

CURRICULUM VITAE

Yulia V. Gerasimova

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PERSONAL INFORMATION

Contact Address: Chemistry Department
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EDUCATION

- 2009** **PhD, Bioorganic Chemistry**, Institute of Chemical Biology and Fundamental Medicine, Siberian Branch of Russian Academy of Sciences, Novosibirsk, Russia. Advisor: Tatyana S. Godovikova.
Dissertation: "Interaction of Native and Chemically Modified Human Serum Albumin with Oligo- and Polyribonucleotides".
- 1998** **BS, Chemistry**, Novosibirsk State University, Russia.
Advisors: Tatyana S. Godovikova, Vladimir N. Silnikov
Honors Thesis: "Synthesis of Imidazole Derivatives of oligonucleotides that mimic the action of RNase A".

POSTDOCTORAL TRAINING

- 2010-2015** **Chemistry Department, University of Central Florida, Orlando FL, USA.**
Advisor: Dmitry M. Kolpashchikov
Application of DNA nanotechnology and smart sensors for disease diagnosis and molecular computing.

PROFESSIONAL EMPLOYMENT

- 2022-present** **Associate Professor** (with tenure), Chemistry Department University of Central Florida, Orlando, FL, USA
- 2016-2022** **Assistant Professor** (tenure track), Chemistry Department University of Central Florida, Orlando, FL, USA
- 2015-2016** **Visiting Assistant Professor** (non-tenure track), Chemistry Department University of Central Florida, Orlando, FL, USA
- 2015-2015** **Adjunct Lecturer**, Chemistry Department, University of Central Florida, Orlando, FL, USA
- 2010-2015** **Postdoctoral Associate**, Chemistry Department University of Central Florida, Orlando, FL, USA
- 2009-2010** **Research Associate**, Chemistry Department, University of Central Florida, Orlando FL, USA.

2002-2009 Research Scientist, Institute of Chemical Biology and Fundamental Medicine (former Novosibirsk Institute of Bioorganic Chemistry), Siberian Branch of Russian Academy of Sciences, Novosibirsk, Russia

1999-2002 Research Assistant, Novosibirsk Institute of Bioorganic Chemistry, Siberian Branch of Russian Academy of Sciences, Novosibirsk, Russia

AWARDS

UCF Awards

2021 Teaching Incentive Program (TIP) award, UCF

2020 Research Incentive Award (RIA), UCF

External Awards

2014 American Fellowship from American Association of University Women AAUW (\$34,000 annual stipend).

2008 Young Scientists Fellowship from Russian Foundation for Basic Research (\$2,000). The grant supported my 2-months training in Orekhovich Institute of Biomedical Chemistry of the Russian Academy of Medical Sciences.

2007 Travel Grant from Russian Foundation of Basic Research (\$1500) to participate in 15th Conversation, Albany, NY, USA

2001 Young Scientists' Support Grant from Russian Foundation for Basic Research (\$1000). The grant supported my PhD research for a year.

2001 Travel Grant from the Federation of European Biochemical Societies (FEBS) (\$800) to participate in FEBS Young Scientists Forum "Structure-Function, Trafficking and Signalling", Oieras, Portugal.

1997 Undergraduate scholarship from SibEnzyme Ltd. for the best performance in Biochemistry class

1996 Undergraduate Voevodsky Prize and Scholarship from the Institute of Chemical Kinetics and Combustion of the Siberian Branch of the Russian Academy of Sciences for the best performance in Physical Chemistry class

RESEARCH

PUBLICATIONS (48 total)

Total citations (according to Google Scholar) 1249, H-index 20

https://scholar.google.com/citations?hl=en&user=87BJs1wAAAAJ&view_op=list_works&sortby=pubdate

The 48 publications include 40 peer-reviewed research papers, 1 invited methodological paper; 1 invited review paper; 1 invited non-peer reviewed highlight paper; 2 book chapters, and 3 conference proceedings.

Authors with greatest contribution in terms of experimental and data analysis efforts (usually students or postdoctoral scholars) are listed first. Senior authors are usually listed last and/or indicated as correspondent authors. The correspondent author(s) in the publications below is(are) underlined. Co-authorship by my postdoctoral advisees is indicated using a dagger symbol (†). Asterisks indicate undergraduate (*) and graduate (**) students under my

supervision who contributed to the publications. Notes about professional highlights are underlined. Journal impact factor (IF) is indicated.

Peer-Reviewed Publications

1. Nix, C.A.; Nottolini, I.; Caranto, J.D.; **Gerasimova, Y.**; Kolpashchikov D.; Saitta, E.K.H. (2022) Championing the involvement of practitioners in the Biochemistry educational research process: A phenomenological view of the early stages of collaborative action research. *Int. J. High. Educ.*, 11, 114.
2. Reed, M.A.;** **Gerasimova, Y.V.** (2022) Single-tube isothermal label-free fluorescent sensor for pathogen detection based on their genetic signatures. *Front. Chem.*, 10, <https://doi.org/10.3389/fchem.2022.951279> (IF 5.545)
3. **Gerasimova, Y.V.**; Nedorezova, D.D.;** Kolpashchikov, D.M. (2022) Split light up aptamers as a probing tool for nucleic acids. *Methods*, <https://doi.org/10.1016/j.ymeth.2021.05.008> (IF 4.647)
4. Connelly, R.P.;** Madalozzo, P.F.;* Moderson, J.E.;* Pratt, A.D.;* **Gerasimova, Y.V.** (2021) Promiscuous dye binding by a light-up aptamer: Application for label-free multi-wavelength biosensing. *Chem. Commun.*, 57, 3672-3675, [DOI:10.1039/D1CC00594D](https://doi.org/10.1039/D1CC00594D). (IF 7.211)
5. Sapia, R.J.;** Campbell, C.;* Reed, A.J.;** Tsvetkov, V.; **Gerasimova, Y.V.** (2021) Interaction of GelRed™ with single-stranded DNA oligonucleotides: Preferential binding to thymine-rich sequence. *Dyes Pigm.*, 188, 109209. <https://doi.org/10.1016/j.dyepig.2021.109209> (IF 5.122)
6. Reed, A.J.;** Sapia, R.J.;** Dowis, C.;* Solarez, S.;* **Gerasimova, Y.V.** (2020) Interrogation of highly structured RNA with multicomponent deoxyribozyme probes at ambient temperatures. *RNA*, 26, 1882-1890. [doi:10.1261/rna.074864.120](https://doi.org/10.1261/rna.074864.120) (IF 3.949).
7. Dhar, B.C.; † Reed, A.J.;** Mitra, S.; Rodriguez Sanchez, P.;* Nedorezova, D.D.; Connelly, R.P.;** Rohde, K.H.; **Gerasimova, Y.V.** (2020) Cascade of deoxyribozymes for the colorimetric analysis of drug resistance in *Mycobacterium tuberculosis*. *Biosens. Bioelectron.*, 165, 112385. <https://doi.org/10.1016/j.bios.2020.112385> (IF 12.545).
8. Foguel, M.V.; Balcarcel, A.M.; Reed, M.A.;** Calvo-Marzal, P.; **Gerasimova, Y.V.**; Kolpashchikov, D.M.; Chumbimuni-Torres, K.Y. (2020) MVF sensor enables analysis of nucleic acids with stable secondary structures. *Electroanalysis*, 32 (4), 835-841, DOI: 10.1002/elan.201900690 (IF 3.077).
9. Connelly, R.P.;** Verduzco, C.;* Farnell, S.;* Yishay, T.;* **Gerasimova, Y.V.** (2019) Toward a rational approach to design split G-quadruplex probes. *ACS Chem. Biol.*, 14, 2701-2712, <https://doi.org/10.1021/acscchembio.9b00634>. (IF 4.634)
10. Lynch, C.A.III; Foguel, M.; Reed, A.J.;** Balcarcel, A.M.; Calvo-Marzal, P.; **Gerasimova, Y.V.**; Chumbimuni-Torres, K.Y. (2019) Selective determination of isothermally amplified Zika virus RNA using a universal DNA-hairpin probe in less than 1 hour. *Anal. Chem.*, 91, 13458-13464, <https://doi.org/10.1021/acs.analchem.9b02455>. (IF 8.008)
11. Kikuchi, N.; Reed, A.;** **Gerasimova, Y.V.**; Kolpashchikov, D.M. (2019) Split dapoxyl aptamer for sequence-selective analysis of NASBA amplicons. *Anal. Chem.*, 91, 2667-2671, DOI: 10.1021/acs.analchem.8b03964. (IF 8.008)

