-Geigy Jubilee Foundation), Postdoctoral Fellowship
- 2004 Swiss National Science Foundation, Postdoctoral Fellowship
- 2012 Excellence in Innovation Award, University of South Florida

## RESEARCH ACTIVITIES

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### Peer Reviewed Publications

(Corresponding author(s) is(are) indicated with asterisk(s)\*)

- 1) Roberts B F, Iyamu I D, Lee S, Eunyoung Lee, Ayong L, Kyle D E, Yuan Y, **Manetsch R**, Chakrabarti D\*. Spirocyclic Chromanes Exhibit Antiplasmodial Activities and Inhibit All Intraerythrocytic Life Cycle Stages. *Int J Parasitol Drugs Drug Resist* 2016; 6, 85-92.
- 2) Kumar A B, **Manetsch R\***. 3-Trifluoromethyl-3-aryldiazirine Photolabels with Enhanced Ambient Light Stability. *Chem Commun* 2016; 2729-2732.
- 3) Zhu X, Van Horn K S, Barber M M, Yang S, Wang M Z, **Manetsch R**, Werbovetz K A\*. SAR Refinement of Antileishmanial  $N^2, N^2$ -disubstituted Quinazoline-2,4-diamines. *Bioorg Med Chem* 2015; 23, 5182-5189.

