

CURRICULUM VITAE

Yulia V. Gerasimova

Updated 08/28/2025

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, Central Florida, Orlando, FL, USA
- 2016-2022** **Assistant Professor** (tenure track), Chemistry Department University, 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

2024 Learner-Centered Design Badge for BCH4053

2024 Learner-Centered Design Badge for BCH4054

2024 Affordable Instructional Materials (AIM) High certificate recognizing commitment to
affordability and access through First Day® (inclusive access)

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 (55 total)

Total citations (according to Google Scholar) 1560, H-index 24

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

The 55 publications include 46 peer-reviewed research and methodological papers, 1 invited
methodological paper; 2 invited review papers; 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. Knowles, A.M.*; Monsalve, J.*; **Gerasimova, Y.V.** (2025) Split hybridization probe utilizing a DNA fluorescent light-up aptamer as a signal reporter for sequence-specific nucleic acid analysis. *JoVE*, e68483
2. Connelly, R.P.*; Fonseca, V.; **Gerasimova, Y.V.** (2025) Peroxidase-like activity of G-quadruplex/hemin complexes for colorimetric nucleic acid analysis: loop and flanking sequences affect signal intensity. *DNA*, 5, 12, <https://doi.org/10.3390/dna5010012>.
3. Neves, Y.C.D.; Reis, A.J.; Rodrigues, M.A.; Chimara, E.; da Silva Lourenço, M.C.; Fountain, J.; Ramis, I.B.; von Groll, A.; **Gerasimova, Y.**, Rohde, K.H., Almeida da Silva, P.E. (2024) Detection of Mtb and NTM: preclinical validation of a new asymmetric PCR-binary deoxyribozyme sensor assay. *Microbiol. Spectr.*, 0:e03506-23, <https://doi.org/10.1128/spectrum.03506-23> (IF 3.7).
4. Torres-Salvador, F.; Ojeda, J.; Castro, C.; **Gerasimova, Y.**; Chumbimuni-Torres, K. (2024) A single electrochemical biosensor designed to detect any virus. *Anal. Chem.*, 96, 15, 5752–5756, <https://doi.org/10.1021/acs.analchem.3c05962> (IF 8.008)
5. Ojeda, J.; Torres-Salvador, F.; Bruno, N.; Eastwood, H.; **Gerasimova, Y.**; Chumbimuni-Torres, K. (2024) Highly reproducible electrochemical biosensor for Influenza A virus towards low-resource settings. *Anal. Methods*, 16, 772-779, [DOI: 10.1039/D3AY01825C](https://doi.org/10.1039/D3AY01825C) (IF 3.532).
6. Foguel, M.V.; Zamora, V.; Ojeda, J.; Reed, M.A.*; Bennett, A.; Calvo-Marzal, P.; **Gerasimova, Y.V.**; Kolpashchikov, D.M.; Chumbimuni-Torres, K.Y. (2024) DNA nanotechnology for nucleic acid analysis: sensing of nucleic acids with DNA junction-probes. *Analyst*, 2024, 149, 968-974, [DOI: 10.1039/D3AN01707A](https://doi.org/10.1039/D3AN01707A) (IF 4.2).
7. Murray, A.; Ojeda, J.; El Merhebi, O.; Calvo-Marzal, P.; **Gerasimova, Y.**; Chumbimuni-Torres, K. (2023) Cost-effective modular biosensor for SARS-CoV-2 and Influenza A detection. *Biosensors*, 13, 874 (IF 5.743).
8. 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)
9. **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)
10. 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)

11. 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)
12. 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).
13. 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).
14. 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).
15. 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)
16. 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)
17. 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)
18. 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)
19. 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)
20. 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)
21. 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)
22. 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 2.6)