12. Wood, H.N., Sidders, A.E., Brumsey, L.E., Morozkin, E.S.,† **Gerasimova, Y.V., Rohde, K.H.** (2019) Species typing of nontuberculous mycobacteria by use of deoxyribozyme sensors. *Clin. Chem.*, 65, 333-341. DOI: 10.1373/clinchem.2018.295212. (IF 12.114)
13. Reed, A.J.,** Connelly, R.P.,** Williams, A.,* Tran, M.,* Shim, B.-S., Choe, H., **Gerasimova, Y.V.** (2019) Label-free pathogen detection by a deoxyribozyme cascade with visual signal readout. *Sensors & Actuators: B. Chemical*, 282, 945-951. DOI: 10.1016/j.snb.2018.11.147. (IF 9.221)
14. Connelly, R.P,** Morozkin E.S.,† **Gerasimova, Y.V.** (2018) Alphanumerical visual display made of DNA logic gates for drug susceptibility testing of pathogens. *Chembiochem* 19, 203-206. DOI: 10.1002/cbic.201800011. [The paper was selected for a cover feature of the issue.](#) (IF 3.468)
15. Bengtson H.N., Homolka S., Niemann S., Reis A.J., da Silva P.E., **Gerasimova Y.V., Kolpashchikov D.M., Rohde K.H.** (2017) Multiplex detection of extensively drug resistant tuberculosis using binary deoxyribozyme sensors. *Biosens. Bioelectron.* 94, 176-183. (12.545)
16. Cox A.J., Bengtson H.N., **Gerasimova Y.V., Rohde K.H., Kolpashchikov D.M.** (2016) DNA antenna tile-associated deoxyribozyme sensor with improved sensitivity. *Chembiochem* 17, 2038-2041. [This paper was featured on the cover of the issue.](#) (IF 3.468)
17. **Gerasimova Y.V, Kolpashchikov D.M.** (2016) Towards a DNA nanoprocessor: reusable tile-integrated DNA circuits. *Angew. Chem. Int. Ed. Engl.* 55, 10244-10247. (IF 16.823)
18. Gentry R.C., Childs J.J., Gevorkyan J., **Gerasimova Y.V., Koculi E.** (2016) Time course of large ribosomal subunit assembly in *E. coli* cells overexpressing a helicase inactive DbpA protein. *RNA*, 22, 1055-1064. doi:10.1261/rna.055137.115 (IF 3.949)
19. **Gerasimova Y.V.,** Yakovchuk P., Dedkova L.M., Hecht S.M., Kolpashchikov D.M. (2015) Expedited quantification of mutant ribosomal RNA by binary deoxyribozyme (BiDz) sensors. *RNA*, 21, 1834-1843. (IF 3.949)
20. Mailloux S., **Gerasimova Y.V.,** Guz N., **Kolpashchikov D.M., Katz E.** (2015) Bridging the two worlds: a universal interface between enzymatic and DNA computing systems. *Angew. Chem. Int. Ed. Engl.* 54, 6562-6566. [This paper was featured at Nature Nanotech. 2015, 10\(5\).](#) (IF 16.823)
21. **Gerasimova Y.V., Kolpashchikov D.M.** (2015) Divide and control: split design of multi-input DNA logic gates. *Chem. Commun.*, 51, 870-872. (IF 7.211)
22. **Gerasimova Y.V.,** Cornett E.M., Edwards E., Su X., **Rohde K.H., Kolpashchikov D.M.** (2013) Deoxyribozyme cascade for visual detection of bacterial RNA. *Chembiochem* 14, 2087-2090. (IF 3.468)
23. **Gerasimova Y.V., Kolpashchikov D.M.** (2013) Folding of 16S rRNA in a signal-producing structure for the detection of bacteria. *Angew. Chem. Int. Ed. Engl.* 52, 10586-10588. [This paper was featured on the back cover of the issue.](#) (IF 16.823)
24. Cornett E.M., **Gerasimova Y.V., Kolpashchikov D.M.** (2013) Two-component covalent inhibitor. *Bioorg. Med. Chem.* 21, 1988-1991. (IF 2.94)
25. **Gerasimova Y.V., Kolpashchikov D.M.** (2013) Detection of bacterial 16S rRNA using a molecular beacon-based X sensor. *Biosens. Bioelectron.*, 41, 386-390, DOI: 10.1016/j.bios.2012.08.058. (IF 12.545)