- 4) Mahajan S, **Manetsch R**, Merkler D J, Stevens S M Jr\*. Synthesis and Evaluation of a Novel Adenosine-Ribose Probe for Global-Scale Profiling of Nucleoside and Nucleotide-Binding Proteins. *PLoS One* 2015; 10 e0115644.
- 5) Monastyrskiy A, Namelikonda NK, **Manetsch R**\*. Metal-Free Arylation of Ethyl Acetoacetate with Hypervalent Diaryliodonium Salts: an Immediate Access to Diverse 3-Aryl-4(1*H*)-Quinolones. *J Org Chem*, 2015; 80, 2513-2520.
- 6) Cross R M, Flanigan D L, Monastyrskiy A, LaCrue A N, Saenz F E, Maignan J R, Mutka T S, White K L, Shackelford D M, Bathurst I, Fronczek F R, Wojtas L, Guida W C, Charman S A, Burrows J N, Kyle D E, **Manetsch R**\*. Orally Bioavailable 6-Chloro-7-methoxy-4(1*H*)-quinolones Efficacious against Multiple Stages of *Plasmodium*. *J Med Chem*, 2014; 57, 1693-1705.
- 7) Monastyrskiy A, Kyle D E, **Manetsch R**\*. 4(1*H*)-Pyridone and 4(1*H*)-Quinolone Derivatives as Antimalarials with Erythrocytic, Exoerythrocytic, and Transmission Blocking Activities (Review). *Curr Top Med Chem*, 2014; 1693-1705.
- 8) Campbell C O, Santiago D N, Guida W C, **Manetsch R**, Adams J H\*. In silico Characterization of an Atypical MAPK Phosphatase of *Plasmodium falciparum* as a Suitable Target for Drug Discovery. *Chem Biol Drug Dis* 2014; 84, 158-168.
- 9) Van Horn K S, Zhu X, Pandharkar T, Yang S, Vesely B, Vanaerschot M, Dujardin J-C, Rijal S, Kyle D E, Wang M Z, Werbovetz Karl, **Manetsch R**\*. Antileishmanial activity of a series of *N*<sup>2</sup>,*N*<sup>4</sup>-disubstituted quinazoline-2,4-diamines. *J Med Chem* 2014; 57, 5141-5156.
- 10) Kumar A B, **Manetsch R**\*. Regioselective, Mild and Robust O2',O3'-Deacetylations of Peracetylated Ribonucleosides Using Tetra-*n*-butylammonium Fluoride. *Eur J Org Chem* 2014; 3551-3555.
- 11) Van Horn K S, Burda W N, Fleeman R, Shaw L N\*, **Manetsch R**\*. Antibacterial Activity of a Series of *N*<sup>2</sup>,*N*<sup>4</sup>-Disubstituted Quinazoline-2,4-diamines. *J Med Chem* 2014; 57, 3075-3093.
- 12) Sáenz F E, LaCrue A N, Cross R M, Maignan J R, Udenze K O, **Manetsch R**, Kyle D K\*. 4-(1*H*)-Quinolones and 1,2,3,4-Tetrahydroacridin-9(10*H*)-ones Prevent the Transmission of *Plasmodium falciparum* to *Anopheles freeborni*. *Antimicrob Agents Chemother* 2013; 57, 61887-6195.
- 13) LaCrue A N, Sáenz F E, Cross R M, Udenze K O, Monastyrskiy A, Stein S, Mutka T S, **Manetsch R**, Kyle D E\*. 4(1*H*)-Quinolones with Liver Stage Activity Against *Plasmodium berghei*. *Antimicrob Agents Chemother* 2013; 57, 417-424.
- 14) Nilsen A, LaCrue A, White K. L., Forquer I P, Cross R M, Marfurt J, Mather M W, Delves M J, Shackelford D M, Sáenz F E, Morrissey J M, Steuten J, Mutka T, Li Y, Wirjanata G, Ryan E, Duffy S, Kelly J X, Sebayang B F, Zeeman A-M, Noviyanti R, Sinden R E, Kocken C H M, Price R N, Avery V M, Angulo-Barturen I, Jiménez-Díaz M B, Ferrer S, Herreros E, Sanz L M, Benito F J G, Bathurst I, Burrows J, Siegl P, Guy R K, Winter R W, Vaidya A B, Charman S A, Kyle D E, **Manetsch R**\*, Riscoe M K\*. Quinolone-3-diarylethers: A New Class of Drugs for a New Era of Malaria Eradication. *Sci Transl Med* 2013; 5, 177ra37.
- 15) Kulkarni S S, Hu X, **Manetsch R**\*. A Simple Base-mediated Amidation of Aldehydes with Azides. *Chem Commun* 2013; 49, 1193-1195.
- 16) Nacheva K P, Maza W A, Myers D Z, Fronczek F R, Larsen R W, **Manetsch R**\*. Fluorescent Properties and Resonance Energy Transfer of 3,4-Bis(2,4-difluorophenyl)-maleimide. *Org Biomol Chem* 2012; 10, 7840-7846.
- 17) Kumar A B, Anderson J M, Melendez A L, **Manetsch R**\*. Synthesis and Structure-Activity Relationship Studies of 1,3-Disubstituted 2-Propanols as BACE-1 Inhibitors. *Bioorg Med Chem Lett* 2012; 22, 4740-4744.
- 18) Namelikonda N K, **Manetsch R**\*. Sulfo-Click Reaction *Via In Situ* Generated Thioacids and Its Application in Kinetic Target-Guided Synthesis. *Chem Commun* 2012; 48, 1526-1528.  
*Article has been published in the "Emerging Investigators 2012" issue.*
- 19) Cross R M, Namelikonda N K, Mutka T S, Luong L, Kyle D E, **Manetsch R**\*. Synthesis, Antimalarial Activity, and Structure-Activity Relationship of 7-(2-Phenoxyethoxy)-4(1*H*)-quinolones. *J Med Chem* 2011; 54, 8321-8327.
- 20) Kumar A B, Anderson J M, **Manetsch R**\*. Design, Synthesis and Photoactivation Studies of Fluorous Photolabels. *Org Biomol Chem* 2011; 9, 6284-6292.
- 21) Cross M R, Maignan J R, Mutka T S, Luong L, Sargent J, Kyle D K, **Manetsch R**\*. Optimization of 1,2,3,4-Tetrahydroacridin-9(10*H*)-ones as Antimalarials Utilizing Structure-Activity and Structure-Property Relationships. *J Med Chem* 2011; 54, 4399-4426.

