



THE RNA INSTITUTE

COLLEGE OF ARTS & SCIENCES **UNIVERSITY AT ALBANY**



2020-2021
Annual Report

THE RNA INSTITUTE

COLLEGE OF ARTS & SCIENCES UNIVERSITY AT ALBANY

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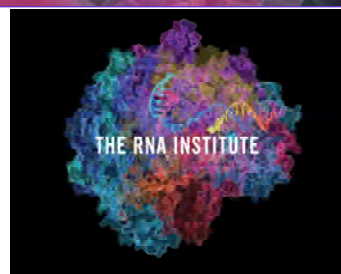
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About our logo: The RNA Institute Rosette draws its influence from the helical shapes created by DNA and RNA structures when viewed from above. The rosette's six hexagonal connected loops create a unified form that spirals towards a central location. The interlocked nature of the rosette mirrors the strong collaborative approach of the Institute where researchers work together toward new discoveries and solutions. Its unique structure holds a concentrated hexagonal point in its center suggesting a focus on results, while at the same time radiates and blooms outward representing a collaborative environment.

Cover Image: Part of the RNA Institute's original logo depicting RNA Polymerase II, based upon computational rendering from the structure originally solved by Roger Kornberg. RNA polymerase II is the enzyme responsible for catalyzing the transcription of DNA into messenger RNA, which in turn dictates the order of the amino acid building blocks that make-up the final proteins. Kornberg received the Nobel Prize in Chemistry in 2006 for his work on the mechanisms of mammalian transcription.

Original image credit: David Bushnell, Ken Westover and Roger Kornberg, Stanford University



A Few Words From Our Director

J. Andrew Berglund, PhD



I am honored to continue serving as Director of the College of Arts & Sciences' RNA Institute and want to highlight some of the successes of our trainees, staff and faculty. Our focus on training the next generation of diverse RNA scientists has not changed, but the Covid-19 pandemic has continued to impact our approaches. For example, the RNA Institute's summer bioinformatics program was completely online in the summer of 2020 and a hybrid model for the summer of 2021. This program, which is partially supported by our generous donors, provides competitive stipends for our trainees and serves as a recruiting tool for the College of Arts & Sciences (CAS). In fact, our shift to an online format enabled us to reach a diverse set of trainees from across the country and world, leading to the recruitment of students to UAlbany's graduate programs.

Our donors and supporters continue to make an impact on the RNA Institute and our cutting-edge science. Many of our programs, including the summer bioinformatics research program, are supported by donors from across the capital region and beyond. As an example, I would like to highlight the generous donation by the Massry family which enabled us to purchase an Illumina NextSeq2000 sequencer. This instrument is capable of supporting the next generation sequencing needs for faculty across the Institute. These donations ensure our students are trained on cutting-edge equipment and will result in new discoveries and technological advances that are critical to the progression of RNA-based therapeutics and diagnostics.

Our undergraduate students, PhD students and postdoctoral fellows were extremely successful in competing for external funding and winning awards. To highlight a few of these trainees: Amber Altrieth was awarded an NIH F31 fellowship, Jesus Frias was awarded an NIH Diversity Fellowship and YaYing Zheng won 3rd place in the UAlbany Three Minute Thesis Competition. Postdoctoral fellow Subodh Mishra was awarded a Myotonic Dystrophy Foundation fellowship. RNA Institute undergraduate students, Emmanuelle Owusu-Ampaw and Che'-Doni Platt, were recognized with the President's Award for Leadership and the Abele and Greenwald Research fund awards, respectively. It is exciting to see our trainees being recruited by top academic institutions and taking positions at leading biotechnology and pharmaceutical companies.

Several of our excellent Institute faculty and staff were recognized with RNA Institute awards in 2021. Two of our outstanding staff members, Liisa Koski and Donna Willey, received Institute Awards for Excellence in Service. One of our faculty, Alan Chen was also recognized with the Institute's Award for Exceptional Performance based on his groundbreaking work to visualize RNA folding pathways. This work was highlighted by the NIH and *Nature*, and he continues his excellent work using physics-based simulations of RNA as a tool for studying RNA folding, structure, and function.

With success comes the challenge of keeping our amazing faculty and staff. With bittersweet feelings I report that Donna, Liisa and Prash Rangan were offered positions they couldn't turn down. We wish Liisa and Donna the best with their new positions, Liisa as the Communications Manager at the Health and Environmental Sciences Institute and Donna as an Administrative Assistant 2 with UAlbany's Vice President for Student Affairs. Prash Rangan's research excellence was recognized with an impressive opportunity from the Icahn School of Medicine at Mount Sinai in New York City. We wish Prash the best and expect that his lab will continue to make significant contributions to the RNA field. As we bid goodbye to familiar faces, we also look forward to new faces at the RNA Institute in the coming year. We are working with the CAS Dean, Dr. Altarriba and her tireless staff to continue to grow in order to meet the challenges of understanding the complex role of RNA in science and society.

Finally I am very proud to highlight the accomplishments of our faculty, including our newest member, Cheryl Andam, who was named a prestigious Scialog Fellow. Other faculty awardees include: Marlene Belfort, who was recognized with the ASBMB Biology Mid-Career Leadership Award, Alex Valm, who was awarded the 3M Non-tenured Faculty Award and our University of Buffalo colleague John Sullivan, who was recognized with the VA Clinician Scientist Award. These are a few of our wonderful achievements this year with many more examples throughout this report. I hope as you read this report you will share my enthusiasm for RNA research and the RNA Institute and will join us to ***unleash greatness***.

Executive Summary

During 2021, the College of Arts & Sciences' RNA Institute implemented a series of initiatives designed to forward our mission of training the next generation of RNA researchers, while contributing to the University at Albany's strategic plan. Many of these initiatives required changes due to COVID-19 disruptions, but the willingness of participants to be flexible and creative allowed our overall goals to be met. Key initiatives are highlighted below and detailed throughout this report.

Research Excellence

- ♦ **Grants and Publications:** RNA Institute members received over \$7.4 million in grants & awards last year (pg. 5) and published over 80 scientific papers (pg. 15).
- ♦ **Next Generation Sequencing:** With a generous donation from the Massry family, the RNA Institute purchased the NextSeq2000, the latest sequencing technology from Illumina. Combined with the recently purchased 10x Genomics single-cell instrument, this equipment helps support cutting-edge research.
- ♦ **New York Center for Myotonic Dystrophy Research:** In continued efforts to lay the foundation for a New York Center for Myotonic Dystrophy (DM) Research, the RNA Institute hosted key government figures including Albany Mayor Kathy Sheehan, Albany County Executive Dan McCoy, NY State Senator James Tedisco, US. Congressman Paul D. Tonko, and NY Governor Kathy Hochul.