26. **Gerasimova Y.V., Kolpashchikov D.M.** (2012) Connectable DNA logic gates: OR and XOR logics. *Chem. Asian J.*, 7, 534-540. (IF 4.839)
27. **Kolpashchikov D.M., Gerasimova Y.V., Khan M.S.** (2011) DNA Nanotechnology for nucleic acid analysis: DX motif-based sensor. *Chembiochem*, 12, 2564-2567. (IF 3.468)
28. Nguyen C., Grimes J., **Gerasimova Y.V., Kolpashchikov D.M.** (2011) Molecular beacon-based tricomponent probe for SNP analysis in folded nucleic acids, *Chem. Eur. J.*, 17, 13052-13058. (IF 5.02)
29. **Gerasimova Y.V.,** Peck S., Kolpashchikov D.M. (2010) Enzyme-assisted binary probe for sensitive detection of RNA and DNA. *Chem. Commun.*, 46, 8761-8763. (IF 6.065)
30. Grimes J., **Gerasimova Y.V., Kolpashchikov D.M.** (2010) Real-time SNP analysis in secondary structure-folded nucleic acids. *Angew. Chem. Int. Ed. Engl.*, 49, 8950-8953. [This paper was highlighted by Faculty 1000.](#) (IF 16.823)
31. **Gerasimova Y.V.,** Hayson A., Ballantyne J., **Kolpashchikov D.M.** (2010) A single molecular beacon probe is sufficient for the analysis of multiple nucleic acid sequences. *Chembiochem*, 11, 1762-1768. (IF 3.468)
32. **Gerasimova Y.V.,** Cornett E., **Kolpashchikov D.M.** (2010) RNA cleaving deoxyribozyme sensor for nucleic acid analysis: the limit of detection. *Chembiochem*, 11, 811-817. [This paper was featured on the cover of April 2010 issue of the journal.](#) (IF 3.468)
33. **Gerasimova Y.V.,** Bobik T.V., Ponomarenko N.A., Shakirov M.M., Zenkova M.A., Tamkovich, N.V., Popova T.V., Knorre D.G., **Godovikova T.S.** (2010) RNA-hydrolyzing activity of human serum albumin and its recombinant analogue. *Bioorg. Med. Chem. Lett.*, 20, 1427-1431. (IF 2.94)
34. Shundrina I.K., Vaganova T.A., Kusov S.Z., Rodionov V.I., Karpova E.V., Koval V.V., **Gerasimova Y.V., Malykhin E.V.** (2009) Synthesis and characterization of polyimides based on novel isomeric perfluorinated naphthylenediamines. *J. Fluorine Chem.*, 130, 733-741. (IF 2.226)
35. **Khranenko S.P.,** Plusnin N.E., Sheludyakova L.A., **Gerasimova Y.V.,** Korol'kov I.V., Korenev S.V. (2009) Study of the complexation reaction between crystallized trans-[Pd(H₂O)₂(NO₃)₂] and acetyl acetone. *Russ. J. Coord. Chem.*, 35, 1-7. (IF 1.58)
36. **Nechepurenko I.V.,** Komarova N.I., **Gerasimova Y.V.,** Koval V.V., Polovinka M.P., Korchagina D.V., Salakhutdinov N.F. (2009) Structure of oligomeric proanthocyanidines from *Hedysarum thienum* roots studied by thiolysis and MALDI-TOF MS. *Chem. Nat. Comp.*, 45, 32-39. (IF 0.83)
37. **Gerasimova Y.V.,** Knorre D.G., Shakirov M.M., **Godovikova T.S.** (2008) Human serum albumin as a catalyst of RNA cleavage: *N*-homocysteinylation and *N*-phosphorylation by oligonucleotide affinity reagent alter the reactivity of the protein. *Bioorg. Med. Chem. Lett.*, 18, 5396-5398. (IF 2.94)
38. **Gerasimova Y.V.,** Erchenko I.A., Shakirov M.M., **Godovikova T.S.** (2008) Interaction of human serum albumin and its clinically relevant modification with oligoribonucleotides. *Bioorg. Med. Chem. Lett.*, 18, 4511-4514. (IF 2.94)
39. **Gerasimova Y.V.,** Alekseyeva I.V., Bogdanova T.G., Erchenko I.A., Kudryashova N.V., Chelobanov B.P., Laktionov P.P., Alekseyev P.V., **Godovikova T.S.** (2006) Affinity separation of polyribonucleotide-binding human blood protein. *Bioorg. Med. Chem. Lett.*, 16, 5526-5529. (IF 2.94)
40. Savinkova L.K., Sokolenko A.A., Rau V.A., Arshinova T.V., **Gerasimova Y.V.,** Kudryashova N.V., **Godovikova T.S.** (2000) Affinity labeling of RNA-polymerase II in the

transcriptionally active complex by a phosphorylating analog of the initiation substrate. *Biochemistry (Moscow)* 65, 1129-1134. (IF 2.824)

41. Knorre D.G., Alekseyev P.V., **Gerasimova Yu.V.**, Silnikov V.N., Maksakova G.A., Godovikova T.S. (1998) Intraduplex photocross-linking of p-azidoaniline residue and amino acid side chains linked to the complementary oligonucleotides via a new phosphorylating intermediate formed in the Mukaiyama System. *Nucleosides&Nucleotides*, 17, 397-410. (IF 1.449)

Invited Reviews and Highlights

42. **Gerasimova Y.V.**, Kolpashchikov D.M. (2014) Enzyme-assisted target recycling (EATR) for nucleic acid detection. *Chem. Soc. Rev.*, 43, 6405-6438. (IF 60.615)
43. **Gerasimova Y.V.**, Kolpashchikov D.M. (2010) Nucleic acid detection using MNazymes. *Chem. Biol.* 17, 104-106. (IF 5.915)

Book chapters

44. **Gerasimova Y.V.**, Ballantyne J., Kolpashchikov D.M. Detection of SNP-Containing human DNA sequences using a split sensor with universal molecular beacon reporter. *Methods in Molecular Biology*, Nucleic acid detection, Humana press, 2013. 1039, 69-80.
45. Godovikova T.S., **Gerasimova Yu.V.**, Knorre D.G. Catalytic activities of serum albumin: mechanism, biological function and practical applications. Serum albumin: structure, functions, and health impacts. In: Alekseev R.J. and Rebane A.I. (eds.) - Nova Science Publishers, Inc., New York: 2012, 1-15.

Conference Proceedings

46. **Gerasimova Y.**; Connelly R. (2017) Split deoxyribozyme sensors for pathogen detection. *Proceedings* 1, 844.
47. Kolpashchikov D.M.*, **Gerasimova Y.V.**, Cornett E. (2011) Deoxyribozyme sensors for nucleic acid analysis. *J. Biomol. Struct. Dyn.* 28, 1053.
48. **Gerasimova Y.**, Erchenko, I., Godovikova, T.* (2007) Interaction of non-enzymatically glycosylated HSA with polyribonucleotide ligands. *J. Biomol. Struct. Dyn.*, 24, 690-691.

PATENTS

1. **Gerasimova, Y. V.**; Kolpashchikov, D. M. (2014) Binary probe system for sensitive detection of target analytes." U.S. Patent No. 8,859,266 B2.

INVITED TALKS

1. **Gerasimova Y.** Multicomponent hybridization probes - a versatile tool for molecular diagnostics," Biosensors Summit 2023, Boston, MA, USA, June 28-29, 2023 (invited conference speaker, <https://biosensors-summit.com/access/program>)
2. **Gerasimova Y.** "Interaction of DNA with fluorogenic dyes," Biophysics Group Seminar, UCF, April 27, 2022 (virtual).
3. **Gerasimova Y.** "Nucleic acid interrogation with colorimetric and fluorescent DNA probes," CRBI, York University, Canada, March 2nd, 2022 (virtual).
4. **Gerasimova Y.** "Fluorescent light-up aptamers and aptamer-based sensors," Department of Chemistry, Northern Illinois University, September 20th, 2021.
5. **Gerasimova Y.** "DNA nano-constructs for nucleic acid analysis and single nucleotide

polymorphism (SNP) differentiation,” Department of Chemistry and Biochemistry, University of Oklahoma, February 3rd, 2020.

6. **Gerasimova Y.** “Fluorescent probes for nucleic acid analysis,” Department of Chemistry and Biochemistry, Florida International University, October 9th, 2020 (virtual).
7. **Gerasimova Y.** “Split deoxyribozyme sensors for highly selective analysis of nucleic acids”, SCAMT Institute at the ITMO University, Russia, June 19th, 2018.

CONFERENCE PRESENTATIONS

Presenter is underlined.

