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EDUCATION

2013	PhD in Biochemistry, <i>summa cum laude</i> European Molecular Biology Laboratory (EMBL), Heidelberg, Germany Ruprecht-Karls-University of Heidelberg, Germany Advisor: Prof. Teresa Carlomagno
2009	Master in Biochemistry Vilnius University, Lithuania Advisor: Prof. Saulius Klimasauskas
2007	Bachelor in Biochemistry Vilnius University, Lithuania Advisor: Prof. Saulius Klimasauskas

PROFESSIONAL EXPERIENCE

2020 – present	Assistant Professor of Chemistry and Biochemistry School of Molecular Sciences and ASU-Banner Neurodegenerative Disease Research Center Arizona State University
2015 – 2019	HFSP Postdoctoral Fellow University of California, Berkeley Advisors: Prof. Jennifer Doudna and Prof. Jamie Cate
2014	Postdoctoral Fellow European Molecular Biology Laboratory (EMBL), Heidelberg, Germany Advisor: Prof. Teresa Carlomagno
2009 – 2013	Graduate Student Researcher European Molecular Biology Laboratory (EMBL), Heidelberg, Germany Ruprecht-Karls-University of Heidelberg, Germany Advisor: Prof. Teresa Carlomagno
2007 – 2009	Graduate Student Researcher Vilnius University, Lithuania Advisor: Prof. Saulius Klimasauskas
2003 – 2007	Undergraduate Student Researcher Vilnius University, Lithuania Advisor: Prof. Saulius Klimasauskas

HONORS & AWARDS

2015 – 2018	The International Human Frontier Science Program (HFSP) Long-Term postdoctoral fellowship
2013	PhD <i>summa cum laude</i> , Ruprecht-Karls-University of Heidelberg, Germany
2013	Best poster prize at the 18th annual meeting of the RNA Society (Davos, Switzerland)
2009 – 2013	EMBL International PhD Fellowship
2008	Lifelong Learning Program (LLP) Scholarship
2008	EU Socrates/Erasmus Scholarship

RESEARCH AREAS

Engineering next generation precision genome editing tools; programmable DNA and RNA editing; structure and function of nucleoprotein complexes; prokaryotic immune systems; CRISPR-Cas; RNA modifications; RNA metabolism in neurons; post-transcriptional gene expression regulation.

PUBLICATIONS

Google scholar: <https://scholar.google.com/citations?user=DtaGQDYAAAAJ&hl=en> (10 articles published, h-index = 8)

✉ = AL as corresponding author; ★ = includes undergraduate in the Lapinaite lab; Underlined = members of the Lapinaite lab; ◆ = AL as a postdoc; ◇ = AL as a graduate student
IF = impact factor

