Marina Tanasova, Ph.D.
Assistant Professor
Department of Chemistry
Michigan Technological University
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Education

Ph.D. in Chemistry (2008)
Michigan State University
East Lansing, MI, USA
Dissertation: "Porphyrin Tweezers for the Absolute Stereochemical Determination of Small Molecules through ECCD." Advisor: Babak Borhan

M.Sc. in Organic Chemistry (1999)
Georgian Technical University
Tbilisi, Georgia

B.Sc. in Technology of Silicates (1996)
Georgian Technical University
Tbilisi, Georgia

Professional Appointments

Assistant Professor (2013-current)
Chemistry Department
Michigan Technological University
Houghton, MI, USA

Postdoctoral Fellow (2010-2013)
Swiss Federal Institute of Technology (ETH)
Zurich, Switzerland
Advisor: Shana J. Sturla

Postdoctoral Research Associate (2008-2010)
University of Minnesota
Minneapolis, MN, USA
Advisor: Shana J. Sturla

Research Associate (1998-2002)
Georgian Technical University
Tbilisi, Georgia

Professional Affiliations

Michigan Technological University Health Sciences Institute
Michigan Technological University Biochemistry and Molecular Biology (BMB) Ph.D. program
American Chemical Society

Fellowships and Awards

- US Department of Health & Human Services (NIH) R15 AREA Award "Exploiting cellular discrimination through GLUTs with small-molecule GLUT-targeting probes." 2019
- MEDC. Technology Transfer Talent Network (T3N): "Advancing probe design for cancer detection." 2017
- Pruett Family donation "Supporting Postdoctoral Fellow to conduct research in Chemistry." 2015
- Michigan Tech's Research Excellence Funds "Cancer Toolbox: Facilitating GLUT5 targeting for theranostic applications." 2017
- Michigan Tech's Research Excellence Funds "Acquiring MerMade4 DNA synthesizer: enabling modern research in chemistry, chemical biology and toxicology at Michigan Tech." 2015
- Michigan Tech's Research Excellence Funds "Repair and Upgrade of Existing Advanced Fluorescent Microscope." 2015
- Michigan Tech's Research Excellence Funds "Establishing Cell Culture and Bio-Imaging Core Facility: Promoting Life-Sciences Research at Michigan Tech." 2014
- Michigan Tech Startup Funds "To establish laboratory for research in organic chemistry and chemical biology." 2013
- Susan G. Komen for the Cure Postdoctoral Fellowship "Breast Cancer Therapy by Tumor-Specific DNA-Repair Inhibitors." 2010

Student Awards (graduate – GR, undergraduate – UG)

Graduate Student Research Awards

- Outstanding Graduate Student Award, 2019 to Vagarshak Begoyan (GR)
- Portage Health Foundation Graduate Fellowship, 2019 to Vagarshak Begoyan (GR)
- Portage Health Foundation Graduate Fellowship, 2019 to Srinivas Kannan (GR)

Undergraduate Student Research Awards

- Summer Undergraduate Research Fellowship (SURF 2019) to Andrew Cooper (UG)
- Summer Undergraduate Research Fellowship (SURF 2019) to Brennan Vogl (UG)
- Songer Research Award 2019 to Andrew Cooper (UG)
- Summer Undergraduate Research Fellowship (SURF 2018) to Gilliane Kenyon (UG)
- Songer Research Award 2018 to Gilliane Kenyon (UG)
- Sandretto Summer Research Fellowship 2017 to Alexis Ferrier (UG)
- Summer Undergraduate Research Fellowship (SURF 2015) to Erin Mathews (UG)

Other Awards

- Outstanding Teaching Award 2018 to Vagarshak Begoyan (GR)
- University Outstanding Teaching Award 2017 to Joseph Fedie (GR)
- Departmental Outstanding Teaching Award 2016 to Joseph Fedie (GR)
- Travel support (ACS-MTU Student Chapter) for 4 GRs and 3 UGs during 2015-2019