Training the Next Generation of RNA Researchers

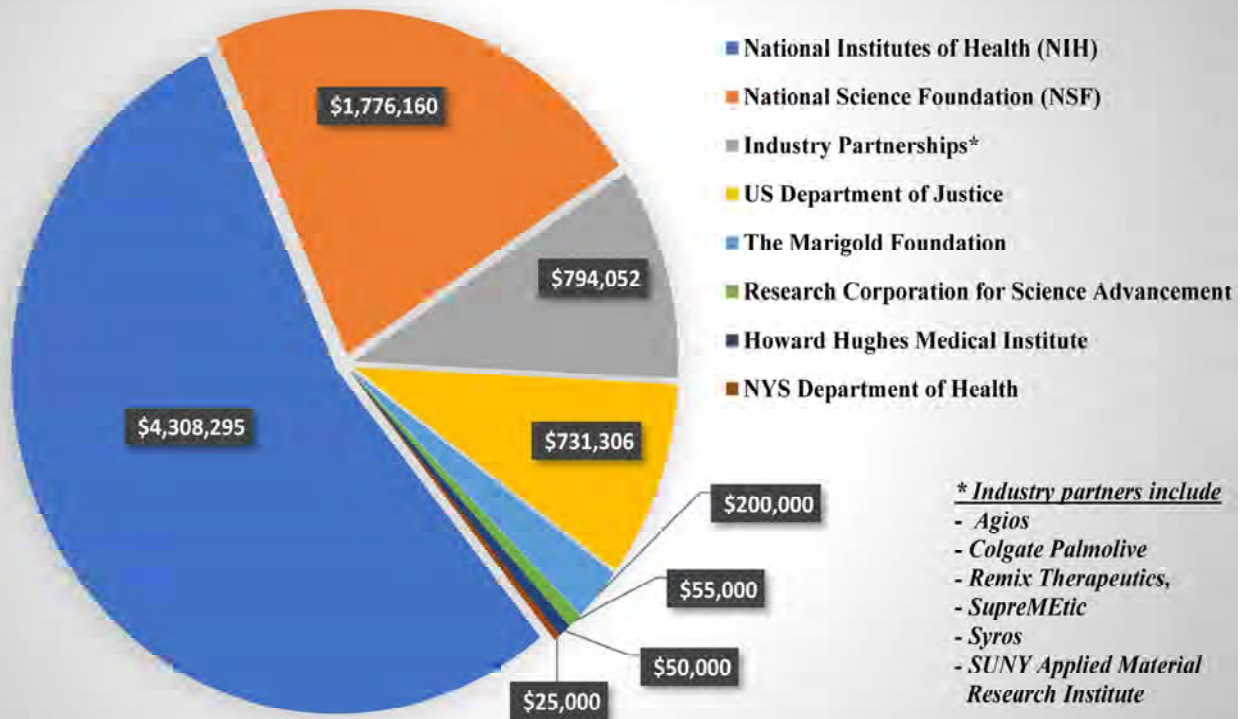
- ♦ The RNA Institute **Undergraduate Summer Fellowship** promotes training of a diverse biomedical workforce and hosted 41 trainees this year, including 65% women and 17% under-represented minorities.
- ♦ The 2020-2021 class of the **RNA Fellows Program**, which is supported by an NIH-funded T32 Training grant, consist of 16 trainees, including 25% who are under-represented minorities.
- ♦ The RNA Institute is continuing efforts to advance diversity amongst our faculty, staff and trainee and are pleased that this year, two of our Institute trainees were awarded **NIH diversity supplements**.

Enrollment and Retention

- ♦ The RNA Institute's Summer Fellowship program moved to a fully online research platform for the 2020 term due to COVID-19 and a hybrid approach for 2021. With a mix of UAlbany, non-UAlbany and high school students, the program continues to serve as a **powerful tool to recruit** undergraduate and graduate students to UAlbany and train the next generation of RNA researchers.
- ♦ The **2021 RNA Institute Symposium** was also held online due to the pandemic, but was extremely successful and attracted over 350 participants from 13 countries. A large group (~22%) of attendees were from outside the US and Canada. This event also continues to be another powerful recruiting tool for graduate students and post-doctoral fellows to UAlbany.

RNA Institute Grant Overview

RNA Institute & affiliated researchers were awarded a total of \$7.9M in 2021. Here's how it breaks down:



RNA New Personnel

Emily Davey, BS (Bioinformatics Support Specialist)



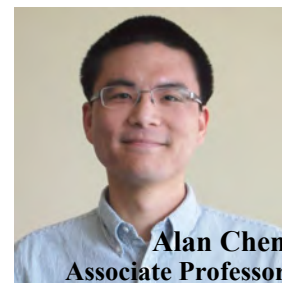
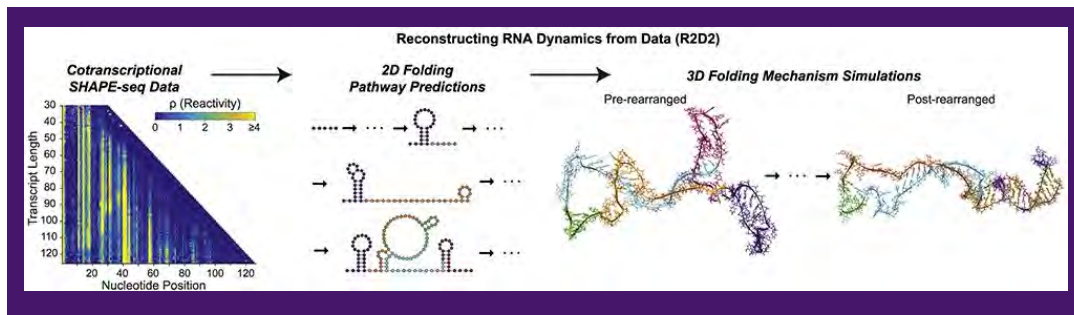
Emily Davey, BSc

Emily Davey joined the RNA Institute in September of 2021 as our **new bioinformatics support specialist**, a position that supports bioinformatics research across a wide variety of disciplines. Emily received her B.S. (Biological Neuroscience and Biology) from Rensselaer Polytechnic Institute in 2021. She joined the RNA Institute in Dr. Berglund's lab in January 2019, first as an undergraduate student, then as a bioinformatics technician supporting myotonic dystrophy research. Her work focused primarily on the analysis of RNAseq data for changes in alternative splicing and differential gene expression patterns. During this time, Emily was heavily involved in the Institute's Summer Bioinformatics Program, first as a group leader and then most recently taking on a larger role as an instructor. Now as the Institute's official bioinformatics support specialist, Emily is continuing this role as instructor for the Bioinformatics program as well as supporting the bioinformatics research needs across different Institute faculty. We are happy to have Emily as part of the RNA Institute team.

Welcome aboard Emily!