- 22) Kulkarni S S, Hu X, Doi K, Wang H-G, **Manetsch R\***. Screening of Protein-Protein Interaction Modulators via Sulfo-Click Kinetic Target-Guided Synthesis. *ACS Chemical Biology* 2011; 6, 724-732.  
*Appeared in the list of 20 "most read" ACS Chemical Biology articles in the entire year of 2011.*
- 23) Cross R M, **Manetsch R\***. Divergent Route to Access Structurally Diverse 4-Quinolones via Mono or Sequential Cross-Couplings. *J Org Chem* 2010; 75, 8654-8657.
- 24) Cross M R, Monastyrskyi A, Mutka T S, Burrows J N, Kyle D K, **Manetsch R\***. Endochin Optimization: Structure-Activity and Structure-Property Relationship Studies of 3-Substituted 2-Methyl-3(1*H*)-quinolones with Antimalarial Activity. *J Med Chem* 2010; 53, 7076-7094.
- 25) Hu X, **Manetsch R\***, Kinetic Target-Guided Synthesis (Review). *Chem Soc Rev* 2010, 39, 1316-1324.
- 26) Hu X, Sun J, Wang H-G, **Manetsch R\***. Bcl-X<sub>L</sub>-Templated Assembly of Its Own Protein-Protein Interaction Modulator from Fragments Decorated with Thio Acids and Sulfonyl Azides. *J Am Chem Soc* 2008; 130, 13820-13821.
- 27) Radic Z, **Manetsch R**, Fournier D, Sharpless KB, Taylor P\*. Probing Gorge Dimensions of Cholinesterases by Freeze-Frame Click Chemistry. *Chem-Biol Interact* 2008; 175, 161-165.
- 28) Sharpless K B, **Manetsch R\***. In Situ Click Chemistry: A Powerful Means for Lead Discovery (Review). *Expert Opinion on Drug Discovery* 2006; 1, 525-538.
- 29) Radic Z, **Manetsch R**, Krasinski A, Raushel J, Yamauchi J, Garcia C, Kolb H C, Sharpless K B, Taylor P\*. Molecular basis of interactions of cholinesterases with tight binding inhibitors. *Chem-Biol Interact* 2005; 157, 133-141.
- 30) Krasinski A, Radic Z, **Manetsch R**, Raushel J, Taylor P, Sharpless K B, Kolb H C\*. Click Chemistry Screening *In Situ*: Target-Guided Optimization of Acetylcholinesterase Inhibitors. *J Am Chem Soc* 2005; 127, 6686-6692.
- 31) Zheng L, **Manetsch R**, Woggon W-D, Baumann U, Reymond J L\*. Mechanistic Study of Proton Transfer in Catalytic Antibody 16E7 by Site-Directed Mutagenesis and Homology Modeling. *Bioorg Med Chem* 2005; 13, 1021-1029.
- 32) **Manetsch R**, Krasinski A, Radic Z, Raushel J, Taylor P, Sharpless K B, Kolb H C\*. In Situ Click Chemistry: Enzyme Inhibitors Made to Their Own Specifications. *J Am Chem Soc* 2004; 126, 12809-12818.
- 33) **Manetsch R**, Zheng L, Reymond M T, Woggon W D, Reymond J-L\*. A Catalytic Antibody Against a Tocopherol Cyclase Inhibitor. *Chem Eur J* 2004; 10, 2487-2506.

### Book Chapters

- 1) Book chapter on "3',5'-Dimethoxybenzoin" by R. Matthew Cross and **Roman Manetsch**. *e-EROS Encycl. Reagents Org. Synth.* 2009.