Oral Presentations

1. Connelly, R.P;** Rodriguez, K.* Ahn, J.* Fergus, A;**Rohde, K.H.; **Gerasimova, Y.V.**. (2022) Multicomponent deoxyribozymes for identification of pathogenic mycobacteria. Southeastern Regional Meeting of American Chemical Society (SERMACS), San Juan, Puerto Rico, October 19-22.
2. Connelly, R.P;** Mordeson, J.* Madalozzo, P.F.* **Gerasimova, Y.V.**. (2021) Split fluorescent light-up aptamer probes for label-free pathogen detection. 262nd American Chemical Society National Meeting, Atlanta, GA, USA, August 22-26.
3. **Gerasimova Y.V.**, Connelly R.** Dhar B.† (2019) Highly selective DNA probes and circuits for the analysis of drug-resistant genotypes in bacterial pathogens. 3rd International Caparica Conference in Antibiotic Resistance ([http:// www.ic2ar2019.com](http://www.ic2ar2019.com)), June 10-13, Lisbon, Portugal.
4. **Gerasimova Y.V.** (2019) Split hybridization probes for pathogen genotyping and molecular drug susceptibility testing. Florida Annual Meeting and Exposition (FAME), Tarpon Springs, FL, USA, May 9-11. *Invited talk*.
5. **Gerasimova Y.**, Connelly R.**, Reed A.**, Dhar B.†, Rohde K., Choe. H. (2019) Approaches toward point-of-care molecular diagnostics of infectious diseases. 257th American Chemical Society National Meeting, Orlando, FL, USA, March 31-April 4.
6. **Gerasimova Y.** (2018) Label-free assay for detection of pathogens using split deoxyribozyme probes with visual read-out. Biosensors 2018: 28th Anniversary World Congress on Biosensors, Miami, FL, USA, June 12-15.
7. **Gerasimova Y.**, Connelly R.** (2017) Split deoxyribozyme sensors for pathogen detection. 5th International Symposium on Sensor Science (I3S 2017), Barcelona, Spain, September 27–29.
8. Abedrabbo N.* Basch R.* Connelly R.** Mitchell C., Solarez S.* **Gerasimova Y.V.**. (2017) Split deoxyribozyme sensors for nucleic acid analysis and diagnostics of infectious diseases. FAME 2017, Palm Harbor, FL, USA, May 4-6.
9. **Gerasimova Y.V.**, Kolpashchikov D.M., Gentry R.C., Koculi E., Rohde K.H., Dedkova L.M., Hecht S.M. (2016) Split deoxyribozyme sensors for highly selective analysis of nucleic acids. Biosensors and Bioelectronics Congress 2016, Phoenix, AZ, USA, September 22-24.
10. **Gerasimova Y.V.**, Cornett E., Kolpashchikov D.M. (2013) Deoxyribozyme cascade for visual detection of mycobacteria. FAME 2013, Palm Harbor, FL, USA, May 9-11.

Poster Presentations

11. Reed A.** Sapia R.** Paredes R.*, Dowis C.*, Solarez S.*, Dedkova L., **Gerasimova Y.** (2019) RNA detection and analysis using multicomponent deoxyribozymes. RNA

Biology Symposium, Bethesda, MD, USA, April 11-12.

12. **Gerasimova Y.V.**, Connelly R.,** Reed A.,** Williams A.* (2018) Self-assembling DNA structures as probes for nucleic acid analysis. Foundations of nanoscience: Self- assembled architectures and devices (FNANO18) Snowbird, UT, USA, April 16-19.
13. Reed A.,** Connelly R.,** Choe H. **Gerasimova Y.** (2017) Visual point-of-care compatible assay for diagnostics of Zika virus infection. Zika Symposium, Boca Raton, FL, USA, October 9.
14. **Gerasimova Y.V.**, Bengtson H.N., Rohde K.H., Kolpashchikov D.M. (2014) Smart deoxyribozyme sensors for point-of-care detection of pathogenic bacteria. Biosensors 2014, Melbourne, Australia, May 27-30.
15. **Gerasimova Y. V.**, Kolpashchikov D. M. (2013) DNA logic gates assembled on a two-dimensional DNA scaffold. DNA19, Sept. 22-27, 2013. Arizona State University, Tempe.
16. **Gerasimova Y.V.**, Cornett E., Kolpashchikov D.M. (2013) Deoxyribozyme cascade for visual detection of mycobacteria. FAME 2013, Palm Harbor, FL, USA, May 9-11. Oral presentation.
17. **Gerasimova Y.V.**, Erchenko I.A.,* Godovikova, T.S. (2008) Influence of clinically relevant modifications of human serum albumin on its RNA-hydrolyzing activity. 4th Congress of Russian Biochemical Society, 11-15 May, Novosibirsk, Russia
18. **Gerasimova Y.V.**, Erchenko,* I., Godovikova, T. (2007) Clinically relevant post-translational modifications of human serum albumin and their influence on its interaction with polyribonucleotide ligands. 4th Young Medics International Conference. September 20-23. Erevan, Armenia. Oral presentation.
19. **Gerasimova Y.V.**, Erchenko I.A.,* Kudryashova N.V., Chubarov A.S., Godovikova T.S. (2007) Poly(A) binding to clinically relevant chemical modifications of human serum albumin. 3rd International conference “Basic Science for Medicine”. September 2-8. Novosibirsk. Russia. Poster presentation.
20. **Gerasimova Y.V.**, Erchenko, I.,* Godovikova, T. (2007) Interaction of non- enzymatically glycosylated HSA with polyribonucleotide ligands. Albany 2007 15th conversation. June 14-18, SUNY at Albany. Poster presentation.
21. **Gerasimova Y.V.**, Bogdanova T.G.,* Erchenko I.A.,* Koval V.V., Godovikova T.S., Fedorova O.S. (2006) Glycation of human blood proteins and its relation to HSA binding to RNA polypurine tracts. International conference “Basic Science for Biotechnology and Medicine”. September 3-7. Novosibirsk, Russia. Poster presentation.
22. **Gerasimova, Y.V.**, Bogdanova T.G.,* Erchenko I.A.,* Koval V.V., Godovikova T.S., Fedorova O.S. (2006) Glucose metabolism abnormality and blood type as factors determining non-enzymatic glycation of human blood proteins. 3rd International Conference “Genomics, Proteomics, Bioinformatics and Nanotechnologies for Medicine”. July 12-16. Novosibirsk. Russia. Poster presentation.
23. **Gerasimova Y.V.**, Alekseyev P.V., Alekseyeva I.V., Kudryashova N.V., Savinkova L.K., Sokolenko A.A., Rau V.A., Godovikova T.S. (2001) Phosphorylating reagents are promising tools for studying eukaryotic transcriptionally active complexes. 27th FEBS Congress. 30 June-5 July. Lisbon, Portugal. Poster presentation.