Research Excellence

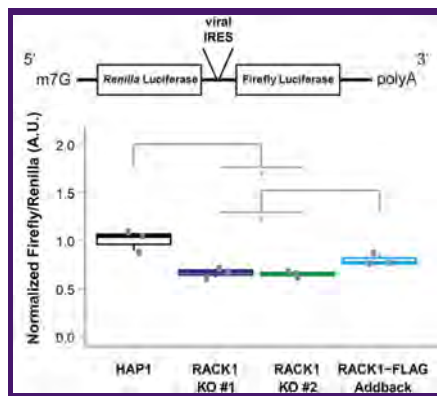
Reconstructing RNA Dynamics from Data



Alan Chen
Associate Professor

The Chen lab (Chemistry), in collaboration with the Lucks Lab at Northwestern University, created a new technology to visualize RNA folding, a very challenging task important for understanding different areas of biomedical research. They named the new technology R2D2, which is short for Reconstructing RNA Dynamics from Data. This groundbreaking technology can be viewed in action in this great video <https://youtu.be/w9VsBW6DQ7o>. The full details have been published in *Molecular Cell*.
[*Mol. Cell*, 2021, DOI: 10.1016/j.molcel.2020.12.017]

Viruses Exploiting Ribosomal Proteins for Translation



The Fuchs lab (Biology) focuses on exploring the ribosome and ribosome subpopulations regulating translation in mammalian cells during stress and viral infections. In a recent study in *Virology*, they showed how viruses utilize specific ribosomal proteins, such as RACK1, to mediate translation during poliovirus infection in mammalian cells using a dual luciferase reporter system.

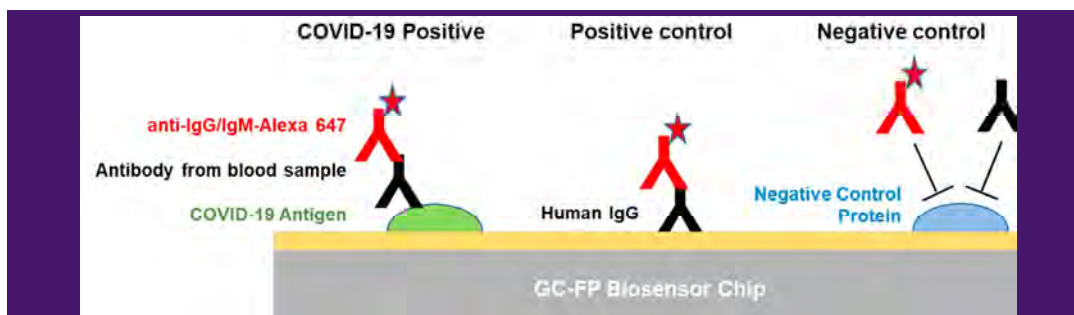
Full article can be found here:

[*Virology*, 2020, DOI: 10.1016/j.virol.2020.03.004]



Gaby Fuchs
Assistant Professor

Detecting COVID-19 Antibodies in 30 Minutes



Nate Cady
Professor

Dr. Nate Cady, Empire Innovation Professor of Nanobioscience and Executive Director of SUNY Applied Materials Research Institute, collaborated with a group of researchers at CNSE, Ciencia Inc. and the New York State Department of Health, Wadsworth Center to develop a COVID-19 antibody test that takes only 30 minutes. The system uses blood serum but the group has also had success with dried blood spots which only require a finger stick and a small drop of blood. Additional information here:
[*Biosens. Bioelectron.*, 2021, DOI: 10.1016/j.bios.2020.112679]

Research Excellence

Genetic Recombination of Bacterial Pathogens

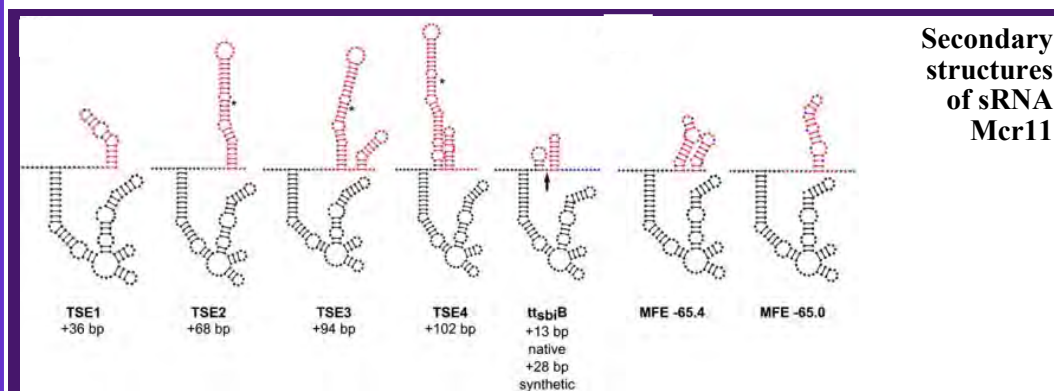
Dr. Cheryl P. Andam, Assistant Professor of Biological Sciences, UAlbany, has been awarded an R25 MIRA award for Early Stage Investigators for her project entitled, “*Population and evolutionary dynamics of recombining genes and alleles in bacteria*”. The \$1.5 million dollar project, which is funded through 2026, will study the causes, patterns and consequences of genomic recombination in diverse species of bacterial pathogens.

Genetic recombination allows a bacterial cell to acquire novel traits through incorporation of DNA fragments from other organisms, even DNA from other species, genera or phyla, into its own genome. Adding to this complexity is that different strains of the same species recombine at different rates. Some strains donate or receive DNA more often than others, while some strains tend to preferentially recombine with specific partners. The Andam lab aims to understand the necessities of such variation and will use a combination of comparative population genomics, laboratory experiments and mathematical modeling.



Cheryl Andam
Assistant Professor

Regulatory Genes in Central Metabolism of Bacterial Pathogens



Secondary
structures
of sRNA
Mcr11

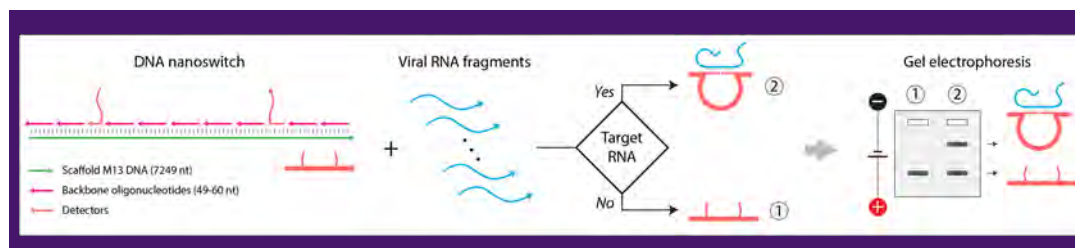


Kathleen McDonough
Professor

The McDonough lab works on understanding the function of small regulatory RNAs (sRNAs) in *Mycobacterium tuberculosis* (Mtb). Recently they have focused on Mtb sRNA Mcr11, which is shown to be responsible for slower bacterial growth and chronic infections in mice.