### Patents

- 1) **Manetsch R**, Cross R M, Namelikonda N K, Kyle D E, Mutka T S, Lacrue A N, Maignan J R, Saenz F E. Preparation of 4(1*H*)-Quinolones Having Antimalarial Activity with Reduced Chemical Resistance. US20130123258A1, 2013.
- 2) Riscoe M K, Kelly J X, Winter R W, Hinrichs D J, Smilkstein M J, Nilsen A, Burrows J N, Kyle D E, **Manetsch R**, Cross R M, Monastyrskyi A, Flanigan D L. Compounds Having Antiparasitic or Anti-Infectious Activity. US20120115904A1, 2012.
- 3) Riscoe M K, Kelly J X, Winter R W, Hinrichs D J, Smilkstein M J, Nilsen A, Burrows J N, Kyle D E, **Manetsch R**, Cross R M, Monastyrskyi A, Flanigan D L. Compounds Having Antiparasitic or Anti-Infectious Activity. WO2012167237A2, 2012.
- 4) **Manetsch R**, Kulkarni S S, Iyamu I D, Wang H-G, Doi K, Guida W C, Santiago D N, Duboulay C J. Target-Guided Synthesis of Acylsulfonamides that Target Bcl-2 Family Proteins with Potential Use in Treating Cancer. WO2012021486A2, 2012.
- 5) Adams J H, Balu B, Maher S P, Campbell C, **Manetsch R**. Methods for Treating and/or Preventing Malaria in Individuals that Use Plasmodium PF13\_0027 Gene and Dual-Specificity Protein Tyrosine Phosphatase as Targets. WO2010108177A2, 2010.
- 6) **Manetsch R**, Wang H-G, Hu X, Kulkarni S S, Sun J G. Target-Guided Synthesis of Triazoles in the Presence of a Bcl-2 Family Protein. WO2009105746A2, 2009.

- 7) **Manetsch R**, Wang H-G, Hu X, Kulkarni S S; Sun J G. Process for Preparation of Acylsulfonamides from Thioacids and Sulfonyl Azides in the Presence of a Bcl-2 Family Protein. WO2009105751A1, 2009.

### Invited Presentations and Conferences

- 1) Kinetic Target-Guided Synthesis: A Fragment Evolution Strategy Based on Bioorthogonal Reactions. Fragment-based Drug Discovery Conference 2015, San Diego, USA, April 20 to 21, 2015.
- 2) Kinetic Target-Guided Synthesis: A Fragment Evolution Strategy Based on Bioorthogonal Reactions. Fragment-based Lead Discovery Conference 2014, Basel, Switzerland, September 21 to 24, 2014.
- 3) Mass Spectrometry-Guided Approaches for Synthetic and Medicinal Chemistry. Pharmaceutical Sciences, University of Nebraska Medical Center, Omaha, NE, March 12, 2014.
- 4) Mass Spectrometry-Guided Approaches for Synthetic and Medicinal Chemistry. Department of Chemistry, Wayne State University, Detroit, MI, March 5, 2014.
- 5) Mass Spectrometry-Guided Approaches for Synthetic and Medicinal Chemistry. Department of Chemistry and Applied Biosciences, Swiss Federal Institute of Technology (ETH), Zürich, Switzerland, October 4, 2013.
- 6) Kinetic Target-guided Synthesis: A Mass Spectrometry-based Fragment Evolution Strategy for "Undruggable" Targets. 30<sup>th</sup> Winterschool on Proteinases and Their Inhibitors, Tiers am Rosengarten, February 27 to March 3, 2013
- 7) Kinetic Target-Guided Synthesis: A Fragment-Based Discovery Strategy for "Undruggable" Targets Based on Bioorthogonal Reactions. Department of Chemistry, University of Basel, February 7, 2013.