a) Published in Peer-reviewed Journals

10. Knott G.J. & **Lapinaite A.** (2021) CRISPR gets its origin story. **CRISPR J.** PMID: 34661430 ✉
IF: 6.071
9. **Lapinaite A.**, Knott G.J., Palumbo C.M., Lin-Shiao E., Richter M.F., Zhao K.T., Beal P.A., Liu D.R., Doudna J.A. (2020) DNA capture by a CRISPR-Cas9 guided adenine base editor. **Science.** PMID: 32732424 ◆
IF: 47.728
8. Richter M.F., Zhao K.T., Eton E., **Lapinaite A.**, Newby G.A., Thuronyi B.W., Wilson C., Koblan L.W., Zeng J., Bauer D.E., Doudna J.A., Liu D.R. (2020) Phage-Assisted Evolution of an Adenine Base Editor with Enhanced Cas Domain Compatibility and Activity. **Nature Biotechnology.** PMID: 32433547 ◆
IF: 54.908
7. **Lapinaite A.**, Carlomagno T., Gabel F. (2020) Small-Angle Neutron Scattering of RNA–Protein Complexes. In: Arluison V., Wien F. (eds) **RNA Spectroscopy. Methods in Molecular Biology.** PMID: 32006315 ◆
IF: 1.167
6. **Lapinaite A.**, Doudna J.A., Cate J.H.D. (2018). Programmable RNA recognition using a CRISPR-associated Argonaute. **PNAS.** PMID: 29531059 ◆
IF: 11.205
5. Graziadei A., Masiewicz P., **Lapinaite A.**, Carlomagno T. (2016). Archaea box C/D enzymes methylate two distinct substrate rRNA sequences with different efficiency. **RNA.** PMID: 26925607 ◆
IF: 4.942
4. **Lapinaite A.**, Simon B., Skjaerven L., Rakwalska-Bange M., Gabel F., Carlomagno T. (2013). The structure of the box C/D enzyme reveals regulation of RNA methylation. **Nature.** PMID: 24121435 ◇
IF: 49.962
3. Kriukienė E., Labrie V., Khare T., Urbanavičiūtė G., **Lapinaite A.**, Koncevičius K., Li D., Wang T., Pai S., Ptak C., Gordevičius J., Wang S.C., Petronis A., Klimasauskas S. (2013). DNA unmethylome profiling by covalent capture of CpG sites. **Nature Communications.** PMID: 23877302 ◇
IF: 14.919
1. Ballaré C.*, Lange M.*, **Lapinaite A.***, Martin G.M., Morey L., Pascual G., Liefke R., Simon B., Shi Y., Gozani O., Carlomagno T., Benitah S.A., Di Croce L. (2012). Phf19 links methylated Lys36 of histone H3 to regulation of Polycomb activity. **Nature Structural & Molecular Biology.** PMID: 23104054 ◇
*equal contribution
IF: 15.37
1. Lukinavicius G., **Lapinaite A.**, Urbanaviciute G., Gerasimaite R., Klimasauskas S. (2012). Engineering the DNA cytosine-5 methyltransferase reaction for sequence-specific labeling of DNA. **Nucleic Acids Research.** PMID: 23042683 ◇
IF: 16.97

b) Patents & Inventions

1. “Chimeric CRISPR/Cas effector polypeptides and methods of use thereof”
PCT/US2021/021942
Inventors: Jennifer A. Doudna; Audrone Lapinaite; Enrique Lin Shiao; David F. Savage

RESEARCH FUNDING

a) Current

2022 Edson Initiative for Dementia Care and Solutions New Idea Fund “Precision Genome Editing Tools to Understand and Treat Alzheimer’s Disease” Award Amount: \$125,000 Role: PI	1/1/2022 – 1/31/2023
US Department of Defence (DOD) AWD00036551 “A zero-cost online biotechnology program for middle and high schools” Award Amount: \$1,399,584 Role: Co-PI PI: A. Singharoy	9/1/2021 – 8/31/2024

b) Past

The International Human Frontier Science Program (HFSP) LT000102/2015-L, HFSP Long-Term Postdoctoral Fellowship “CRISPR/Cas based RNA imaging to observe cytoplasmic intron-retaining transcripts in living cells” Award Amount: \$160,980 Role: Co-PI PI: J. Cate	6/1/2015 – 5/31/2018
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TALKS, SEMINARS & POSTER PRESENTATIONS

a) Research Talks

2021	4th International Conference on CRISPR Technologies (Virtual meeting). <u>Invited talk.</u>
2021	Symposium on Regenerative Medicine (Tempe, AZ, USA). <u>Invited talk.</u>
2021	ASU School of Life Sciences Seminar Series (Tempe, AZ, USA). <u>Invited talk.</u>
2021	Drug Discovery News’ webinar “On target: Understanding base editors”. <u>Invited talk.</u>
2021	Gordon Research Conference on RNA editing (Cancelled due to COVID-19). <u>Invited talk.</u>
2021	Genome Engineering Seminar Series, Harvard Medical School (Virtual meeting). <u>Invited talk.</u>
2021	Barrow Neurological Institute Seminar Series (Virtual meeting). <u>Invited talk.</u>
2021	2nd International Conference on Base Editing – Deaminet 2021 (Virtual meeting). <u>Invited talk.</u>
2020	The AZ RNA Salon (Virtual meeting). <u>Invited talk.</u>
2020	ASU Biological Physics Seminar Series (Virtual meeting). <u>Invited talk.</u>
2020	Cold Spring Harbor Meeting on Genome Engineering: CRISPR Frontiers (Virtual meeting). <u>Invited talk.</u>
2020	The 25th annual meeting of the RNA Society (Virtual meeting). <u>Selected talk.</u>
2020	1st International Conference on Base Editing – Deaminet 2020 (Palm Springs, CA, USA). <u>Selected talk.</u>