[[Mol Microbiol.](https://doi.org/10.1111/mmi.14436) 2020, DOI: 10.1111/mmi.14436].

DNA Nanoswitches to Detect Viral RNA



Ken Halvorsen
Research Scientist

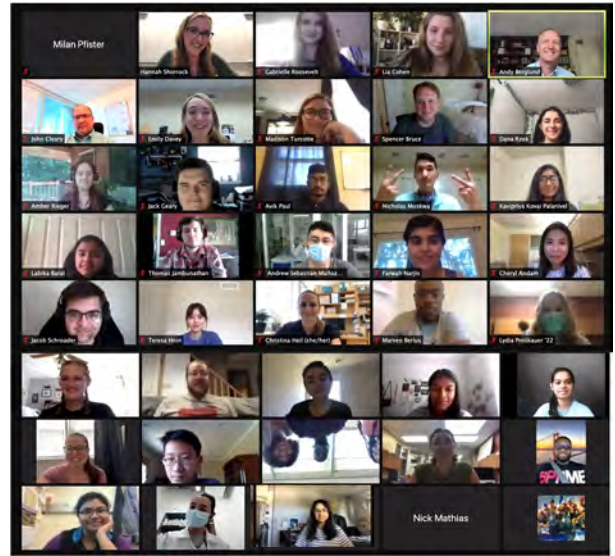
The Halvorsen lab has pioneered a DNA nanoswitch technology to detect SARS-CoV-2 and other viruses at the cost of a few pennies per reaction. The platform can detect viral RNA at clinical level concentrations and only takes about two hours. The overall system is “simple and cheap”. Funding for the project was received from the National Science Foundation through a Rapid Response Research (RAPID) award. Click here for more info. [[Sci. Adv.](https://doi.org/10.1126/sciadv.abc6246), August 21, 2020, DOI: 10.1126/sciadv.abc6246]

Summer Training Program

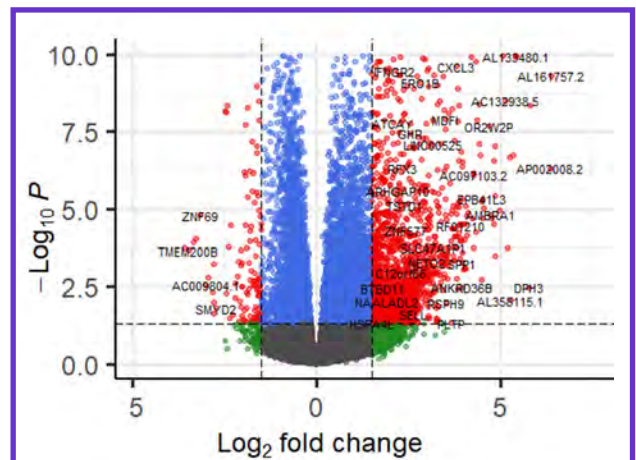
RNA Institute Summer Bioinformatics Program

One of the staples of the RNA Institute training efforts has been the Summer Bioinformatics fellowship program, which includes high school, undergraduates, graduate and postdoctoral trainees. This innovative program is designed to teach a bioinformatics approach to the analysis of complex biological research data, usually in the form of RNA sequencing data. The program divides students, many of whom have little to no bioinformatics training, into teams that are each led by an RNA Institute senior trainee and overseen by the Institute Bioinformatics Support specialist, Emily Davey. The trainees attend class remotely each day then break out into teams to collaborate remotely with their RNA Institute team leader to work on each day's assignment. The program is organized and led by Dr. Hannah Shorrock, one of the Institute's post-doctoral fellows. The funding for this program comes from our Institute donors, funds from UAlbany and federal and foundation grants.

During the program, trainees tackle two distinct bioinformatic projects. During project 1, the students learn the basic biology behind myotonic dystrophy type 1 (DM1) and analyze publicly available RNA-sequencing data from DM1 patients. For project 2, students typically work independently to analyze a dataset related to their own hands-on research in the lab of one of our faculty. With the return of in-person research in 2021, trainees were able this year to focus on datasets relevant to their own independent research. The type of bioinformatic skills provided by this program are highly sought after in research and industry labs and make our trainees well placed for future STEM careers.



Virtual class in now in session! - The 2021 class meets in Zoom for regular bioinformatics training



Volcano plot produced by program trainee showing the genes altered in DM1 versus unaffected individual. Significantly affected genes are in red.

Trainee Highlight

Cristina DeMeo, a high school senior, was one of the youngest members of the RNA Institute 2020 Summer Bioinformatics Program. Her project was entitled "*A differential gene expression and alternative splicing analysis of ALS-causing mutations*". With this work she won 1st place (Biomedical section) in the Eastern NY 17th Annual Subregional Junior Sciences and Humanities Symposium, 1st place in 2021 Greater Capital Region Science and Engineering Fair and 4th Award (Computational Biology & Bioinformatics) at the largest Global High School STEM competition.

Senior Division

**Senior Division 1st Place and
Regeneron ISEF Finalist**

Cristina DeMeo

A Differential Gene Expression and Alternative
Splicing Analysis of ALS-Causing Mutations
Saratoga Springs HS
Sponsoring Teachers: Fran Lohnes and Peter
Robinson

We are very proud of Cristina, who started as a freshman at Harvard University in fall 2021.

2020-2021 Seminars Highlights

Life at the Interface of Science & Engineering

This endowed lecture series brings world renowned experts to speak to both UAlbany and RPI. Established through the generosity of UAlbany Distinguished Professor Marlene Belfort and RPI Institute Professor Georges Belfort, this series is designed to address fundamental questions that require the expertise of both Life Sciences and Engineering to answer. Recently, the series hosted Nobel Laureate **Jennifer Doudna PhD**, who discussed her groundbreaking development of CRISPR-Cas9 as a genome engineering technology and the associated ethical implications of genome editing for biology and societies.

LIFE AT THE INTERFACE OF SCIENCE + ENGINEERING

lecture series

Featuring Nobel Laureate **Jennifer A. Doudna, Ph.D.**

Howard Hughes Medical Institute Investigator
Li Ka Shing Chancellor's Chair
Professor of Chemistry and of Molecular and Cellular Biology
University of California, Berkeley

Tuesday, September 21, 2021

"CRISPR: The Science and Opportunity of Genome Editing"

1:00 p.m.