Presentations by postdoctoral (†), undergraduate () and graduate (***) student advisee*

All after 2016 (48 total)

24. **Madalozzo, P.F.,*** Connelly, R.P,** Gerasimova, Y.V. (2023) Structural investigations of fluorescent light-up DNA aptamers. Spring 2023 American Chemical Society National Meeting, Indianapolis, IN, USA, March 26-30. Poster presentation

25. Radii, N.;* Madalozzo, P.;* **Gerasimova, Y.V.** (2023) Spectroscopic and biochemical analysis of DNA light-up aptamer complexes with environment-sensitive dyes. UCF Student Scholar Symposium, Orlando, FL, March 28. Poster presentation.
26. Ahn, J.;* **Gerasimova, Y.V.** (2023) Split peroxidase-like deoxyribozyme probes for Monkeypox virus detection. UCF Student Scholar Symposium, Orlando, FL, March 28. Poster presentation.
27. Radii, N.;* Madalozzo, P.;* **Gerasimova, Y.V.** (2023) Spectroscopic and biochemical analysis of DNA light-up aptamer complexes with environment-sensitive dyes. UCF Biophysics week, Orlando, FL, March 16. Poster presentation.
28. Radii, N.;* **Gerasimova, Y.V.** (2023) Structural Investigations of Fluorescent Light-up DNA Aptamers. Florida Undergraduate Research Conference, Miami, FL, February 17-18. Poster presentation.
29. Ahn, J.;* (2023) Split peroxidase-like deoxyribozyme probes for Monkeypox virus detection. Florida Undergraduate Research Conference, Miami, FL, February 17-18. Poster presentation.
30. Madalozzo, P.F.;* Connelly, R.P.;** Gerasimova, Y.V. (2023) Split aptameric probes in a multiplex approach for detecting point-mutations in pathogenic bacteria. Florida Undergraduate Research Conference, Miami, FL, February 17-18. Poster presentation.
31. Fergus, A.;** **Gerasimova, Y.V.** (2022) Single tube analysis of antibiotic resistant *Mycobacterium tuberculosis* using split deoxyribozymes sensors. NOBCCChE Conference, Orlando, FL, USA, September 26-29, Oral presentation.
32. Fergus, A.;** **Gerasimova, Y.V.** (2022) Analysis of multi-drug resistant mycobacterium tuberculosis using LATE PCR and split deoxyribozyme sensors. ACS Spring National Meeting, San Diego, CA, USA, March 20-24, Oral presentation.
33. Madalozzo, P.F.;* **Gerasimova, Y.V.** (2021) Designing a label-free light-up aptasensor for thrombin. UCF Student Scholar Symposium. Orlando, FL, USA, March 30. Virtual poster presentation.
34. Reed, M.A.;** Genest, J.E.;* **Gerasimova, Y.V.** (2020) Isothermal, label-free signal amplification probes for the detection of *Mycobacterium tuberculosis*. PittCon, Chicago, IL, USA, March 1-5. Poster presentation.
35. Connelly, R.P.;** Madalozzo, P.F.;* Beaton, S.;* Mordeson, J.E.;* Pratt, A.D.;* Tsvetkov, V.; **Gerasimova, Y.V.** (2020) Instrument- and label-free drug susceptibility testing via split-aptamer probes. PittCon, Chicago, IL, USA, March 1-5. Poster presentation.
36. Madalozzo, P.F.;* **Gerasimova, Y.V.** (2020) Designing a label-free light-up aptasensor for thrombin. UCF Summer Poster Showcase. Orlando, FL, USA, July 17. Poster presentation.
37. Mordeson, J.E.;* Connelly, R.P.;** Madalozzo, P.F.;* **Gerasimova, Y.V.** (2020) Optimization of dapoxyl aptamer for label-free bioanalysis. UCF Showcase of Undergraduate Research Excellence (SURE). Orlando, FL, USA, April 2. Poster presentation.
38. Gomez, M.;* Reed, A.;** **Gerasimova Y.V.** (2020) Hybridization light-up probes for prediction of nucleic acid base-pairing. Florida Undergraduate Research Conference, Fort Myers, FL, USA, February 21. Poster presentation.
39. Canning, L.;* Reed, A.;** Campbell, C.;* **Gerasimova Y.V.** (2020) Optimization of a histidine dependent RNA-cleaving deoxyribozyme. Florida Undergraduate Research Conference, Fort Myers, FL, USA, February 21. Poster presentation.
40. Campbell, C.;* **Gerasimova Y.V.** (2020) Interaction of fluorescent nucleic acid binding dyes with single-stranded DNA sequences, Fort Myers, FL, USA, February 22. Poster presentation.

41. Karnati, R.*, **Gerasimova Y.V.** (2020) An in-silico approach at NASBA primer probe development: A primer design software, Fort Myers, FL, USA, February 22. Poster presentation.
42. Yishay, T.*, Connelly, R.***, **Gerasimova Y.V.** (2020) Split probe detection of Influenza A Virus for improved diagnostics in a point of care system, Fort Myers, FL, USA, February 22. Poster presentation.
43. Reed A.J.**, Sapia R.J.***, Dowis C.*, **Gerasimova Y.V.** (2019) Split deoxyribozymes as a powerful tool for RNA analysis. RNA: From Biology to Drug Discovery, Jupiter, FL, USA, December 5th, Poster presentation.
44. Connelly R.**, **Gerasimova Y.** (2019) DNA-based logic gates with alphanumeric readout for the analysis of clinically relevant point mutations. 25th International Conference on DNA Computing & Molecular Programming, Seattle, WA, USA, August 5-9. Poster presentation.
45. Dhar B.C.,† Connelly R.***, **Gerasimova Y.V** (2019) Visual detection of pathogens and drug susceptibility testing. Pittcon, Philadelphia, PA, USA, March 17-21. Oral presentation.
46. Dhar B.C.,† Connelly R.***, Mitra S., **Gerasimova Y.** (2019) Discrimination of single nucleotide substitutions causing drug resistance in *Mycobacterium tuberculosis* using split deoxyribozyme sensors with visual readout. 257th American Chemical Society National Meeting, Orlando, FL, USA, March 31-April 4. Oral presentation.
47. Reed A.**, Nedorezova D., Kikuchi N., Kolpashchikov D., **Gerasimova Y.** (2019) Real time monitoring of NASBA reaction using split hybridization probes. 257th American Chemical Society National Meeting, Orlando, FL, USA, March 31-April 4. Oral presentation.
48. Connelly R.P.**, Farnell S.*, **Gerasimova Y.V.** (2019) Molecular logic gates for the detection of multiple single-nucleotide polymorphisms conferring antibiotic resistance. 257th American Chemical Society National Meeting, Orlando, FL, USA, March 31-April 4. Poster presentation.
49. Paredes R.*, Reed A.***, Sapia R.***, Dowis. C.*, **Gerasimova Y.V.** (2019) Split deoxyribozyme sensor for detection of a highly structured highly modified nucleic acid: transfer ribonucleic acid. 257th American Chemical Society National Meeting, Orlando, FL, USA, March 31-April 4. Poster presentation.
50. Sapia R.**, **Gerasimova Y.V.** (2019) Catalytic properties of RNA-cleaving deoxyribozymes with peptide cofactors. 257th American Chemical Society National Meeting, Orlando, FL, USA, March 31-April 4. Poster presentation.
51. Berhane T.*, Reed A.***, Connelly R.***, Williams A.*, **Gerasimova Y.** (2019) Visual split deoxyribozyme sensor for Zika virus detection. UCF Showcase of Undergraduate Research Excellence, Orlando, FL, USA, April 3. Poster presentation.
52. Dowis C.*, Reed A.***, Sapia R.***, **Gerasimova Y.** (2019) tRNA detection using multicomponent deoxyribozymes. UCF Showcase of Undergraduate Research Excellence, Orlando, FL, USA, April 3. Poster presentation.
53. Yishay T.*, Connelly R.***, **Gerasimova Y.** (2019) Split probes to detect the Influenza A virus for improved diagnostics in a point-of-care system. UCF Showcase of Undergraduate Research Excellence, Orlando, FL, USA, April 3. Poster presentation. *Selected as one of the SURE winners (<https://showcasedtlcmsdev.smca.ucf.edu/past/winners2019/>)*
54. Campbell C.*, Sapia R.***, **Gerasimova Y.** (2019) Interaction of single-stranded DNA sequences with fluorescent dyes. Summer Undergraduate Research Showcase, UCF, July.
55. Connelly R.P.**, Morozkin E.S., **Gerasimova Y.V.** (2018) Mycobacterium tuberculosis detection and drug susceptibility testing with alphanumeric character as a read-out. Biosensors 2018: 28th Anniversary World Congress on Biosensors, Miami, FL, USA, June