IP Disclosures and Patent Applications

- IP Disclosure: Fluorescent Probes for Targeting Fructose-Specific Transport; Filed: 10/08/2016
- U.S. Provisional Patent Application No. 62/527,532 "Fluorescent Probes for targeting fructose-specific transport"; Filed: 07/30/2017; MTU Ref. No.: 1708; MBF Ref. No.: 066040-9945-US01
- IP Disclosure: "H, CH_3, CF_3 Probes for Cancer Detection"; Filed: 09/17/2017.
- IP Disclosure: "Nanofiber scaffolds with embedded fructose-like molecular probes to limit cancer cell migration"; Filed: 07/25/2019
- Licensing: Kerafast Inc. License; Non-Exclusive; Effective Date: April 25, 2019

Publications (* corresponding author; # undergraduate student):

Sugar transporters, development of molecular probes and their application

1. Ghosh, A.; Kannan, S.; Begoyan, V.V.; Weselinski, L.J.; Rao, S.; Tanasova, M.* "*Metabolism-driven cancer identification with GLUT5-specific molecular probes."* Abstract P2-02-17: Cancer Research 79 (4 Supplement), P2-02-17, **2019** https://cancerres.aacrjournals.org/content/79/4_Supplement/P2-02-17.short
2. Godoy, A.; Carreño, D.; Corro, N.; Torres-Estay, V.; Veliz, L. P.; Jaimovich, R.; Cisternas, P.; San Francisco, I.; Sotomayor, P.; Tanasova, M.; Inestrosa, N. "Fructose and Prostate Cancer: Towards an Integrated View of Cancer Cell Metabolism." *Nature, Prostate Cancer Prostate Dis.*, **2019,** *22,* 49–58. doi: 10.1038/s41391-018-0072-7
3. Begoyan, V.; Xia, S.; Khanan, S.; Ferrier, A.#; Rao, S.; Tanasova, M.* "Multicolor GLUT5-Permeable Fluorescent Probes for Fructose Transport Analysis." C*hem. Commun.*, **2018**, *54*, 3855-3858. doi:10.1039/C7CC09809J
4. Ainsley, S.; Chaturvedi, S.S.; Karabencheva-Christova, T.G.; Tanasova, M.;* Christov, C.Z.;* "Integrating Molecular Probes and Molecular Dynamics to Reveal Binding Interactions towards Designing GLUT5 Inhibitors." *Chem. Commun.* **2018**, 9917-9920. doi: 10.1039/C8CC04843F
5. Kannan, S.; Begoyan, V.; Fedie, J.; Xia, S.; Weseliński, L.; Tanasova, M.;* Rao, S.* "Metabolism-driven High Throughput Cancer Identification with GLUT5-specific Molecular Probes." *Biosensors*, **2018**, e39. doi: 10.3390/bios8020039
6. Tanasova, M.,* Begoyan, V.V., Weseliński, Ł.J. "Targeting Sugar Uptake and Metabolism for Cancer Identification and Therapy: An Overview." *Curr. Topics Med Chem.*, **2018**, *18* (6), 467-483. Invited Review. doi: 10.2174/1568026618666180523110837

7. Fedie, J.; Kannan, S.; Begoyan, V.; Xia, S.; Shaikh, S.; Tanasova, M.; Rao, S. "Fructose Uptake-based Rapid Detection of Breast Cancer Cells." *Proc. IEEE LSC* **2017**, https://ieeexplore.ieee.org/document/8268168
8. Fedie, J.; Tanasova, M.* "Molecular Tools for Facilitative Carbohydrate Transporters." Review Article, *ChemBioChem*, **2017**, *18*, 1774-1788. doi: 10.1002/cbic.201700221
9. Tanasova, M.; Muroski, M.; Plutschack, M.; Sturla, S. J.; Strouse, G.; McQuade, T.* "Fluorescent THF-Based Fructose Analog Exhibits Fructose Dependent Uptake." *ChemBioChem,* **2013**, *14*, 1263-1270. doi: 10.1002/cbic.201300164