Hudson Valley RNA Club (HVRC)

Organized by Dr. Fuchs, the HVRC seminar series is a community and scientific forum of scientists and researchers engaged in RNA-related research in the Hudson Valley region and beyond. The talks given by trainees, including graduate students and postdoctoral fellows, are scored by the audiences and best trainee talk awards are given at the end of each semester. In 2020-2021, this series organized over 25 talks. HVRC also organizes the speed talk series for the RNA fellows to present their research works in under 5 minutes highlighting their objective and methodology.

HUDSON VALLEY RNA CLUB

Sponsored by:



RNA Café

An invited seminar series for trainees to explore non-traditional science careers.



Tuesday, September 28th @ 4:00pm

"Emerging Landscape of Therapeutics Development and Opportunities"

Guest Speaker: **Umut Esen, PhD**

Affiliation: Chief Innovation Officer @ Doctor Evidence, LLC

About: Dr. Esen received his PhD from Stanford University and postdoctoral training from Harvard University. He is an expert in Deep Learning powered high-tech IoT medical devices, AI-assisted drug repurposing, discovery and development, therapeutics and non-therapeutics applications of AI-assisted protein engineering.

Host: Mehmet Yigit, PhD. (myigit@albany.edu)



Tuesday, October 26th @ 4:00pm

"Biotech Startups: the Unicorn Gems Edition"

Guest Speaker: **Mourik Koussa, PhD**

Affiliation: Co-founder and Vice President of R&D at Vital Biosciences Inc.

About: Dr. Koussa received his PhD in Neuroscience at Harvard Medical School. His research experience with molecular biosensing led him to create the biotech start-up company Center Health, for which he was the Founder and CEO. At Vital Biosciences, he heads the development of a diagnostic platform technology for conducting a suite of clinical laboratory tests.

Host: Arun Richard Chandrasekaran, PhD. (arun@albany.edu)



Tuesday, November 30th @ 4:00pm

"The Patent Process: An overview of a patent application and the role of a patent practitioner"

Guest Speaker: **Michael Krenitsky**

Affiliation: Patent Attorney, The Research Foundation for SUNY

About: Michael is an accomplished patent attorney with experience providing patent preparation and prosecution strategy, trademark registration, and litigation support in both industry and law firm settings. With a deep background patenting in the life science, biotech, and chemical arts, Michael routinely navigates clients through complex patent issues with practical patent advice to enable business.

Host: Mehmet Yigit, PhD. (myigit@albany.edu)



Tuesday, Dec 14th @ noon

"Translational Career: Academics to Biotech and Back"

Guest Speaker: **Dan Dransfield**

Affiliation: Chief Scientific Officer at Therays

About: Dan has 25 years of experience in drug development and research in industry and academia, leading discovery research efforts from target identification, validation through drug discovery and into clinical development.

Host: Tom Begley, PhD. (tbegley@albany.edu)

Stranded in Science

STRANDED IN SCIENCE



A SciComm/SciArt Seminar Series

This seminar series was created and hosted by the RNA Institute's own Arun Richard Chandrasekaran. This creative series explores the connections between Science, Communication and Art. Seminars have included exciting presentations including a live demonstration of molecular cooking followed by a discussion of the associated science. This seminar series is not to be missed and is exciting for everyone!

Oct 6, 2021 | 10:30 am

SciComm Pop! Exploiting Culture to Popularize Science

Dr. Steven W. Cranford

Editor-in-chief, Matter, Cell Press

Nov 10, 2021 | 3:00 pm

The Write Stuff: Science Writing Beyond the Journal Article

Prof. Michelle M. Francl

Department of Chemistry, Bryn Mawr College

Dec 2, 2021 | 7:00 pm

Molecular Cooking in Your Kitchen (Live Demo & Cook-Along!)

Prof. Subha Ranjan Das

Department of Chemistry, Carnegie Mellon University

Host: Arun Richard Chandrasekaran

Industry Highlights & Internationalization

Industry Highlights



Click Chemistry Collaboration – Dr. Maksim Royzen, Department of Chemistry, collaborated with [Shasqi](#), a San Francisco-based biotech firm, to develop the first ever click chemistry to target a powerful cancer drug at tumor cells, sparing healthy ones. The therapy has entered Phase 1 clinical trials and marks the first time click chemistry has been carried out inside a patient's body. Royzen is one of the researchers who was involved in the development of the Tetrazine-TCO reaction.

[*J. Am. Chem. Soc.* 2008, DOI: [10.1021/ja8053805](https://doi.org/10.1021/ja8053805)]



Forensic Start-up – Dr. Igor Lednev, Department of Chemistry, received a highly competitive NSF Small Business Technology Transfer (STTR) Phase I grant entitled "*STTR Phase I: Body fluid identification for forensic purposes using Raman spectroscopy*". The grant will support his promising start-up company **SupreMetric LLC**, which is developing novel methods for forensic applications based on laser spectroscopy and advanced statistics. The grant will be used to advance the commercialization of his novel laser based technology which combines Raman spectroscopy and advanced statistics to identify body fluid traces at crime scenes.

www.supremetric.com

Internationalization

While ongoing COVID-19 disruptions continue to make in-person gatherings difficult, the move to virtual platforms has created new opportunities for the RNA Institute. Using a virtual platform enables our researchers to engage with scholars throughout the world who might otherwise have been unable to participate. In 2021, roughly 22% of participants to the RNA Institute Symposium came from outside the US and Canada. In comparison, in past years when the symposium was in person, only a handful of international scholars participated.



In an effort to continue this trend moving forward, the Institute will use a hybrid model for the 2022 symposium, hosting attendance in-person while broadcasting talks virtually. In addition, the 2nd day of the symposium, which highlights trainees and their research, will be fully virtual. As we have observed with our Summer Bioinformatics Program, the more involvement from scholars and trainees across the US and internationally, the better chance we have to attract faculty and graduate students to UAlbany.

Training the Next Generation of RNA Researchers

Doctoral RNA Training Program — 7th Cohort of RNA Fellows

For the seventh year in a row, the RNA Training Program has selected a handful of graduate students as RNA fellows who will focus on RNA-centric courses and training this year. The program co-directors, Drs. Thomas Begley & Marlene Belfort, coordinate training for the fellows in science communication with the [NYS Writers Institute](#) and science entrepreneurship with Dr. Scott Tenenbaum. The program also brings in a variety of speakers for the RNA Café, Life at the Interface of Science and Engineering seminar and Stranded in Science seminar series. The program is supported by a T32 training grant from the National Institute of General Medical Sciences titled “*RNA Science and Technology in Health and Disease*”. This crop of RNA fellows were chosen based on academic performance from four participating departments: Biological Sciences, Biomedical Sciences, Chemistry (UAlbany) and Nanobiosciences (SUNY Poly).