12-15. Poster presentation.

56. Reed A.,** Williams A.,* Connelly R.,** Choe H., **Gerasimova Y.** (2018) Label-free detection of Zika virus RNA utilizing split deoxyribozyme sensors. Biosensors 2018: 28th Anniversary World Congress on Biosensors, Miami, FL, USA, June 12-15. Poster presentation.
57. Williams A.,* Reed A.,** **Gerasimova Y.** (2018) Colorimetric assay for the detection of Zika virus for point-of-care applications. UCF Showcase of Undergraduate Research Excellence, Orlando, FL, USA, April 5. Poster presentation.
58. Tran M.,* **Gerasimova Y.**, Connelly R.** (2018) Comparison of substrates for colorimetric assays using peroxidase-like deoxyribozyme PW17. UCF Showcase of Undergraduate Research Excellence, Orlando, FL, USA, April 5. Poster presentation.
59. Verduzco C.,* **Gerasimova Y.**, Connelly R.** (2018) Visual split peroxidase-like deoxyribozyme probes for the detection of rifampin-resistance in *Mycobacterium tuberculosis*. UCF Showcase of Undergraduate Research Excellence, Orlando, FL, USA, April 5. Poster presentation.
60. Reed A.,** Williams A.,* Connelly R.,** Choe H., **Gerasimova Y.** (2018) Detection of Zika viral RNA using isothermal amplification-deoxyribozyme sensors. UCF Graduate Research Forum, Orlando, FL, USA, April 3. Oral presentation.
61. Connelly R.P.,** Morozkin E.S., **Gerasimova Y.V.** (2018) DNA-Based Nano-Constructs for Visual Detection of Rifampin Resistant *Mycobacterium Tuberculosis*. UCF Graduate Research Forum, Orlando, FL, USA, April 3. Poster presentation.
62. Tran M.,* **Gerasimova Y.**, Connelly R.** (2018) Comparison of substrates for colorimetric assays using peroxidase-like deoxyribozyme PW17. 255th American Chemical Society National Meeting, New Orleans, LA, USA, March 18-22. Poster presentation.
63. Connelly R.,** Solarez S.,* **Gerasimova Y.** (2018) DNA-based nano-constructs for visual detection of rifampin resistant *Mycobacterium tuberculosis*. 255th American Chemical Society National Meeting, New Orleans, LA, USA, March 18-22. Poster presentation.
64. Reed A.,** Connelly R.,** Williams A.,* Choe H., **Gerasimova Y.** (2018) Deoxyribozyme cascade for visual detection of Zika virus RNA. 255th American Chemical Society National Meeting, New Orleans, LA, USA, March 18-22. Poster presentation.
65. Verduzco C.,* **Gerasimova Y.**, Connelly R.** (2018) Visual split peroxidase-like deoxyribozyme probes for the detection of rifampin-resistance in *Mycobacterium tuberculosis*. 255th American Chemical Society National Meeting, New Orleans, LA, USA, March 18-22. Poster presentation.
66. Solarez S.,* **Gerasimova Y.** (2018) Split deoxyribozyme probe for efficient interrogation of highly structured RNA targets. 255th American Chemical Society National Meeting, New Orleans, LA, USA, March 18-22. Poster presentation.
67. Balenko A.,* **Gerasimova Y.** (2018) Selective detection of *M. tuberculosis* utilizing split peroxidase-like deoxyribozymes. Florida Undergraduate Research Conference, Melbourne, FL, USA, February 24. Poster presentation.
68. Williams A.,* Reed A.,** **Gerasimova Y.** (2018) Colorimetric assay for the detection of Zika virus for point-of-care applications. Florida Undergraduate Research Conference, Melbourne, FL, USA, February 24. Poster presentation.
69. Connelly R.,** Solarez S.,* **Gerasimova Y.V.** (2017) DNA-based nano-constructs for visual detection of rifampin resistant *mycobacterium tuberculosis*. FAME 2017, Palm Harbor, FL, USA, May 4-6. Poster presentation.
70. Abdrabbo N.,* Basch R.,* Connelly R.,** Mitchell C., Solarez S.,* **Gerasimova Y.V.** (2017) fluorescent assay for the analysis of RNA maturation. FAME 2017, Palm Harbor,

FL, USA, May 4-6. Poster presentation.

71. Sapia R.,* Gerasimova Y. (2017) Deoxyribozyme Sero1C and photoreversion of cytosine dimers. 253rd American Chemical Society National Meeting & Expo, San Francisco, CA, USA, April 2–6. Poster presentation.

EXTRAMURAL GRANTS

CURRENT AND COMPLETED

01/22/2020 – 12/31/2023 - National Institute of Health (NIAID), R01 AI149468 “Point-of-care detection of TB and NTM pathogens with fluorescent deoxyribozyme sensors and 3D- printed, battery powered device”, Co-PI (MPI), 40%, \$234,670 (Total award \$586,677, PI – Dr. Rohde, UCF Burnett School of Biomedical Sciences).