Fluorescent probes for biochemical applications

10. Mazi, W.; Adhiari, R.; Zhang, Y.; Xia, S.; Fang, M.; Luck, R.L.;* Tajiri, M.; Tiwari, A.;* Tanasova, M.;* Liu, H.* "Fluorescent Probes with High pKa Values Based on Traditional, Near-infrared Rhodamine, and Hemicyanine Fluorophores for Sensitive Detection of Lysosomal pH Variations." *Methods*, **2019**, in press. https://doi.org/10.1016/j.ymeth.2019.07.012
11. Fang, M.; Xia, S.; Bi, J.; Wigstrom, T.P.;[#] Valenzano, L.;* Wang, J.;* Tanasova, M.;* Luck, R.L.;* Liu, H.* "Detecting Zn (II) Ions in Live Cells with Near-Infrared Fluorescent Probes." *Molecules*, **2019**, *24*, 1592-1605. doi: 10.3390/molecules24081592
12. Singh, S.; Begoyan, V.V.; Tanasova, M.;* Waters, K.; Seel, M.; Pandey, R.; "Coumarins: Spectroscopic measurements and first principles calculations of C4-substituted 7-aminocoumarins." *J. Phys. Org. Chem.* **2018**, e3852. https://doi.org/10.1002/poc.3852
13. Fang, M.; Xia, S.; Bi, J.; Wigstrom, T.P.[#]; Valenzano, L.;* Wang, J.;* Mazi, W.; Tanasova, M.;* Luo, F-T.;* Liu, H.* "A cyanine-based fluorescent cassette with aggregation-induced emission for sensitive detection of pH changes in live cells." *Chem. Commun*, **2018**, *54*, doi: 1133-1136. 10.1039/C7CC08986D
14. Xia, S.; Wang, J.; Bia, J.; Fang, M.; Phillipsa, T.; May, A.[#]; Conneral, N.; Tanasova. M.; Luo, F-T.; Liu, H. "Fluorescent Probes Based on π-Conjugation Modulation between Hemicyanine and Coumarin Moieties for Ratiometric Detection of pH Changes in Live Cells with Visible and Near-infrared Channels." *Sens. Actuators B Chem,* **2018**, *265,* 699-708. https://doi.org/10.1016/j.snb.2018.02.168
15. Xia, S.; Shen, J.; Wang, J.;* Wang, J.; Zhou, H.;* Tanasova, M.* "Ratiometric Fluorescent and Colorimetric Sensing of Zinc Ions in Solution and Living Cells." *Sens. Actuators B Chem,* **2017**, *258,* 1279-1286. https://doi.org/10.1016/j.snb.2017.11.129
16. Bi, J.; Fang, M.; Wang, J.; Xia, S.; Zhang, Y.; Zhang, J.; Vegesna, G.[#]; Zhang, S.; Tanasova, M.;* Luo, F.-T.;* Liu, H.* "Near-Infrared Fluorescent Probe for Sensitive Detection of Pb(II) Ions in Living Cells." *Inogr. Chim. Acta*, **2017**, *468, 140-145*. https://doi.org/10.1016/j.ica.2017.06.044

Synthetic methodologies and development of biochemical assays

17. Shahsavari, S.; Eriyagama, D.N.A.M.; Halami, B.; Begoyan, V.; Tanasova, M.; Chen, J.; Fang, S.* "Electrophilic oligodeoxynucleotide synthesis using dM-Dmoc for amino protection." *Beilstein J. Org. Chem.* **2019**, *15*, 1116-1128. doi: 10.3762/bjoc.15.108