23. **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)
24. 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)
25. **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)
26. 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)
27. **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)
28. **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)
29. **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)
30. Cornett E.M., **Gerasimova Y.V., Kolpashchikov D.M.** (2013) Two-component covalent inhibitor. *Bioorg. Med. Chem.* 21, 1988-1991. (IF 2.94)
31. **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)
32. **Gerasimova Y.V., Kolpashchikov D.M.** (2012) Connectable DNA logic gates: OR and XOR logics. *Chem. Asian J.*, 7, 534-540. (IF 4.839)
33. **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)
34. 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)
35. **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)
36. 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)
37. **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)
38. **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)
39. **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)
40. 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)
 41. 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)
 42. 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)
 43. **Gerasimova Y.V.**, Knorre D.G., Shakirov M.M., Godovikova T.S. (2008) Human serum albumin as a catalyst of RNA cleavage: *N*-homocysteinylolation and *N*-phosphorylation by oligonucleotide affinity reagent alter the reactivity of the protein. *Bioorg. Med. Chem. Lett.*, 18, 5396-5398. (IF 2.94)
 44. **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)
 45. **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)
 46. 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)
 47. 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

48. Kolpashchikov, D.M.; **Gerasimova, Y.V.** (2025) Cleavage of structured RNAs is accelerated by high affinity DNzyme agents. *ChemBioChem*, 26, e202400950, <https://doi.org/10.1002/cbic.202400950>. (IF 2.6)
49. **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)
50. **Gerasimova Y.V.**, Kolpashchikov D.M. (2010) Nucleic acid detection using MNzymes. *Chem. Biol.* 17, 104-106. (IF 5.915)

Book chapters

51. **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.

52. 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

53. **Gerasimova Y.**; Connelly R. (2017) Split deoxyribozyme sensors for pathogen detection. *Proceedings* 1, 844.
54. Kolpashchikov D.M.*, **Gerasimova Y.V.**, Cornett E. (2011) Deoxyribozyme sensors for nucleic acid analysis. *J. Biomol. Struct. Dyn.* 28, 1053.
55. **Gerasimova Y.**, Erchenko, I., Godovikova, T.* (2007) Interaction of non-enzymatically glycated 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.** "Deoxyribozymes and fluorescent light-up aptamers for nucleic acid analysis," Chemical Biology Seminar, University of Florida, August 23, 2024.
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.** "Fluorescent probes for nucleic acid analysis," Department of Chemistry and Biochemistry, Florida International University, October 9th, 2020 (virtual).
6. **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.
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. **Gerasimova, Y.V.**, Monsalve, J.** (2025) Multicomponent deoxyribozyme probes for pathogen and cancer detection. the Canadian Chemistry Conference and Exhibition (CSC 2025), Ottawa, Canada, June 15-19.
2. Dunton, G.;* Connelly, R.P.;** **Gerasimova, Y.V.**. (2024) Deoxyribozyme-based dual channel fluorescent assay for detection and differentiation of clinically relevant mycobacteria. American Chemical Society National Meeting Spring 2024, New Orleans,

LA, USA, March 17-21.

3. 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.
4. 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.
5. **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.
6. **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*.
7. **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.
8. **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.
9. **Gerasimova Y.**, Connelly R.** (2017) Split deoxyribozyme sensors for pathogen detection. 5th International Symposium on Sensor Science (I3S 2017), Barcelona, Spain, September 27–29.
10. 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.
11. **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.
12. **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

13. 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.
14. **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.
15. 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.
16. **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.

17. **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.
18. **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.
19. **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
20. **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.
21. **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.
22. **Gerasimova Y.V.**, Erchenko, I.,* Godovikova, T. (2007) Interaction of non- enzymatically glycated HSA with polyribonucleotide ligands. Albany 2007 15th conversation. June 14-18, SUNY at Albany. Poster presentation.
23. **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.
24. **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.
25. **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 (57 total)