Before Joining ASU

2019	The 17th annual CEGS meeting (Boston, MA, USA). <u>Selected talk.</u>
2018	Cold Spring Harbor Meeting on Regulatory & Non-Coding RNAs (Cold Spring Harbor, NY, USA). <u>Selected talk.</u>
2017	The Bay Area RNA Club meeting (San Francisco, CA, USA). <u>Selected talk.</u>
2017	CRSB Quarterly meeting (Berkeley, CA, USA). <u>Selected talk.</u>
2017	BBS Annual Research Conference & Retreat (Asilomar, CA, USA). <u>Selected talk.</u>
2014	Non-Coding RNA – from Basic Mechanisms to Cancer (Heidelberg, Germany). <u>Selected talk.</u>
2014	Molecular Machines: Lessons from Integrating Structure, Biophysics and Chemistry (Heidelberg, Germany). <u>Selected talk.</u>
2014	NIBB 2014 – Neutrons for Biology and Biotechnology (Grenoble, France). <u>Invited talk.</u>
2014	Invited seminar at University of Zurich (Zurich, Switzerland). <u>Invited talk.</u>
2012	RNPnet meeting (Lisbon, Portugal). <u>Selected talk.</u>

b) Poster Presentations

Before Joining ASU

2019	Cold Spring Harbor Meeting on Genome Engineering: CRISPR Frontiers (Cold Spring Harbor, NY, USA).
2018	The 16th annual CEGS meeting (Chicago, IL, USA).
2018	RNA at the Bench and Bedside (La Jolla, CA, USA).
2018	The 23rd annual meeting of the RNA Society (Berkeley, CA, USA).
2017	The 22nd annual meeting of the RNA Society (Prague, Czech Republic).
2016	The 16th HFSP Awardees Meeting (Singapore).
2013	The 18th annual meeting of the RNA Society (Davos, Switzerland).
2013	Instruct Biennial Structural Biology Meeting (Heidelberg, Germany).
2011	EUROMAR 2011 (Frankfurt am Main, Germany).

TEACHING & MENTORING

a) Courses Taught

PREFIX	CLASS	ROLE	SEMESTERS (ENROLMENT)
BCH 598/ BCH 494	RNA Biochemistry	Sole Instructor	Spring 2020 (14) Spring 2021 (20) Fall 2021 (18)
BCH 461	General Biochemistry	Sole Instructor	Spring 2022 (106)
MCB 556	Advanced Molecular & Cellular Biology II	Guest Lecturer	Spring 2020 (17) Spring 2021 (7)

Fall 2020, Fall 2022 and Spring 2025: Approved Release from teaching before tenure.