18. Weseliński, Ł. J.; Begoyan, V. V.; Ferrier, A. [#]; Tanasova, M.* "Tuning Cross-Coupling Approaches to C3-Modification of 3-Deazapurines." *ACS Omega*, **2017**, 7002-7015. doi: 10.1021/acsomega.7b01159
19. Weseliński, Ł.; Grillo, M. [#]; Tanasova, M.* "The practical stereocontrolled synthesis of vicinal halohydrins and haloamines from vinyl epoxides and vinyl aziridines." *Tetrahedron Lett*. **2016**, *57*, 4477-4479. https://doi.org/10.1016/j.tetlet.2016.08.070
20. Malvezzi, S., Sturla, S. J., Tanasova, M.* "Quantification of Inorganic Pyrophosplate as a Universal Approach to Screening Translesion Synthesis Polymerase Inhibitors." *Anal. Biochem.* **2015**, *478*, 1-7. doi: 10.1016/j.ab.2015.03.002
21. Tanasova, M.; Borhan, B "Sensing Remote Chirality: Stereochemical Determination of β- and γ-Chiral Carboxylic Acids." *Angew. Chem. Int. Ed.* **2015**, *14,* 4274-4278. https://doi.org/10.1002/anie.201410371

Explorations of biochemical mechanisms

22. Otto, C.; Spivak, G.; Aloisi, C.M.N.; Menigatti, M.; Naegeli, H.; Hanawalt, P. C.; Tanasova, M.; Sturla, S. J.* "Modulation of Cytotoxicity by Transcription -Coupled Nucleotide Excision Repair Is Independent of the Requirement for Bioactivation of Acylfulvene." *Chem. Res. Toxicol.* **2017**, *30,* 769-776. doi: 10.1021/acs.chemrestox.6b00240
23. Tanasova, M.; Goeldi, S.; Meyer, F. [#]; Spivak, G.; Hanawalt, P. C. Sturla, S. J. *"*Altered Minor-Groove Hydrogen Bonds in DNA Block Transcription Elongation by T7 RNA Polymerase*." ChemBioChem,* **2015**, *16*, 1125-1146. doi: 10.1002/cbic.201500077

Other publications

24. Tanasova, M.; Sturla, S. J. "Chemistry and Biology of Acylfulvenes." *Chem. Rev.* **2012**, *112*, 3578–3610. https://doi.org/10.1021/cr2001367
25. Tanasova, M.; Borhan, B. "Conformational Preference in Bis-Porphyrin Tweezers Complexes: A Versatile Chirality Sensors for α-Chiral Carboxylic Acids." *Eur. J. Chem*. **2012**, *17,* 3261-3269. https://doi.org/10.1002/ejoc.201200147
26. Tanasova, M.; Yang, Q.; Olmsted, C.; Li, X.; Vasileiou, C.; Borhan, B. "An Unusual Conformation of α-Haloamides due to Cooperative Binding with Zincated Porphyrins." *Eur. J. Org. Chem.* **2009**, *25,* 4242-4253. https://doi.org/10.1002/ejoc.200900089
27. Tanasova, M.; Vasilieou, C.; Olumolade, O.; Borhan, B. "Enhancement of Exciton Coupled Circular Dichroism with Sterically Encumbered Bis-Porphyrin Tweezers." *Chirality*, **2009**, *21*, 374-382. doi: 10.1002/chir.20595
28. Li, X.; Tanasova, M.; Vasileiou, C.; Borhan, B. "Fluorinated Porphyrin Tweezer: A Powerful Reporter of Absolute Configuration for *erythro* and *threo* Diols, Amino Alcohols, and Diamines." *J. Am. Chem. Soc.* **2008**, *130*, 1885-1893. https://doi.org/10.1021/ja0752639
29. Lu, Y.; Tanasova, M.; Borhan, B.; Reid, G. "Ionic Reagent for Controlling the Gas-Phase Fragmentation Reactions of Cross-Linked Peptides." *Anal. Chem*. **2008**, *80*, 9279-9287. doi: 10.1021/ac801625e

Presentations (* corresponding author; presenter underlined; # undergraduate researcher)