26. **Monsalve, J.,** Gerasimova, Y.V.** (2025) Detection of SNPs in NANOG gene in exosomes using multicomponent deoxyribozyme assay. The 23rd annual Castle Conference, Tampa, FL, USA, April 26. Poster presentation
27. **Monsalve, J.,** Gerasimova, Y.V.** (2025) Detection of SNPs in NANOG gene in exosomes using multicomponent deoxyribozyme assay. UCF Student Scholar Symposium, Orlando, FL, USA, March 27. Poster presentation
28. **Knowles, A.,* Gerasimova, Y.V.** (2025) Multicomponent hybridization probe with a label-free reporter based on a DNA light-up aptamer. UCF Student Scholar Symposium, Orlando, FL, USA, March 27. Poster presentation
29. **Kapidzic, H.,** Hong, J.,* Gerasimova, Y.V.** (2025) Structural considerations of DNA light-up aptamers and their split probe counterparts. UCF Student Scholar Symposium, Orlando, FL, USA, March 26. Poster presentation

30. Ghasseminia, L.,* Monsalve, J.,** **Gerasimova, Y.V.** (2025) Detection of clinically relevant nontuberculous mycobacterial species using a multicomponent deoxyribozyme-based fluorescent assay. UCF Student Scholar Symposium, Orlando, FL, USA, March 26. Poster presentation
31. Kapidzic, H.,** Connelly, R.,** Raddi, N.,* **Gerasimova, Y.V.** (2024) Structural considerations for a DNA light-up aptamer. The 100th Florida Annual Meeting and Exposition (FAME 2024), Palm Harbor, FL, USA, May 30-June 1. Poster presentation.
32. Ghasseminia, L.,* Dunton, G.,* Connelly, R.P,** **Gerasimova, Y.V.** (2024) Multicomponent deoxyribozyme-based fluorescent assays for species-specific detection of nontuberculous mycobacteria. The 100th Florida Annual Meeting and Exposition (FAME 2024), Palm Harbor, FL, USA, May 30-June 1. Poster presentation.
33. Hong, J.,* Kapidzic, H.,** **Gerasimova, Y.V.** (2024) Triplex-forming oligonucleotides for modulating interactions of aptamers with their ligands. The 100th Florida Annual Meeting and Exposition (FAME 2024), Palm Harbor, FL, USA, May 30-June 1. Poster presentation.
34. Knowles, A.,* **Gerasimova, Y.V.** (2024) Multicomponent hybridization probe with a label-free reporter based on a DNA light-up aptamer. The 100th Florida Annual Meeting and Exposition (FAME 2024), Palm Harbor, FL, USA, May 30-June 1. Poster presentation.
35. 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
36. 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.
37. 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.
38. 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.
39. 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.
40. Ahn, J.,* (2023) Split peroxidase-like deoxyribozyme probes for Monkeypox virus detection. Florida Undergraduate Research Conference, Miami, FL, February 17-18. Poster presentation.
41. 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.
42. 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.
43. 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.
44. 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.
45. 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.
46. 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-apptamer probes. Pittcon, Chicago, IL, USA, March 1-5. Poster presentation.
 47. 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.
 48. 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.
 49. 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.
 50. 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.
 51. Campbell, C.,* **Gerasimova Y.V.** (2020) Interaction of fluorescent nucleic acid binding dyes with single-stranded DNA sequences. Florida Undergraduate Research Conference, Fort Myers, FL, USA, February 22. Poster presentation.
 52. Karnati, R.,* **Gerasimova Y.V.** (2020) An in-silico approach at NASBA primer probe development: A primer design software. Florida Undergraduate Research Conference, Fort Myers, FL, USA, February 22. Poster presentation.
 53. Yishay, T.,* Connelly, R.**, **Gerasimova Y.V.** (2020) Split probe detection of Influenza A Virus for improved diagnostics in a point of care system. Florida Undergraduate Research Conference, Fort Myers, FL, USA, February 22. Poster presentation.
 54. 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.
 55. 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.
 56. 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.
 57. 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.
 58. 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.
 59. 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.
 60. 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.