The full list of the 7th cohort of RNA Fellows is as follows:

- **Rachel Lange**, Biomedical Sciences. Mentor: **Alexander Ciota**.
- **Jacob Schroader**, Biological Sciences. Mentor: **Kaalak Reddy**.
- **Sawyer Hicks**, Biological Sciences. Mentor: **Andy Berglund**.
- **Emmanuel Adade**, Biological Sciences. Mentor: **Alex Valm**.
- **Michelle Urman**, Biological Sciences. Mentor: **ChangHwan Lee**.
- **William Mudd**, Nanobioscience. Mentor: **Benoit Boivin**.
- **Gregory John**, Chemistry. Mentor: **Alan Chen**.
- **Kavya Chegiredy**, Biological Sciences. Mentor: **Joseph Wade**.
- **Rachel Fey**, Biomedical Sciences. Mentor: **Alexander Ciota**.
- **Ryan Treen**, Biomedical Sciences. Mentor: **Anil Ojha**.
- **Chris Smith**, Chemistry. Mentor: **Mehmet Yigit**.
- **Raghu Katreddi**, Biological Sciences. Mentor: **Paolo Forni**.

To learn more about our training programs, please visit:

<https://www.albany.edu/rna/rna-training-programs#phd>



Past and present RNA Fellows (left to right)

Back row: Jesus Frias, William Mudd, Luis Perez Almodovar, Ryan Treen, Ed Zandro, Chris Smith, Jacob Schroader

Middle row: Sawyer Hicks, Rachel Lange, Haley Caldwell, Michelle Urman, Rachel Fey, Pheonah Badu, Amber Altrieth, Raghu Katreddi.

Front row: Anil Ojha, Paolo Forni, Alan Chen, Kevin Williams, Marlene Belfort, Andy Berglund, Tom Begley, ChangHwan Lee, Gregory John

Faculty Awards and Recognition



Cheryl Andam, PhD

Assistant Professor

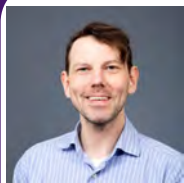
Scialog Fellow for
Mitigating Zoonotic threats



Marlene Belfort, PhD

Distinguished Professor

2022 ASBM Mid-Career
Leadership Award



Alex Valm, PhD

Assistant Professor

3M Non-tenured Faculty
Award

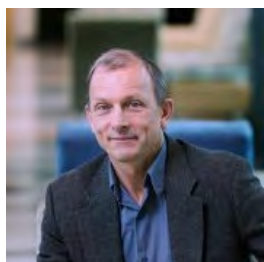


John M. Sullivan, MD, PhD

Professor

VA Clinician Scientist Award

SUNY Distinguished Professor – Dr. Igor Lednev



Prof. Igor Lednev has attained the SUNY Distinguished Professor rank. The rank is given to professors who have shown prominence in their chosen field of research, globally. The Lednev research group focuses on using laser spectroscopy for forensic sample analysis and medical diagnostics.

[Click here to read the UAlbany news article about Prof. Lednev's accomplishment.](#)

Dr. Arun Richard Chandrasekaran, Research Scientist in the Halvorsen Lab, won the 2021 Best talk award at the FNANO 2021 conference. He was also named one of "2021's rising stars of nanoscience and nanotechnology research" by the journal Nanoscale, Royal Society of Chemistry and "2021's Emerging Investigators" by the Journal of Materials Chemistry B, Royal Society of Chemistry. Arun is also the creator and host of the "Stranded in Science" virtual seminar series that explores science in communication and the arts.

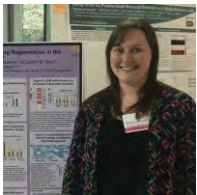


Dr. Subodh Mishra, Postdoctoral Fellow from the Berglund Lab, was awarded a Myotonic Dystrophy Foundation (MDF) Fellowship. This fellowship will support his post-doctoral research work for two years, including travel and attendance at the annual MDF conference. His study, "*Discovery of Dietary Natural Compounds as Potential Therapeutics for Myotonic Dystrophy (DM)*" focuses on two main aims; i) assessing the promising therapeutic potential of dietary flavonoids for the treatment of DM, and ii) determining the mechanism of action of these compounds. The overall goal of Subodh's research is to identify new potential therapeutic compounds for DM patients with negligible or limited toxicity that can reduce or lower the levels of toxic expansion RNA that drive disease.

Trainee Success

Graduate Student Awards

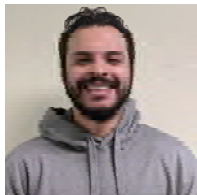
- **Amber Altrieth** (*Graduate Student, Larsen Lab*) was awarded a NIH F-31 grant for 3 years to support her project, entitled “*Angiocrine Signaling in Salivary Gland Regeneration*”.
- **Emmanuel Edem Adade** (*Graduate Student, Valm Lab*) won the Scientista Best Flash Talk Award at the 12th Annual Life Sciences Research Symposium (2021).
- **Lamyaa Almeahmadi** (*Graduate Student, Lednev Lab*) won an Honorable Mention in the 2021-2022 Graduate Women in Science (GWIS) National Fellowship Program.
- **Jesus Frias** (*Graduate Student, Berglund Lab*) was awarded a NIH Diversity Supplement which covers his full tuition and stipend to support his research work on “*Mechanism of action of small molecule therapeutics for myotonic dystrophy type 1*”.
- **Nidhi Nandu** (*Graduate Student, Yigit Lab*) won the 2nd place prize in the 4th annual UAlbany three-minute thesis (3MT) competition with a talk titled “*Looking at the big picture differently*”.
- **Christopher Smith** (*Graduate Student, Yigit Lab*) received Best Flash Talk Award at the 12th Annual Life Sciences Research Symposium (2021).
- **YaYing Zheng** (*Graduate Student, Sheng Lab*) won 3rd place in the 4th annual UAlbany 3MT competition and the Best Selected 10-minute talk at the 12th Annual Life Sciences Research Symposium.



Amber Altrieth



Emmanuel Adade



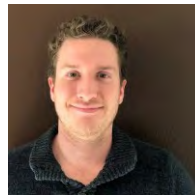
Jesus Frias



Lamyaa Almeahmadi



Nidhi Nandu



Christopher Smith



YaYing Zheng

Undergraduate Student Awards



Emmanuella Owusu-Ampaw

Fuchs Lab

2021 Biology department Excellence in Research Award

2021 President's Award for Leadership—Outstanding Senior



Nate Forrest

Halvorsen Lab

2021 Biology department Excellence in Research Award



Ché -Doni Platt

Halvorsen Lab

2021 Abele Research Fund

2021 Greenwald Research Fund



Ibirayo Otusile

Valm Lab

CSTEP Capital Region Virtual Conference — First Place (Oral presentation)