Platform Presentations/Seminars/Lectures

1. "Fructose analog containing 3-D scaffolds to isolate and study breast cancer cell metabolism by mimicking tumor microenvironment." C. Que, S. N. Hanumantharao, S. Bule, E. Nelson,# K. Fink,# M. Tanasova,* S. Rao* 50th ACS Central Regional Meeting (CERM), June 4-8, Midland, MI, 2019, *platform presentation*
2. "Exploring transporter-specific fluorescent molecular tools for GLUT-based discrimination of metabolically-compromised cells." M. Tanasova, 50th ACS Central Regional Meeting (CERM), Midland, MI, June 4 - 8, 2019, *platform presentation*
3. "Developing Molecular Probes to Solve Biological Problems." M. Tanasova, Lake Superior State University, November 11, 2018, *lecture, invited*
4. "Exploring substrate selection of sugar transporters en route to transporter-specific bioanalytical and biomedical tools." M. Tanasova, Michigan Technological University, September 14, 2018, s*eminar, invited*
5. "Fructose Uptake-based Rapid Detection of Breast Cancer Cells." J. Fedies, S. Kannan, V.V. Begoyan, S. Xia, S. Shaikh, M. Tanasova,* S. Rao* IEEE LSC 2017, *platform presentation*
6. "Targeting fructose transport in cancers with carbohydrate mimics." M. Tanasova, Michigan Technological University, January 27, 2017, *seminar, invited*
7. "Molecular probes for mechanistic studies of biological processes." M. Tanasova, Michigan Technological University, April 7, 2017, *seminar, invited*
8. "Chemistry of DNA stability and transcription." M. Tanasova, 248-th ACS National Meeting, San Francisco, CA, August 10-14, 2014. Young Investigator Award symposium, *platform presentation, invited*
9. "Chemistry of DNA stability and transcription. Towards Polymerase Inhibitors." Tanasova, M. University of Minnesota, Institute for Therapeutic Discovery and Development, April 4, 2014, *seminar, invited*

Poster Presentations (presented underlined)

Sugar transporters, development of molecular probes and their application

10. C. Que, S.N. Hanumantharao, B. Vogl,# M. Tanasova, S. Rao "Topographical cues overlaid with fructose-like molecules to assess breast cancer recruitment in nanofiber scaffolds." *accepted,* 2019 Breast Cancer Symposium, San Antonio, TX, USA.
11. N. Nahrjou, V.V. Begoyan, L.J. Weselinski, M. Tanasova "Exploring Cancer Targeting with Bioactive GLUT5-Specific Click Conjugates." *Central Regional Meeting (CERM)*, June 4-9, Midland, MI, 2019.
12. A. Ghosh, V. B. Begoyan, S. Rao, and M. Tanasova "Real-Time Monitoring of Fructose Uptake Modulation Outcomes in Breast Cancer Cells." *Central Regional Meeting (CERM)*, June 4-9, Midland, MI, 2019.
13. C. Que, S.M. Hanumantharao, E. Nelson#, M. Tanasova S. Rao "Fructose Analog Containing 3-D Scaffolds to Isolate and Study Breast Cancer Cell Metabolism by

Mimicking Tumor Microenvironment." *6-th Annual Meeting of Michigan Physiological Society*, June 27-28, Mount Pleasant, MI, 2019.