12/01/2016 - 11/30/2019 - National Institute of Health (NIAID), R21AI123876 “Development of a method for visual detection of *Mycobacterium tuberculosis* complex”, PI, 50%, \$191,547 (Total award \$383,093)

08/01/2017 - 06/30/2018 - Florida Biomedical Research Programs (Zika Research Grant Initiative), 7ZK33 “Point-of-care diagnostic platform for Zika virus infection based on visual split deoxyribozyme sensors”, PI, 100% (Total award \$200,000)

OTHER RELATED GRANTS

2017 Spring ACS COACH Workshop. “COACHing Strong Women in the Art of Strategic Performance” Oregon University, \$1,000.

INTERNAL GRANTS

CURRENT AND COMPLETED

01/01/2020 – 06/30/2020 - UCF Seed Funding Program, IR1: Team Building Award, “Innovative Point-of-Care Diagnostic Platform for Detection of Multi-drug Resistant Tuberculosis”, Co-PI, 31%, \$15,500 (Total award \$50,000, PI – Dr. Rohde, UCF Burnett School of Biomedical Sciences)

2017-2019 – UCF Preeminent Postdoctoral Program (P3) – 50% matching support to hire a postdoctoral scholar, \$63,000

Summer 2019 – UCF Faculty Center for Teaching and Learning (FCTL) Summer Teaching Conference Scholarship, \$800

Fall 2019 – UCF FTCL Course Innovation Project: Improving Strategies for Teaching and Learning, \$500

STUDENTS GRANTS AND AWARDS

2023 Honors Undergraduate Thesis (HUT) scholarship for Jaehyun Ahn, \$1000

2023 Office of Undergraduate Research (OUR) Student Research Grant “Biomolecular interactions enabling promiscuous binding of structurally unrelated environment-sensitive dyes by a fluorescent light-up DNA aptamer: spectroscopic and biochemical analysis” for Pedro Madalozzo and Nicolas Radii, \$1474

2022 NOBCChE Advancing Science Conference Grant for Abryana Fergus

- 2022 Office of Undergraduate Research (OUR) Student Research Grant “Development of point-of-care diagnostics for monkeypox virus by utilizing split peroxidase-like deoxyribozyme probes” for Jaehyun Ahn, \$750
- 2021 Pedro Madalozzo was accepted into the UCF Research and Mentoring Program (RAMP)
- 2021 Office of Undergraduate Research (OUR) Student Research Grant “Adaptation of the NASBA method for use with thermostable enzymes” for Nolan Bennett and Hafsa Ali, \$1500.
- 2021 OUR Summer Undergraduate Research Fellowship for Nolan Bennett, \$1500
- 2021 HUT scholarship for Jack Mordeson, \$1000
- 2021 The Distinguished Undergraduate Researcher Award (DURA) for the month of January 2021 at the University of Central Florida to Michael Greenberg, \$250 scholarship
- 2020 OUR Summer Undergraduate Research Fellowship for Pedro Madalozzo, \$1500
- 2020 The 2019-2020 University of Central Florida Award for Excellence by a Graduate Teaching Assistant to Ryan Connelly
- 2019 OUR Student Research Grant “Optimization and catalytic efficiency study of a histidine dependent deoxyribozyme” for Liam Canning and Colin Campbell, \$1000
- 2019 OUR Student Research Grant “Split-aptameric detection of peptide hormones” for Charles Dowis, \$1475
- 2019 College of Graduate Studies. Two travel grants for graduate students Mark Reed and Ryan Connelly to participate in Pittcon 2020 meeting, \$1000.
- 2019 HUT scholarship for Charles Dowis, \$1000
- 2019 OUR Summer Undergraduate Research Fellowship for Colin Campbell, \$1000
- 2018 Two OUR travel grants for undergraduate students Maithi Tran and Charles Verduzco to participate in Spring 2018 ACS National Meeting, \$680
- 2018 College of Graduate Studies. Two travel grants for graduate students Adam Reed and Ryan Connelly to participate in Spring 2018 ACS National Meeting, \$1000.
- 2017 OUR Student Research Grant for Ryan Sapia, Rebecca Basch and Allison Williams, \$1000.
- 2017 HUT scholarship for Sheila Solarez, \$1000.

TEACHING

TEACHING RELATED PRESENTATIONS

TEXTBOOK

Gerasimova Y.V., Kolpashchikov D.M. Biochemistry I. Electronic textbook for BCH4053 students. Kendall Hunt, 2011, ISBN 0757576648, 9780757576645.

CLASSES TAUGHT AT UCF

total enrollment 1927 students

- Spring 2023 Biochemistry II (enrolment 36)
- Fall 2022 Bioconjugate Chemistry (enrolment 18)
- Spring 2022 Biochemistry II (enrolment 39)
- Fall 2021 Biochemistry I (enrolment 297)

Spring 2021 Biochemistry II (enrolment 63)
Fall 2020 Biochemistry I (enrolment 308)
Spring 2020 Biochemistry II (enrolment 66)
Fall 2019 Biochemistry I (enrolment 283)
Spring 2019 Biochemistry II (enrolment 67)
Spring 2018 Biochemistry II (enrolment 69), Biochemical Methods Lab (coordinator, total enrollment 38)
Fall 2017 Organic Chemistry II (enrollment 249)
Spring 2017 Biochemistry II (enrolment 55)
Fall 2016 Organic Chemistry II (enrolment 339)

Prior to the Assistant Professor Position (total enrolment 805 students)

Spring 2016 Organic Chemistry I (enrolment 235) & Biochemistry II (enrolment 55)
Fall 2015 Organic Chemistry I (enrolment 444)
Spring 2015 Biochemistry II (enrolment 71)

POSTDOCTORAL SCHOLAR ADVISEES (2 total)

2018-2019 Bidhan Chandra Dhar
2017-2018 Evgeny S. Morozkin

GRADUATE RESEARCH ADVISEES (5 total)

PhD students

2017-2022 Ryan Connelly (Chemistry, UCF)

Master students

2020-2023 Abryana Fergus (Chemistry, UCF)
2018-2021 Ryan Sapia (Chemistry, UCF)
2018-2020 Mark Reed (Chemistry, UCF)
2017-2020 Adam Reed (Chemistry, UCF)

UNDERGRADUATE RESEARCH ADVISEES (40 total)

2022-2023 Pedro Madalozzo (Chemistry, UCF, Honors Undergraduate Thesis, RAMP); Jaehyun Ahn (Biomedical Sciences, UCF, Honors Undergraduate Thesis); Anwar Rahaman (Chemistry, UCF); Gavin Dunton (Chemistry, UCF); Nicholas Raddi (Chemistry, UCF)
2021-2022 Pedro Madalozzo (Chemistry, UCF); Nolan Bennet (Chemistry, UCF); Kazuma Rodriguez (Chemistry, UCF); Dima Mutawe (Health Sciences, UCF); Hafsa Ali (Biomedical Sciences, UCF)
2020-2021 Michael Greenberg (Biomedical Sciences, UCF, Honors Undergraduate Thesis); Jack Mordeson (Biomedical Sciences, UCF, Honors Undergraduate Thesis); Shannon Beaton (Chemistry, UCF, Honors Undergraduate Thesis); Alexander Mabel (Biomedical Sciences, UCF, LEARN program); Nicholas Mandel (Chemistry, UCF); Shane Palmer (Chemistry, UCF); Tyler Lawson (Chemistry,

UCF); Courtney Failla (Chemistry, UCF); Emily Freer (Chemistry, UCF); Nolan Bennet (Chemistry, UCF); Mary Gomez (Chemistry, UCF); Dima Mutawe (Health Sciences, UCF); Hafsa Ali (Biomedical Sciences, UCF)

2019-2020 Charles Dowis (Biomedical Sciences, UCF, Honors in the Major); Michael Greenberg (Biomedical Sciences, UCF, Honors in the Major); Rohit Karnati (Chemistry, UCF, Honors in the Major); Shane Palmer (Chemistry, UCF); Tamar Yishay (Chemistry, UCF); Liam Canning (Chemistry, UCF); Colin Campbell (Chemistry, UCF); Kendra Nixon (Chemistry, UCF); Patricia Rodriguez Sanchez (Chemistry, UCF); Jack Mordeson (Biomedical Sciences, UCF), Shannon Beaton (Chemistry, UCF, LEARN program)