61. 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.
62. 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.
63. 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.
64. 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/>)
65. Campbell C.*, Sapia R.**, **Gerasimova Y.** (2019) Interaction of single-stranded DNA sequences with fluorescent dyes. Summer Undergraduate Research Showcase, UCF, July. Poster presentation.
66. 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.
67. 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.
68. 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.
69. 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.
70. 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.
71. 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.
72. 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.
73. 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.
74. 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.

75. 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.
76. 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.
77. 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.
78. 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.
79. 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.
80. 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.
81. Abedrabbo 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.
82. 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

07/01/2025 – 06/30/2027 - National Institute of Health (NIAID), R03AI193602 “Isothermal DNA amplification using double DNA primer”, Co-PI, 50%, \$22,109 (Total award \$147,156, PI – Dr. Kolpashchikov, UCF Chemistry Department)

01/01/2025 – 12/31/2027 - National Institute of Health (NIAID), R15AI189259 “A single biosensor for the simultaneous molecular detection of HIV and Hepatitis B and C viruses at resource-limited settings”, Co-PI, 20%, \$124,936 (PI Dr. Chumbimuni-Torres, total award \$537,619)

07/08/2024 – 01/08/2026 - Florida Cancer Innovation Fund, MOABC “Innovative Cancer Diagnosis Using Saliva-Derived Exosomes”, Co-PI, 25%, \$70,635 (Total award \$348,592, PI – Dr. Kiminobu Sugaya UCF Burnett School of Biomedical Sciences, Co-PI – Dr. Qun Huo, UCF Chemistry Department).

01/22/2020 – 12/31/2024 - 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)

PENDING

04/01/2026 – 03/31/2028 - National Institute of Health (NIGMS), R21GM164925 “Combinatorial hybridization accessibility profiling (CHAP) of native RNA”, PI, 50% (Total award \$407,172)

12/01/2025 – 11/30/2028 - National Institute of Health (NIAID), R15AI197143 “Species-Specific Detection and Differentiation of Candida Using iAmp/MNAzyme Assay”, PI, 100% (Total award \$545,983)

10/01/2025 – 09/30/2028 - Nuclear Regulatory Commission, “Advancing Low-energy Inclusive Guidelines in Nuclear Dosimetry (ALIGN)”, Co-PI, 20%, \$195,207 (Total award \$500,000, PI – Dr. Penchoff, UCF Chemistry Department; Co-PI – Dr. Jonathan Caranto, UCF Chemistry Department)

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

Summer 2024 – UCF Faculty Center for Teaching and Learning (FCTL) Summer Faculty Development Institute Scholarship, \$800

Summer 2023 – UCF Faculty Center for Teaching and Learning (FCTL) Summer Faculty Development Institute Scholarship, \$500

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

2025 Office of Undergraduate Research (OUR) Student Research Grant “Development of split aptameric probes for detection of cancer-associated single-nucleotide polymorphisms” for AnnaMarie Knowles, \$724

2024 FAME 2024 “Best Poster” award for Laila Ghasseminia

2024 OUR travel grants for undergraduate students Laila Ghasseminia, Jiyeong Hong and AnnaMarie Knowles to participate in the 100th Florida Annual Meeting and Exposition (FAME 2024), \$1225

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 NOBCCChE 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 Outstanding Graduate Student Award from the Orlando Section of the American Chemical Society for Ryan Connelly
- 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 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.

TEACHING RELATED PRESENTATIONS

1. **Gerasimova Y.V.**, Partlow S., Leemook, D., Caranto J., Kolpashchikov D.K., Nix C.A, Saitta E.K.H. (2024) Using creative exercises to apply prior knowledge and improve critical thinking in Biochemistry learning. Biennial Conference on Chemical Education (BCCE), Lexington, KY, USA, July 28 – August 1. Oral presentation.
2. **Chary D.**; Nix C.; **Gerasimova Y.**; Saitta E. K.H. (February 2025) Improving Biochemistry Education through Creative Exercises. Florida Undergraduate Research Conference (FURC), Tampa FL, Poster Presentation
3. **Chary D.**; Nix C.; **Gerasimova Y.**; Saitta E. K.H.* (March 2025) Improving Biochemistry Education through Creative Exercises. Student Scholar Symposium (SSS) Orlando Fl. Poster presentation