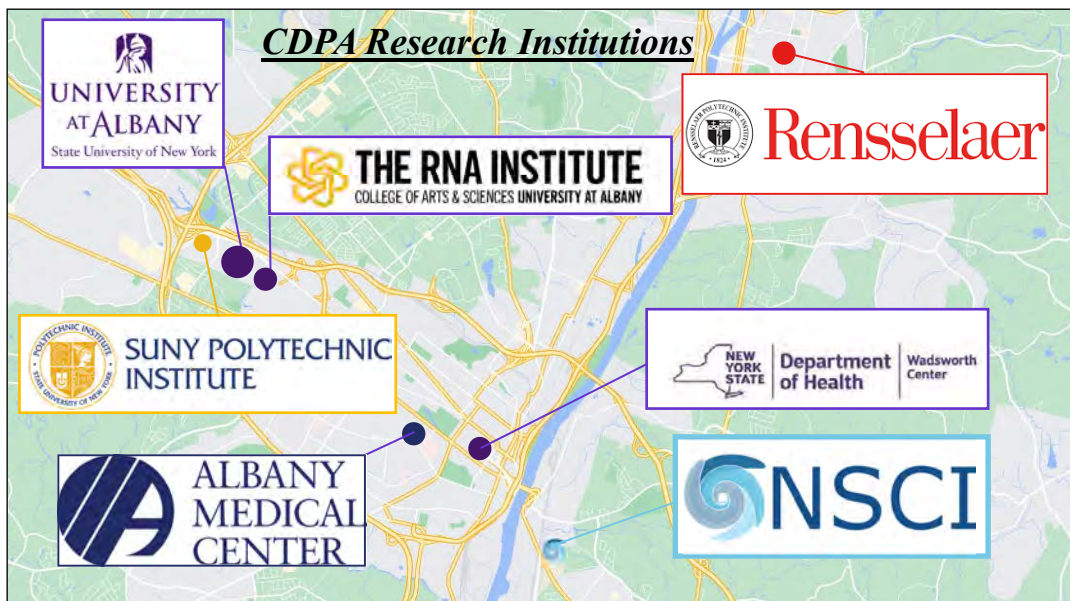
2021 President's Award for Leadership—Great Dane Award

Postdoctoral Association Symposium

Capital District Postdoctoral Association (CDPA)

This new organization is a cross-institutional community of postdoctoral researchers in the Capital Region of New York state. The association brings together postdoctoral fellows from the RNA Institute and five other major research institutions across the Capital region to build a community for their professional development and collaboration. RNA Institute postdoctoral fellow Hannah Shorrock and UAlbany postdoctoral fellow Kate Tubbesing are the CDPA Co-Presidents. They are joined by the CDPA leadership teams which is comprised of representatives from each institution. RNA Institute postdoctoral fellow Gaby Baniulyte from the Sammons Lab is the UAlbany CDPA representative.

[<Click here to learn more about the CDPA>](#)



Kate Tubbesing, Ph.D.
(Department of Physics, UAlbany)
Co-President of CDPA



Hannah Shorrock, Ph.D.
(The RNA Institute, UAlbany)
Co-President of CDPA



Gaby Baniulyte, Ph.D.
(Department of Biology & The RNA Institute, UAlbany)
UAlbany Representative of CDPA



CDPA co-president, Dr. Shorrock, chats with ThermoFisher sales representative.

1st annual CDPA Research Symposium

On **September 20th, 2021**, the CDPA hosted its 1st Annual Postdoc Research Symposium at the Life Sciences Research Building at the University at Albany, SUNY. The RNA Institute was one of the proud sponsors of this event which included 15 research-focused talks, a networking event and a Krackeler sponsored vendor fair. Three RNA Institute postdoctoral fellows—Jibin Abraham Punnoose (Halvorsen lab), Subodh Mishra (Berglund lab) and Hannah Shorrock (Berglund Lab) presented their research work at the symposium.



Crowd at Krackeler sponsored vendor fair

The RNA Institute welcomes continued cooperation with the CDPA and our joint efforts to train the next generation of RNA researchers.

Publications - Highlights of 2020-2021

In 2020-2021, the RNA Institute research groups have published over **80 peer-reviewed articles** along with multiple book chapters and other types of publications. Research articles are one of the primary means by which Institute researchers share their tools, analysis, and early stage discoveries and progress on RNA-based therapeutics and diagnostics. This output is too numerous to list here but please check out our RNA Institute Publications webpage for a complete lists of all our research publications.

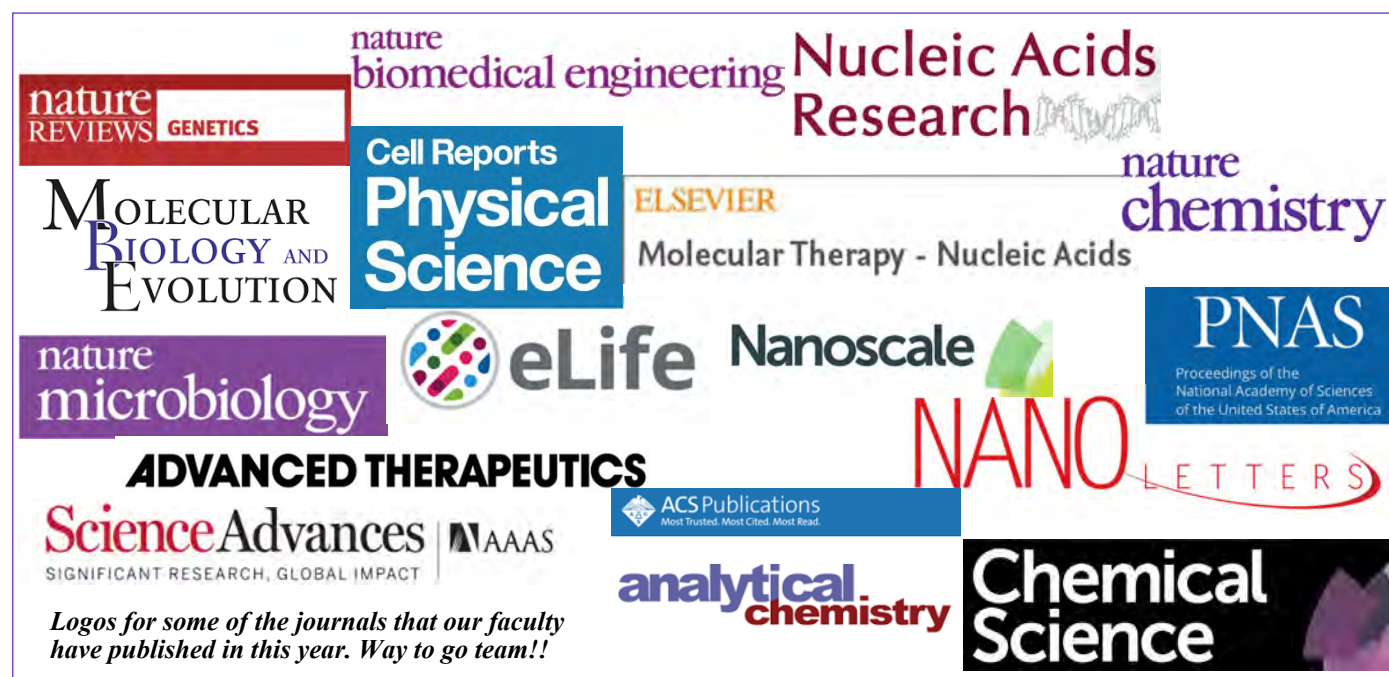
[<Click here for a list of our 2020-2021 Institute Publications>](#)