14. A. Ghosh, S. Kannan, V.V. Begoyan, L.J. Weselinski, S. Rao, M. Tanasova "Metabolism-driven cancer identification with GLUT5-specific molecular probes. " *2018 Breast Cancer Symposium*, San Antonio, TX, USA, December 4-10, 2018.
15. A. Ghosh, S. Rao, M. Tanasova "Real-Time Monitoring of Fructose Uptake Modulation Outcomes in Breast Cancer Cells." *Annual Meeting of BMES 2018*, Atlanta, GA, Oct 17-20, 2018. (Poster with extended abstract).
16. S. Kannan, S.N. Hanumantharao, K. Fink, C. Que, M. Tanasova, S. Rao "Fructose Analog Containing 3D Scaffolds as Controllable Microenvironments to Isolate and Study Metabolic Cues in Breast Cancer." *Annual Meeting of BMES 2018*, Atlanta, GA, Oct 17-20, 2018. (Poster with extended abstract).
17. V.V. Begoyan, Ł.J. Weseliński, M. Tanasova "Unveiling the conformational preferences of fructose transporters." *255-th ACS Meeting*, New Orleans, LA, USA, March 18-22, 2018.
18. A. Ferrier[#], V.V. Begoyan, M. Tanasova "Development of Fluorogenic Probes for Sugar Transport Analysis." *255-th ACS Meeting* (Sci-Mix), New Orleans, LA, USA, March 18-22, 2018.
19. V.V. Begoyan, M. Tanasova "Cleavable fluorescent probes for direct measurement of nutrient uptake." *254th ACS Meeting*, Washington DC, USA, August 20-25, 2017.
20. J.R. Fedie, S. Kannan, V.V. Begoyan, S. Xia, S. Shaikh, M. Tanasova,* S. Rao, S.* *"*Fructose Uptake-based Rapid Detection of Breast Cancer Cells." *Proc. IEEE LSC* 2017.
21. J.R. Fedie, S. Xia, M. Tanasova "Fluorescent probes for targeting fructose transport." *253-rd ACS Meeting*, San Francisco, CA, USA, August 2-6, 2017.
22. S. Kannan, V.V. Begoyan, S. Xia, S. Shaikh, B. Vogl[#], S. Rao, M. Tanasova "GLUT5 Targeting Fluorescent Probes for Cancer Detection." *Annual Meeting of BMES 2017*, Phoenix, AZ, October 11-14, 2017. (Poster with extended abstract).
23. S. Xia, V.V. Begoyan, M. Tanasova "Multicolor Probes for Analysis of Carbohydrate Transport Activity." *253rd ACS Meeting*, San Francisco, USA, April 2-7, 2017.
24. J.R. Fedie, S. Xia, M. Tanasova "Fluorescent Probes for Targeting Fructose Transport." *253-rd ACS Meeting*, San Francisco, USA, April 2-7, 2017.
25. A. Ferrier,[#] L.J. Weselinski, M. Tanasova "Synthesis of a Fructopyranose Mimic as a Carbohydrate Probe for Fructose Transporters." *UPLS ACS Student Research Symposium*, Marquette, March 25, 2017.
26. S. Xia, V.V. Begoyan, M. Tanasova "Multicolor Probes for Analysis of Carbohydrate Transport Activity." *UPLS ACS Student Research Symposium*, Marquette, March 25, 2017.
27. J.R. Fedie, S. Xia, M. Tanasova "Exploiting Overactive Fructose Transporters for Selective Targeting in MCF-7 Human Breast Carcinomas." *UPLS ACS Student Research Symposium*, Marquette, March 25, 2017.

28. A. Ferrier,[#] L.J. Weselinski, M. Tanasova "Synthesis of a Fructopyranose Mimic as a Carbohydrate Probe for Fructose Transporters." *Undergraduate Research Symposium*, MTU, March 17, 2017.

Synthetic methodologies and explorations of biochemical mechanisms

29. L.J. Weselinski, V.V. Begoyan, A. Ferrier[#], S. Xia, M. Tanasova "Modified Deaza-Adenosine Mimics as DNA Minor Groove Alkylation Probes." *254th ACS Meeting*, Washington DC, USA, August 20-25, 2017.
30. G. Kenyon, L.J. Weselinski, V.V. Begoyan, M. Tanasova "Synthetic 3-deaza-3-alkyl-adenosines as minor groove alkylation mimics in studies on DNA replication processivity." *Undergraduate Research Symposium*, MTU, March 29, 2019
31. L.J. Weselinski, M. Grillo,[#] M. Tanasova "Practical stereocontrolled synthesis of vicinal halohydrins and haloamines from vinyl epoxides and vinyl aziridines." *253rd ACS Meeting*, San Francisco, CA, USA, August 2-6, 2017.
32. M. Tanasova,* S. Goeldi, F. Meyer,[#] Sturla, S.J. "Chemistry of DNA stability and transcription." *248th ACS Meeting*, San Francisco, CA, USA, August 10-14, 2014.