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 2320 students

Fall 2025	Biochemistry I (enrolment 108)
Spring 2025	Biochemistry II (enrolment 54)
Fall 2024	Bioconjugate Chemistry (CHM4309, enrollment 11; CHM5305, enrollment 6)
Spring 2024	Biochemistry II (enrolment 34)
Fall 2023	Biochemistry I (enrolment 197)
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 (9 total)

PhD students

2025-present Vera Zavadskaya (Chemistry, UCF)

2025-present Justine Monsalve (Chemistry, UCF)

2025-present Harun Kapidzic (Chemistry, UCF)

2024-2025 Timothy Asem (Chemistry, UCF)

2017-2022 Ryan Connelly (Chemistry, UCF)

Master students

2024-present Shaleh Alazmi (Chemistry, UCF, *with thesis*)

2023-2025 Harun Kapidzic (Chemistry, UCF)

2020-2023 Abryana Fergus (Chemistry, UCF, *with thesis*)

2018-2021 Ryan Sapia (Chemistry, UCF)

2018-2020 Mark Reed (Chemistry, UCF)

2017-2020 Adam Reed (Chemistry, UCF)

UNDERGRADUATE RESEARCH ADVISEES (63 total)

All at UCF

Riley Hugg (2025-present, Chemistry), Malia Jeukeng (2025-present, Chemistry), Richard Nguyen (2025-present, Chemistry), Miranda Ashwell (2025, Forensic Sciences), Samuel Veleke (2024-present, Chemistry), Vera Zavadskaya (2024-2025, Chemistry, ***Honors Undergraduate Thesis***), Andrea Hernandez Gomez (2024-present, Chemistry), Marina Tsukanova (2024-present, Chemistry, ***Honors Undergraduate Thesis***), AnnaMarie Knowles (2024-2025, Chemistry, ***Honors Undergraduate Thesis***), Christopher Linter (2023-2024, Chemistry), Jiyeong Hong (2024, Forensic Sciences), Mark Richards (2023-2024, Chemistry), Laila Ghasseminia (2023-2024, Forensic Sciences), Xavier Del Toro (2023, Biomedical Sciences), Jaehyun Ahn (2022-2023, Biomedical Sciences, ***Honors Undergraduate Thesis***), Gavin Dunton (2022-2023, Chemistry), Nicholas Raddi (2022-2024, Chemistry), Pedro Madalozzo (2020-2023, Chemistry, ***Honors Undergraduate Thesis, RAMP***), Anwar Rahaman (2022, Chemistry), Erin Stipulkoski (2021-2022, Chemistry), Liseth Rubio (2021-2022, Chemistry), Brenna Yokieli (2021-2022, Chemistry), Nolan Bennett (2020-2022, Chemistry), Kazuma Rodriguez (2021-2022, Chemistry), Hafsa Ali (2021, Biomedical Sciences), Dima Mutawe (2021, Biomedical Sciences), Alexander Mabel (2020-2021, Biomedical Sciences, ***T-LEARN***), Shannon Beaton (2020-2021, Chemistry, ***Honors Undergraduate Thesis, T-LEARN***), Nicholas Mandel (2020-2021, Chemistry), Tyler Lawson (2020-2021, Chemistry), Courtney Failla (2020-2021, Chemistry), Emily Freer (2020, Chemistry), Mary Gomez (2020, Chemistry), Alondra Gittelsohn (2020, Biotechnology, ***F-LEARN***), Andrei Gulapa (2020, Forensic Sciences, ***F-LEARN***), Delaney Orr (2020, Forensic Sciences, ***F-LEARN***), Haley Perkins (2020, Forensic Sciences, ***F-LEARN***), Michael Greenberg (2019-2021, Biomedical Sciences, ***Honors in the Major***), Jack Mordeson (2019-2021, Biomedical Sciences, ***Honors in the Major***), Rohit Karnati (2019-2020, Chemistry, ***Honors in the Major***), Liam Canning (2019-2020, Chemistry), Kendra Nixon (2019-2020, Chemistry), Colin Campbell (2019-2020,