b) Student Mentoring

Graduate Students – Primary Advisor

2021 – present	Madeleine King, School of Molecular Sciences, Biochemistry Graduate Student, ASU Research focus: Engineering next generation precision DNA editing tools
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2021 – present	Archana Kikla, Biological Design Graduate Student, ASU Research focus: Engineering next generation precision DNA editing tools
2021 – present	Xiaoyu Chen, School of Molecular Sciences, Biochemistry Graduate Student, ASU Research focus: Molecular Mechanism of Bacterial Immune system
2020 – present	Kayla Perry, School of Molecular Sciences, Biochemistry Graduate Student, ASU Research focus: Regulation of the RNA modifications <i>in vivo</i>
2020 – present	Mitchell McAndrew, School of Molecular Sciences, Biochemistry Graduate Student, ASU Research focus: Engineering next generation precision DNA editing tools
<u>Master's Students – Primary Advisor</u>	
2021 – present	Mischa Ellison, School of Molecular Sciences, Biochemistry Master's Student, ASU Research focus: Regulation of the RNA modifications <i>in vivo</i>
<u>Undergraduate Students – Primary Advisor</u>	
2021 – present	Jack Kostrinsky, The Barrett Honors College, Biomedical Engineering, ASU Research focus: Molecular Mechanism of Bacterial Immune system
2021 – present	Marisa E. Bennett, School of Life Sciences, Microbiology and Chemistry, ASU Research focus: Engineering next generation precision DNA editing tools
2020 – 2021	Alaa Abdelsalam, The Barrett Honors College, Biochemistry (Medicinal Chemistry) & Biomedical Sciences, ASU Research focus: Engineering Programmable RNPs for detection of modified RNAs in cells
<u>Graduate Students – Oral and Supervisory Committee Member</u>	
2021 – present	Paul Workinger, School of Molecular Sciences (Supervisory Committee)
2021 – present	Alexandra Novacek, School of Molecular Sciences (Supervisory Committee)
2021 – present	Shundene Key, School of Molecular Sciences (Supervisory Committee)
2021 – present	Tianxiang Liu, School of Molecular Sciences (Supervisory Committee)
2021 – present	Ryan Yellamaty, School of Life Sciences (Supervisory Committee)
2021 – present	Bridget Diviak, School of Life Sciences (Supervisory Committee)
2020 – present	Khadiza Akhter, School of Molecular Sciences (Supervisory Committee)
2020 – present	Liangxiao Chen, School of Molecular Sciences (Supervisory Committee)
2020 – present	Emma Murari, School of Life Sciences (Supervisory Committee)
2022	Erik Stahl, School of Molecular Sciences (Oral Exam Committee)
2021	Skylar Henry, School of Molecular Sciences (Oral Exam Committee)
2021	Kelsea Evraets, School of Molecular Sciences (Chair of Oral Exam)

SERVICE

a) Professional Service

2021	Guest editor for <i>eLife</i>
2021 – 2022	Guest editor for <i>METHODS (Elsevier)</i> special issue "Methods for sequence-specific targeting of RNA"
2021	NSF 2021 reviewer
2021	Co-organizer, 3rd International Conference on Base Editing – Deaminet 2022 (Palm Springs, CA, USA)
2021	Session Chair, 2nd International Conference on Base Editing – Deaminet 2021 (Virtual meeting)
2021	Poster judge, 2nd International Conference on Base Editing – Deaminet 2021 (Virtual meeting)
2021	Poster judge, The 26th Annual Meeting of the RNA Society (Virtual meeting)
2020	Co-organizer, 2nd International Conference on Base Editing – Deaminet 2021 (Virtual meeting)

2020	Session Chair, Cold Spring Harbor Meeting on Genome Engineering: CRISPR Frontiers (Virtual meeting)
2020	Poster judge, 1st International Conference on Base Editing – Deaminet 2020 (Palm Springs, CA, USA)
2020 – present	External Member of Editorial Board of <i>Communications Biology</i> Nature Publishing Group
2019 – present	<i>Ad hoc</i> reviewer for: <i>Cell</i> <i>Science Advances</i> <i>Nature Communications</i> <i>Nature Methods</i> <i>eLife</i> <i>Nucleic Acids Research</i> <i>The CRISPR Journal</i> <i>Synthetic Biology</i> <i>Communications Biology</i>

b) University & Departmental Service

2021	Member of AZ RNA Salon Organization Committee, ASU
2021	Member of Regenerative Medicine Core Advisory Board, ASU
2021	Member of SMS Advisory Committee for Diversity Cluster Hires, ASU
2021	Member of SMS Seminar Committee, ASU
2020	Member of SMS Graduate Admission Committee, ASU

c) Outreach

2021 December	Speaker at the Career Panel for undergraduates, Innovative Genomics Institute (IGI) at UC Berkeley
2021 November	Speaker at the Science Teacher Engagement outreach program, University of New Mexico
2021 April	Speaker at the Science Teacher Engagement outreach program, University of New Mexico
2020 November	Speaker at the Science Teacher Engagement outreach program, University of New Mexico

PROFESSIONAL ASSOCIATIONS

2013 – present	RNA Society voting member
2020 – present	American Society for Biochemistry and Molecular Biology (ASBMB)