2018-2019 Shane Palmer (Chemistry, UCF); Thomas Berhane (Chemistry, UCF); Serena Farnell (Chemistry, UCF); Velda Iskandar (Forensics, UCF); Charles Dowis (Biomedical Sciences, UCF); Renan Paredes (Chemistry, UCF); Tamar Yishay (Chemistry, UCF, Honors in the Major); Andrew Pratt (UCF, EXCEL program); Colin Campbell (UCF, Chemistry)

2017-2018 Ryan Sapia (Chemistry, UCF); Anna Balenko (Biomedical Sciences, UCF); Sheila Solarez (Biology, UCF, Honors in the Major); Allison Williams (Biology, UCF); Nicole Abedrabbo (Health Sciences, UCF); Charles Verduzco (Chemistry, UCF); Maithi Tran (Chemistry, UCF); Shane Palmer (Chemistry, UCF); Thomas Berhane (Chemistry, UCF)

2016-2017 Ryan Sapia (Chemistry, UCF); Anna Balenko (Biomedical Sciences, UCF); Silvana Sidhom (Biomedical Sciences, UCF); Sheila Solarez (Biology, UCF); Allison Williams (Biology, UCF); Rebecca Basch (Biomedical Sciences, UCF); Nicole Abedrabbo (Health Sciences, UCF)

HIGH SCHOOL STUDENT ADVISEES (8 total)

2018-2019 Pettia Petrov (Boone High School); Katia Marcos (Boone High School); Pedro Madalozzo (Hagerty High School); Emma Steward (Oviedo High School), Ali Owji (Oviedo High School)

2017-2019 Serena Lyou, Meghana Srinivasa (Lake Highland Preparatory School)

2016-2017 Carly Mitchell (Oviedo High School)

INTERNS (2 total)

Fall 2018 Daria Nedorezova, SCAMT Institute, ITMO University, Saint-Petersburg, Russia; master student

Fall 2016 Andreu Moral, IQS School of Engineering, Barcelona, Spain; undergraduate student

THESIS COMMITTEES

Committee chair

2023 Abryana Fergus (MS)

2022 Ryan Connelly (PhD)

Committee member

2023 Jessica Kindell (PhD); Christopher Nix (PhD)

2022 Luz Kelly (PhD); Kaitlin Huffman (PhD)

2021	Nilab Azim (PhD)
2020	Nameer Ezzat (PhD)
2020	Charles Lewis (PhD); Ann Kimball (MS)
2019	Paris Volk (MS)

CANDIDACY COMMITTEES

Committee chair

2020	Ryan Connelly
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Committee member

2022	Jillian Morgan; Kara Strickland; Safiya Best
2021	Zhiyuan Wei; Weiwei Gao; Gabriel Padilla; Christopher Martin
2020	Christopher Nix; Kaitlin Huffman; Nilab Azim
2019	Nameer Ezzat; Luz Kelley; Jessica Kindell
2018	Ziyang Huang
2017	Charles Lewis

HONORS UNDERGRADUATE THESIS COMMITTEES

Committee chair

2023	Pedro Madalozzo
2021	Shannon Beaton; Jack Mordeson
2020	Michael Greenberg; Rohit Karnati; Charles Dowis
2019	Tamar Yishay
2018	Sheila Solarez

Committee member

2022	Jessica Huitsing
2021	Alexis Howard; Omar El Merhebi
2020	Garrett Couch
2019	Joseph Risler

SERVICE

SERVICE TO PROFESSION

Reviewer for professional journals:

Advanced Materials (IF 32.086); Nucleic Acids Research (IF 19.16); Angewandte Chemie (IF 16.823); Small (IF 15.153); Chemical Science (IF 9.969); Nanoscale (IF 8.307); Analytical Chemistry (IF 8.008); Chemical Communications (IF 7.211); Analytica Chimica Acta (IF 6.911); Nanomaterials (IF 5.719); Analyst (IF 5.227); Chemistry-An Asian Journal (IF 4.839); Molecules (IF 4.927); ACS Synthetic Biology (IF 4.634); ACS Omega (IF 4.132); Sensors (IF 3.847); Analytical Methods (IF 3.532); ChemPlusChem (IF 3.21); Biotechniques (IF 2.746); Biotechnology and Applied Biochemistry (IF 2.724); ChemistrySelect (IF 2.307)

Organizer and Chair of Biochemistry and Chemical Biology Symposium at FAME 2023

Associate Editor, Frontiers in Chemistry, Analytical Chemistry, 2022-present

Served as a poster judge for the 15th annual Raymond N. Castle Student Research Conference, USF, March 24, 2018

PhD Thesis examiner, the University of New South Wales, 2018

Chaired a session “Nano- & Biomaterials” at 2018 Annual Symposium of the Florida Chapter of the AVS Science and Technology Society, Orlando, FL, May 7-8.

Invited Co-Editor of Methods in Molecular Biology volume on ‘Nucleic acid detection’, Humana press. 2013.

SERVICE TO UCF/COLLEGE OF SCIENCES

Served as the College of Sciences representative on the UCF SOTL award selection committee, 2022-23

Served as a member of the College of Sciences Research Committee, 2022-23

Served as a member of the College of Sciences Research Incentive Award (RIA) Committee, 2022

Served as a member of the Goldwater Committee Member, 2021, 2022

Served as a member of the UCF Undergraduate Course Review Committee, 2020, 2021

Served as a member of the College of Sciences Instructor/Lecturer Promotion Committee, 2019, 2020

Reviewed in-house grant applications for UCF Seed Funding Program, 2020-2021

Hosted lab tours for student from the UCF LEARN program, 2018, 2019

Serve as a judge for the Showcase of the Undergraduate Research excellence, 2018, 2019

Serve as a judge for the Graduate Research Forum at UCF, 2017, 2018 and 2019

SERVICE TO UCF CHEMISTRY DEPARTMENT

2016-17 – Biochemistry faculty search committee; Graduate curriculum committee

2017-18 – Collective faculty search committee; Graduate curriculum committee

2018-present – Graduate admission committee (Chair since 2021)

2021-present – Facilities and Safety Committee (member)

2022 – I/L Promotion Criteria Committee (member)

SERVICE TO COMMUNITY

Hosted lab tours for students from Osceola High school, November 2022

Hosted a lab tour for students from Valencia College, May 2022, June 2023

Served as a judge for the 2019 Seminole County Regional Science, Math, and Engineering Fair, February 2, 2019.

Served as a chair for a session “Nano- & biomaterials” and a poster judge at the 2018 annual symposium of Florida Chapter of the AVS Science and Technology Society (May 7-8, 2018)

Served as a review committee member for the Florida Eastern Europe Linkage Institute tuition waiver program, 2017, 2018, 2019, 2021, 2023.

Served as a judge for the Florida Technology Student Association State Competition, March 2-4, 2017.

Served as a 2014 Student Research Showcase Judge, Sigma Xi, Scientific Research Society.

Supervised research work of high school students from local Orlando high schools.

Participated in Orlando Chemistry Tutoring, Enrichment and Training (OCTET) Camp (Summer 2017)