Chemistry, ***SURF***), Patricia Rodriguez (2019-2020, Chemistry), Andrew Pratt (2019, Biomedical Sciences, ***EXCEL Program- iSTEM***), Charles Dowis (2018-2020, Biomedical Sciences ***Honors Undergraduate Thesis***), Tamar Yishay (2018-2020, Chemistry, ***Honors in the Major***), Shane Palmer (2018-2019, Chemistry), Thomas Berhane (2018-2019, Chemistry), Serena Farnell (2018-2019, Chemistry), Velda Iskandar (2018, Forensic Science), Renan Paredes (2018, Chemistry), Jaime Caldaro (2018, Forensic Sciences), Allison Williams (2018, Biology), Sheila Solarez (2017-2018, Biology, ***Honors in the Major***), Charles Verduzco (2017-2018, Chemistry), Maithi Tran (2017-2018, Chemistry), Nicole Abedrabbo (2017-2018, Health Sciences), Ryan Sapia (2016-2018, Chemistry), Rebecca Basch (2017, Health Sciences), Anna Balenko (2016-2017, Biomedical Sciences), Silvana Sidhom (2016, Chemistry).

HIGH SCHOOL STUDENT ADVISEES (8 total)

- 2024-2025 Aanvi Mathur (Orlando Science School, won 1st place at the Lockheed Martin Science Challenge, and 4th place at the State Science and Engineering Fair in Florida)
- 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 (6 total)

- Summer 2025 Miranda Ashwell, Forensic Sciences BS, University of Central Florida, undergraduate student
- Summer 2025 Chloe Caven, University of Florida, undergraduate student
- Spring 2025 Evangelia Brisby, Forensic Sciences BS, University of Central Florida, undergraduate student
- Summer 2024 Jiyeong Hong, Forensic Sciences BS, University of Central Florida, undergraduate student
- 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 (2): Abryana Fergus (Chemistry MS, 2023); Ryan Connelly (Chemistry PhD, 2022)

Committee member (13): Kyle Langlois (Chemistry PhD; 2025); Christopher Martin (Chemistry PhD; 2024); Zhiyuan Wei (Chemistry PhD; 2024); Weiwei Gao (Chemistry PhD; 2024); Jessica Kindell (Chemistry PhD; 2023); Christopher Nix (Chemistry PhD, 2023); Luz Kelly (Chemistry PhD, 2022); Kaitlin Huffman (Chemistry PhD, 2022); Nilab Azim (Chemistry PhD, 2021); Nameer Ezzat (Chemistry PhD, 2020); Charles Lewis (Chemistry PhD, 2020); Ann Kimball (Forensic Science MS, 2020); Paris Volk (Forensic Science MS, 2019)

CANDIDACY COMMITTEES

Committee chair (1): Ryan Connelly (Chemistry PhD, 2020)

Committee member (20): Stephanny Rodriguez Cordero (Chemistry PhD; 2025); Sarah Jennings (Chemistry PhD; 2024); Julio Ojeda (Chemistry PhD; 2024); Sarah Parker (Chemistry PhD; 2024); Kyle Langlois (Chemistry PhD; 2023); Jack Trimble (Chemistry PhD; 2023); Yujia Bian (Chemistry PhD; 2023); Jillian Morgan (Chemistry PhD, 2022); Kara Strickland (Chemistry PhD, 2022); Safiya Best (Chemistry PhD, 2022); Zhiyuan Wei (Chemistry PhD; 2021); Weiwei Gao (Chemistry PhD; 2021); Gabriel Padilla (Chemistry PhD; 2021); Christopher Martin (Chemistry PhD; 2021); Christopher Nix (Chemistry PhD; 2020); Kaitlin Huffman (Chemistry PhD; 2020); Nilab Azim (Chemistry PhD; 2020); Nameer Ezzat (Chemistry PhD; 2019); Luz Kelley (Chemistry PhD; 2019); Jessica Kindell (Chemistry PhD; 2019)