- 8) Mass Spectrometry Guided Medicinal Chemistry of Antimalarial and Anticancer Agents. Department of Chemistry and Biochemistry, University of Bern, November 27, 2012.
- 9) Bringing 4(1*H*)-Quinolones and 3-Aryldiazirines Out of the "Dark" Ages. 6th International Conference, Chemistry of Nitrogen Containing Heterocycles, Kharkiv, Ukraine, November 12 to 16, 2012.
- 10) Kinetic Target-Guided Synthesis: A Fragment-Based Discovery Strategy for "Undruggable" Targets Based on Bioorthogonal Reactions. Drug Discovery Symposium, Novartis, Basel and Cambridge, October 22, 2012.
- 11) Kinetic Target-Guided Synthesis: Fragment-Based Discovery Strategies Based on Bioorthogonal Reactions. Glaxo Smith Kline, Research Triangle Park, NC, June 26, 2012.
- 12) Kinetic Target-Guided Synthesis: Fragment-Based Discovery Strategies Based on Bioorthogonal Reactions. Novartis, Basel, Switzerland, April 27, 2012.
- 13) Kinetic Target-Guided Synthesis: Fragment-Based Discovery Strategies Based on Bioorthogonal Reactions. Addex Pharmaceuticals, Geneva, Switzerland, April 23, 2012.
- 14) Mass Spectrometry Based Decisions Facilitating Synthetic and Medicinal Chemistry. Department of Chemistry, Clemson University, Clemson, SC, March 15, 2012.
- 15) Mass Spectrometry Based Decisions Facilitating Synthetic and Medicinal Chemistry. Department of Chemistry, Mississippi State University, MS, March 2, 2012.
- 16) Quinazolines with Anti-Leishmania Activity. Consortium for Parasitic Drug Development Meeting 2011. Clearwater, FL, November 1 to 3, 2011.
- 17) LC-MS-Guided Identification and Optimization of Anti-Cancer and Anti-Malarial Agents. Albert Einstein College of Medicine, Bronx, NY. June 21, 2011.
- 18) The Bioorthogonal Sulfo-click Reaction and its Use in Kinetic Target-Guided Synthesis Screening of Bcl-2 Proteins. Amgen, Thousand Oaks, CA, May 18, 2011.
- 19) LC-MS-Guided Identification and Optimization of Anti-Cancer and Anti-Malarial Agents. Department of Chemistry, Rice University, Houston, TX, April 27, 2011.
- 20) Bioorthogonality of the Sulfo-Click Reaction and its Use in Kinetic Target-Guided Synthesis. 241st ACS National Meeting and Exposition, Anaheim, CA, March 27 to 31, 2011.
- 21) Discovery and Optimization of Protein-Protein Interaction Modulators via Kinetic Target-Guided Synthesis. 18th International Molecular Medicine Tri-Conference, Mastering Medicinal Chemistry Summit. San Francisco, CA, February 23 to 25, 2011.
- 22) Targeting Protein-Protein Interactions via Kinetic Target-Guided Synthesis. The Fragment-Based Lead Discovery Conference 2010. Philadelphia, PA, October 10 to 13, 2010.
- 23) Two Case Studies of LC/MS-driven Drug Discovery: Targeting Bcl-2-Protein Interactions for Anti-Cancer and bc<sub>1</sub> for Anti-Malarial Agents. Department of Chemistry, University of Washington. Seattle, WA, October 20, 2010.