Mentoring

Postdoctoral Fellows:

- L.J. Weselinski (2015-2018)

Graduate Students:

- Joseph Fedie (Chemistry, Ms.Sc. awarded 2017)
- Vagarshak Begoyan (Chemistry, Ph.D. expected May 2020)
- Shuai Xia (Chemistry, Ph.D. in progress)
- Avik Ghosh (BMB, Ph.D. in progress)
- Nazanin Nahrjou (Chemistry, Ph.D. in progress)
- Adelilna Oronova (Chemistry, Ms.Sc. in progress)
- Srinivar Khannan (BME, Ph.D. in progress)

Undergraduate Students:

- Austin O'Dea (MTU, Chemistry, SS2014-FS2014)
- Melissa Hallmann (MTU, Chemistry, SS2014)
- Erin Mathews (MTU, Chemistry, SS2015-FS2015)
- Anna-Catharina Wilheim (MTU, Chemistry, FS2015)
- Morgan Chabonneau (MTU, Chemistry, SS2016)
- Michael Grillo (MTU, Chemistry, SS2016)
- Alexis Ferrier (MTU, Chemistry, FS2016-current)
- Jacob Mohar (MTU, Chemistry, SS2017)
- Shelby McGuire (MTU, Chemistry, SS2017-SS2018)
- Gilliane Kenyon (MTU, Chemistry, FS2017-SS2019)
- Andrew Cooper (MTU, Chemical Engineering, SS2018-current)
- Brennan Vogl (MTU, Biomedical Engineering, FS2017-current)

- Logan McDonald (MTU, Chemistry, Summer 2019-current)
- Logan Mikesell (MTU, Chemistry, FS2019-current)

High School Students:

- Aryana Puh (Houghton High School, Summer 2018)
- Cameron Goodreau (Chassel High School, Summer 2019)

Service to the Profession

Peer-Review Journal Reviewer

Chemical Research in Toxicology (American Chemical Society); ACS Omega (American Chemical Society); Medicinal Chemistry (Bentham Science); Biointerphases (AVS); Analytical Biochemistry (Elsevier); Analitica Chimica Acta (Elsevier); Bioorganic and Medicinal Chemistry (Elsevier); Molecules (MDPI); Nutrients (MDPI); Scientific Reports (Nature Group) Royal Society Open Access (Royal Society); ChemBioChem (Wiley); ChemMedChem (Wiley); Chemistry and Biodiversity (Wiley)

Proposal Refereeing

National Science Foundation pannelist, Chemistry Division
MTU Summer Research Fellowship (SURF) proposals

Service to the Department and University

Exctracurricular Activity

- Leader of a weekly Chemistry Club (extracurricular activities for graduate and senior undergraduate students, Fall/Spring 2014-current).
- Professional Development Class Speaker (2016-2019)
- Judge for poster and oral presentations for Undergraduate and Graduate Research Forums (2014-current)

Committee Service:

- Chemistry Department Graduate Program Committee member
- Chemistry Department Graduate Program Admission Committee member
- BMB program Stirring Committee member
- Chemistry Department Chair Search Committee member
- Cell culture facility and confocal facility supervisor

Collaborators

Smitha Rao (BME, MTU); Haiying Liu (Chemistry, MTU); Cristo Christov (Chemistry, MTU); Tatyana Karabencheva-Christova (Chemistry, MTU); Ashutosh Tiwari (Chemistry, MTU); Tarun Dam (Chemistry, MTU); Alejandro Godoy (P. Universidad Católica de Chile, Chile); Changzoon Chun (Dep. of Surgery, University of Florida); Michael Gottschaldt (Laboratory of Organic and Macromolecular Chemistry, Friedrich-Schiller-Universität Jena, Germany)