HONORS UNDERGRADUATE THESIS COMMITTEES

Committee chair (9): Marina Tsukanova (2025); Vera Zavadskaya (2025); AnnaMarie Knowles (2025); Pedro Madalozzo (2023); Jaehyun Ahn (2023); Shannon Beaton (2021); Jack Mordeson (2021); Michael Greenberg (2020); Rohit Karnati (2020); Charles Dowis (2020); Tamar Yishay (2019); Sheila Solarez (2018)

Committee member (7): Andrew Casanova (2025); Max Ivanov (2025); Nicholas Bruno (2024); Jessica Huitsing (2022); Alexis Howard (2021); Omar El Merhebi (2021); Garrett Couch (2020); Joseph Risler (2019)

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)

Grant review panels:

- NIH ZRG1 BBB-L (82) Special Topics in Bioengineering and Instrumentation review panel (2025/07)
- NIH ZAI1-CAB-M-J1 Centers of Excellence for Translational Research Special Emphasis Panel (2024/10)
- NIH MCST (10) Council Small Business: Biological Chemistry, Biophysics, and Assay Development study section panel (2023/08; 2023/11; 2024/03; 2024/07)
- NSF Reviewer (2024, 2025)
- *Ad hoc* reviewer for a UK Research and Innovation (UKRI) opportunity (2024).

Organizer and Chair of Biochemistry and Chemical Biology Symposium at FAME 2023, FAME 2024

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

2025 UCF ASF Committee

2024-present UCF Institutional Biosafety Committee (member)

2024 UCF Office of Research’s Grant Writing Academy (reviewer)

2023 UCF College of Sciences Excellence in Research Award Selection Committee (chair)

2023-2025 UCF Student Scholar Symposium (judge)

2022-2023 UCF College of Sciences representative on the UCF SOTL award selection committee (member)

2022-2023 UCF College of Sciences Research Committee (member)

2022 UCF College of Sciences Research Incentive Award (RIA) Committee (member)

2021-2022 UCF Goldwater Committee (member)

2020-2021 UCF Undergraduate Course Review Committee (member)

2020-2021 UCF Seed Funding Program (grant reviewer)

2019-2020 UCF College of Sciences Instructor/Lecturer Promotion Committee (member)

2018-2019 UCF Showcase of the Undergraduate Research Excellence (judge)

2017-2019 UCF Graduate Research Forum (judge)

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

SERVICE TO UCF CHEMISTRY DEPARTMENT

2025 – AESP revision committee (member)

2025 – Chair advisory committee (member)

2024 – Recruitment visit to the Florida Gulf Coast University, October 18th 2024

2022, 2023 – General Chemistry/Biochemistry Honors Lecturer Search Committee (chair)

2022 – I/L Promotion Criteria Committee (member)

2021-present – Facilities and Safety Committee (member)

2018-present –Graduate Admission Committee (co-chair since 2021)

2017-2018 –Collective faculty search committee (member)

2016-2017 –Biochemistry Faculty Search Committee (member)

2016-2018 –Graduate Curriculum Committee (member)

SERVICE TO COMMUNITY

Hosted 3 high school students for a week-long research project as part of Camp Connect Advanced, UCF, June 2025

Hosted a lab tour for the Ying competition finalists (high school students), April 2024

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

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

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

Served as a review committee member for the Florida Eastern Europe Linkage Institute tuition waiver program, 2017, 2018, 2019, 2021, 2023, 2024.

Served as a member of Orlando Section ACS Awards Committee

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)