- 24) Targeting Protein-Protein Interactions and Malaria: Two Case Studies of LC/MS-driven Screening and Hit-to-Lead Optimization. The Scripps Florida Research Institute. Jupiter, FL, August 10, 2010.
- 25) Kinetic Target-Guided Synthesis Targeting Protein-Protein Interactions. "Short talk" and poster at the Gordon Research Conference on Chemistry and Biology of Peptides. Ventura, CA, February 28 to March 5, 2010.
- 26) LC/MS-based Drug Discovery Targeting Malaria and Cancer. Department of Chemistry, University of Tampa. Tampa, FL, November 17, 2009.
- 27) Kinetic Target-Guided Synthesis: A Fragment-Based Lead Discovery Method Targeting Protein-Protein Interactions. Department of Chemistry, Florida State University, Tallahassee, FL, November 20, 2008.
- 28) Target-Guided Synthesis: A New Approach for Drug Discovery. Florida Annual Meeting and Exposition 2008 (American Chemical Society Regional Meeting). Orlando, FL, May 8 to 10, 2008.
- 29) Target-Guided Synthesis: A New Approach for Drug Discovery. BioStat International / Molecular Medicine Seminar Series, College of Medicine, University of South Florida, Tampa, FL, March 31, 2006.

## RESEARCH FUNDING

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### Current Awards

- 1) National Institutes of Health, National Institute of General Medical Sciences (1R01GM097118): Drugs Targeting Erythrocytic and Exoerythrocytic Stages of Malaria. \$1,361,229 (\$952,861 Manetsch budget) 09/15/2011 - 05/31/2016. PI **Roman Manetsch**; CI Dennis Kyle (University of South Florida, Department of Global Health).
- 2) National Institutes of Health, National Institute of Allergy and Infectious Diseases Partnerships with Product Development Public-Private Partnerships (1R01AI090662): Drug Validation of New Antimalarial Leads. \$5,721,270 (\$1,111,636 Manetsch budget), 06/01/2011 - 05/31/2016. Lead PI Jeremy Burrows (Medicines for Malaria Venture) and PIs Kip Guy (St. Jude Children's Research Hospital, Chemical Biology and Therapeutics), Dennis Kyle (University of South Florida, Department of Global Health), David Floyd (Rutgers, Department of Chemistry), and **Roman Manetsch**.

### Grants Expired

- 1) National Institutes of Health, National Institute of Allergy and Infectious Diseases (R21): Antileishmanial Lead Optimization of Quinazolines. \$432,963 (\$115,274 Manetsch budget), 07/01/2012 - 06/30/2014. PI Karl Werbovetz (The Ohio State University, Department of Medicinal Chemistry); CIs **Roman Manetsch** and Zhuo (Michael) Wang (University of Kansas, Pharmaceutical Chemistry).
- 2) Medicines for Malaria Venture (11/0022): Quinolones for Single Exposure Radical Cure, \$182,108 (direct costs only) (\$83,724 Manetsch budget; direct costs), 03/01/2012 – 12/31/2012 (continuation upon meeting milestones). PI Dennis Kyle (University of South Florida, Department of Global Health); CI **Roman Manetsch**.
- 3) Medicines for Malaria Venture (08/0068): Quinolone and 1,2,3,4-Tetrahydroacridone Chemotypes for Malaria Drug Discovery. \$859,086 (direct costs only) (\$449,127 Manetsch budget; direct costs), 11/01/2008 – 12/31/2012 (annually renewed; notified on 05/22/2012 that project will be terminated due to successful delivery of a preclinical candidate, which will be taken forward by MMV's translational team). PI **Roman Manetsch**; CI Dennis Kyle (University of South Florida, Department of Global Health).
- 4) Bankhead-Coley Biomedical Research Program, Florida Department of Health (08BN-04): Chemical Tools for Proteomic Profiling. \$375,000 (\$173,610 Manetsch budget), 07/01/2008 – 12/31/2011. PI **Roman Manetsch**; CI David Merkler (University of South Florida, Department of Chemistry), Mentor Mark McLaughlin (University of South Florida, Department of Chemistry)
- 5) Florida Center of Excellence - BITT Seed Grant: Evaluation of a Phosphotyrosin Phosphatase as an Antimalarial Drug Target. \$75,000 (\$33,000 Manetsch budget), 07/01/09 – 12/31/11. PI John Adams (University of South Florida, Department of Global Health); CI **Roman Manetsch**.
- 6) Florida Center of Excellence - BITT Seed Grant: Characterization of Candida Cytochrome b5 Reductase as Pharmacological Target, \$75,000 (\$33,000 Manetsch budget), 07/01/09 – 12/31/11. PI Andreas Seyfang (University of South Florida, Molecular Medicine); CI **Roman Manetsch**.

- 7) James and Esther King Biomedical Research Program, Florida Department of Health (07KN-08): Bcl-X<sub>L</sub>-Templated Assembly of Compounds Modulating Bcl-X<sub>L</sub>-Protein Interactions. \$375,000 (\$337,612 Manetsch budget), 07/01/2007 – 12/31/2010. PI **Roman Manetsch**; Mentor Wayne Guida (University of South Florida, Department of Chemistry).
- 8) Johnnie B. Byrd, Sr. Alzheimer's Center and Research Institute, Seed Grant: Adenylomics and Caffeinylics. \$40,793 (\$21,443 Manetsch budget), 09/01/2008 – 08/31/2009. PI **Roman Manetsch**; CI David Merkler (University of South Florida, Department of Chemistry).
- 9) Florida Center of Excellence - BITT Seed Grant, GALS007: Adenylomics. \$75,000 (\$37,000 Manetsch budget), 05/01/2008 – 04/30/2009. PI David Merkler (University of South Florida, Department of Chemistry); CI **Roman Manetsch**.
- 10) Florida Center of Excellence - BITT Seed Grant, GALS008: SAR Study of Quinolones and 1,2,3,4-Tetrahydroacridones for the Development of Novel Chemotypes Targeting Atovaquone Resistant Malaria Parasites. \$75,000 (\$38,000 Manetsch budget), 05/01/2008 – 04/30/2009. PI **Roman Manetsch**; CI Dennis Kyle (University of South Florida, Department of Global Health).
- 11) Florida Center of Excellence - BITT Thrust Graduate Scholar, Ph.D. scholarship for graduate student Richard M. Cross: Discovery of Lead Compounds Targeting the Enzyme 5-Aminolevulinic Synthase. \$40,000, 09/01/2007 – 08/31/2009. PI **Roman Manetsch**.
- 12) University of South Florida, Interdisciplinary Research Development Grant: Development of Novel Antiviral Compounds Targeting Non-structural Protein 1. \$49,872 (\$16,624 Manetsch budget), 03/01/2006 – 02/29/2008. PI **Roman Manetsch**; CIs Alberto van Olphen (University of South Florida, Center for Biological Defense) and Edwin Rivera (University of South Florida, Department of Chemistry).
- 13) University of South Florida, Interdisciplinary Research Development Grant: Development of Novel Antiviral Compounds Against Influenza. \$19,994 (\$6,372 Manetsch budget), 02/01/2006 – 01/31/2007. PI Alberto van Olphen (University of South Florida, Center for Biological Defense); CIs **Roman Manetsch** and Edwin Rivera (University of South Florida, Department of Chemistry).
- 14) American Cancer Society Institutional Grant Program, Cycle 20, Fall 2005: Bcl-xL-Templated Assembly of Compounds Modulating Bcl-xL. \$20,000, 04/01/2006 – 03/31/2007. PI **Roman Manetsch**.

## TEACHING ACTIVITIES

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### Courses Taught at Northeastern University

- 1) *CHEM2311 Organic Chemistry I*: Fall 2015.

### Courses Taught at the University of South Florida

- 1) *CHM2210 Organic Chemistry I*: Spring 2007, Spring 2008, Fall 2008, Spring 2009, Fall 2009, Spring 2010, Spring 2011, Spring 2014.
- 2) *CHM2211 Organic Chemistry II*: Spring 2012.
- 3) *CHM6250/5225 Advanced Organic Chemistry I*: Fall 2005, Fall 2006, Fall 2007, Fall 2013 (dual listed graduate and undergraduate level course).
- 4) *CHM6935 Graduate Seminar*: Fall 2006, Spring 2007, Fall 2007, Spring 2008, Fall 2008, Spring 2009, Fall 2009, Spring 2010, Fall 2010, Spring 2011, Fall 2011, Spring 2012. Coordinating CHM6935 Graduate Seminar program.
- 5) *CHM6938/4932 Spectroscopy*: Fall 2010, Fall 2011 (dual listed graduate and undergraduate level course).
- 6) *CHM6938/PHC7931 Drug Discovery for Tropical Diseases*: Spring 2010, Spring 2012, Spring 2014.

### Postdoctoral Associates

- 1) Dr. Abdul Shaikh 09/2015 - present
- 2) Dr. Fabian Brockmeyer 07/2015 - present
- 3) Dr. Yana Sakhno, 06/2012 - 08/2013
- 4) Dr. Raghupathi Neelarapu, 05/2012 - 07/2014
- 5) Dr. Niranjana Namelikonda, 05/2009 - 09/2014
- 6) Dr. David Flanigan, 04/2009 - 10/2014

- 7) Dr. Yijun Yiang, 09/2009 - 12/2010
- 8) Dr. Xiangdong Hu, 09/2006 - 04/2009

### Thesis and Dissertation Research Supervision

- 1) Matthew G. Dowgiallo, 2015 - present, Ph.D. candidate
- 2) Yingzhao Zhao, 2015 - present, Ph.D. candidate
- 3) Megan Barber, 2012 - 2015, *2,4-Disubstituted Quinazolines with Antileishmanial or Antibacterial Activity*, M.S.
- 4) Iredia D. Iyamu, 2010 - 2016, *Design, Synthesis and Evaluation of Spirocyclic Chromanes, Dihydropyridines, and Naphthoquinones as Antimalarial Agents*, Ph.D.
- 5) Cynthia Lichorowic, 2010 - 2016, *Studies on Antimalarial Activity, Physicochemical Properties and Mechanism of Action of 4(1H)-Quinolones and Artemisinin*, Ph.D.
- 6) Jordany R. Maignan, 2009 - 2015, *Development of In Vivo Efficacious 4(1H)-Quinolones and 1,2,3,4-Tetrahydroacridin-9(10H)-ones with Potent Antimalarial Activity*, Ph.D.
- 7) Andrii Monastyrskiy, 2008 - 2014, *Synthesis and Evaluation of 3-Aryl-4(1H)-Quinolones as Orally Active Antimalarials: Overcoming Challenges in Solubility, Metabolism, and Bioavailability*, Ph.D.
- 8) Kurt Van Horn, 2007 - 2013, *Antiparasitic and Antibacterial Agents: Studies on 1,4-Dihydropyridines and 2,4-Diaminoquinazolines*, Ph.D.
- 9) Katya Nacheva, 2007 - 2012, *Design and Synthesis of a Molecular Fluorescent Probe and its Role of Kinetic Target-Guided Synthesis to Identify Inhibitors of Enzymatic and Protein-Protein Interaction Targets*, Ph.D.
- 10) Sameer S. Kulkarni, 2006 - 2012, *Development and Optimization of Kinetic Target-Guided Synthesis Approaches Targeting Protein-Protein Interactions of the Bcl-2 Family*, Ph.D.
- 11) Arun B. Kumar, 2006 - 2012, *Design, Synthesis and Evaluation of Novel Diazirine Photolabels with Improved Ambient Light Stability and Fluorous-Based Enrichment Capacity*, Ph.D.
- 12) Shikha Mahajan, 2006 - 2012, *Protein Profiling of Adenine Nucleoside and Nucleotide Analogs Binding Proteins Using N<sup>6</sup>-Biotinylated-8-azidoadenosine Analogs as Affinity Based Protein Profiling Probes*, Ph.D. (primary advisor David Merkler, Co-advisor Roman Manetsch)
- 13) R. Matthew Cross, 2005 - 2011, *Lead Discovery and Optimization Strategies Towards the Development of 4(1H)-Quinolone and 1,2,3,4-Tetrahydroacridone Analogs with Antimalarial Activity*, Ph.D.
- 14) Lisa Malmgren, 2005 - 2007, *Using in Situ Click Chemistry to Modulate Protein-Protein Interactions: Bcl-xL as a Case Study*, M.S.

### Undergraduate Research

- 1) Isabelle S. Schulte, 2015 - present
- 2) Michael Shultis, 2015 - present
- 3) James Giarrusso, 2011 - 2013, BS in Chemistry in 2012.
- 4) Niles Gunsalus, 2010 - 2012, BS in Chemistry in 2012.
- 5) Lisa Luong, 2009 - 2011, BS in Biomedical Sciences in 2011.
- 6) Jordan Anderson, 2008 - 2011, BS in Chemistry in 2011.
- 7) Mario Martinez, 2007 - 2009, BS in Chemistry in 2009.

### Honors Undergraduate Thesis

- 1) Alexandra Griffin, 2010 - 2011, BS in Biomedical Sciences in 2011
- 2) Lisa Luong, 2010 - 2011, BS in Biomedical Sciences in 2011
- 3) Jordan Anderson, 2010 - 2011, BS in Chemistry in 2011
- 4) Mario Martinez, 2008 - 2009, BS in Chemistry in 2009