We are very pleased by the publication output of our scientists, which spans a wide variety of research journals and disciplines. The 80⁺ articles published by Institute researchers generated 389 citations (number of times another researcher refers to the article in another publication) in 2021 and we expect this number to grow substantial. The average impact factor (the mean number of article citations published in a given journal) for the journals that our publications appeared in was 7.29. We are pleased that several of our publications appeared in some of the highest impact journals including *Nature Review Genetics* (53.24, **Wade lab**), *Nature Biomedical Engineering* (25.67, **Halvorsen lab**) and *Nature Chemistry* (23.19, **Sheng lab**). These publications are split across the diverse departments and affiliated faculty that make up the Institute. Labs that have published articles during the 2021 year include:

Sammons (Biology), **Valm** (Biology), **Yigit** (Chemistry), **Rozyen** (Chemistry), **Sheng** (Chemistry), **Vangaveti** (RNA Institute), **Begley** (Biology), **Crawford** (AMC), **Wade** (Biomedical), **McDonough** (Biomedical), **Cady** (SUNY Poly), **Halvorsen** (RNA Institute), **Pata** (Biomedical), **Fuchs** (Biology), **Berglund** (RNA Institute/Biology), **Sullivan** (Buffalo), **Fasullo** (SUNYPoly), **Tenenbaum** (SUNYPoly) & **Belfort** (Biology)

With over 50⁺ faculty publishing across multiple disciplines, and the rise of preprint publications in BioRxiv and medRxiv, we are positive that our list does not represent the full research output of our faculty. We apologize if we've overlooked anyone and look forward to hearing about your research publication.

We are very pleased that a number of these publications include RNA Institute trainees as authors, and includes undergraduate students, graduate fellows and post-doctoral researchers. Learning how to effectively communicate our research to both a scientific and lay audience is a critical skill we aim to teach our trainees so that they can thrive as the next generation of RNA researchers.



Highlights from the 2021 RNA Institute Symposium

This year the [RNA Institute Annual Symposium](#) was a two day online event featuring Noble Laureate, Dr. Michael Rosbash, and presentations from Postdoctoral and Graduate Students from around the world. During the planning stages for the event we initially aimed for a half-day event, expecting around 150 people to attend. We were pleasantly surprised with the large number of abstracts that were submitted from trainees as well as the scope and quality of their research. The symposium planning committee quickly pivoted and expanded the symposium to a two-day event to give all RNA trainees a chance to present their exciting findings.

Our keynote speaker was Noble Laureate, Dr. Michael Rosbash, Professor of Neuroscience at Brandeis University and Investigator at Howard Hughes Medical Institute. His talk "*More than 50 years of RNA: Plus ça change...*" was a big draw with over 350 attendees from around the world, including UK, Spain, Israel, New Zealand, Germany, Brazil, Singapore, Colombia, Turkey, Morocco, the Philippines, and many more countries! The symposium closed with an award ceremony presented by Dr. Elga Wulfert, Professor of Psychology, Dean Emerita, College of Arts & Sciences and Dr. James Dias, Vice President of Research. It was an exciting event and we were happy to recognize the excellent work done by our faculty and trainees.



RNA Institute Award for Exceptional Performance
Alan Chen



RNA Institute Award for Excellence in Mentoring
Jason Herschkowitz



RNA Institute Award for Excellence in Research
Kathleen McDonough
Jia Sheng
Alex Valm



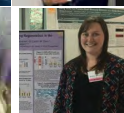
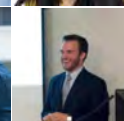
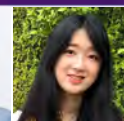
RNA Institute Award for Excellence in Service

Scott Tenenbaum
Gaby Fuchs
Liisa Koski
Donna Willey



Trainee Talk Awards - RNA Institute Awards for Best Talk

James Thomas, Fred Hutchinson Cancer Research Center
Qiushuang Wu, Stowers Institute for Medical Research
Tianhan Huang, Auburn University
Miha Modic, The Francis Crick Institute and University of Cambridge
Carl Shotwell, The RNA Institute
Yekaterina Shulgina, Harvard University
Amber Altrieth, University at Albany



Scientific Engagement: A global RNA community

RNA Collaborative Seminar Series

The RNA Institute is one of the founding members of the [RNA Collaborative](#), a grassroots effort from 24 worldwide RNA research centers to provide online seminars during, and beyond, the institutional shutdowns caused by COVID-19. The goal of this program is to promote and disseminate emerging RNA research and to establish and strengthen connections within the international RNA scientific community. By the end of its first year in July 2021, the RNA Collaborative, which is supported by the [RNA Society](#), had hosted over 30 seminars with members attending remotely from all over the globe. The community also maintains a [YouTube Channel](#) where these talks are uploaded for future viewing.



RNA Institute Presentations

In the first year of the series, two RNA Institute faculty (Joseph Wade and Scott Tenenbaum) presented at the October 7th, 2020 session with Thomas Begley as the moderator. In the following year, Cara Pager and Gabriele Fuchs presented on November 17, 2021 and the session was moderated by Marlene Belfort. This platform is an opportunity for affiliated faculty to showcase their research to a diverse, yet RNA targeted group, encouraging collaboration domestically and internationally, while enhancing the reputational reach of the RNA Institute.



"Pervasive translation in Mycobacterium tuberculosis"

Joseph Wade

Research Scientist, Wadsworth Center, NYSDOH, Professor of Biomedical Sciences and The RNA Institute, University at Albany, SUNY



"sxRNA: The Engineering of trans-acting 3-way Junctions for function"

Scott Tenenbaum

Head of Nanobioscience, Laboratory of RNA Nanotechnology, College of Nanoscale Science and Engineering, SUNY Polytechnic Institute, and The RNA Institute, University at Albany, SUNY

Moderator: **Thomas Begley**



"RACK1 as a Regulator of Protein Biosynthesis"

Gabriele Fuchs

Assistant Professor, Department of Biological Sciences and The RNA Institute, University at Albany, SUNY



"RNA Shapes Zika Virus Gene Expression"

Cara Pager

Associate Professor, Department of Biological Sciences and The RNA Institute, University at Albany, SUNY

Moderator: **Marlene Belfort**



RNA Institute Service: COVID-19 Testing



Congressman Paul Tonko tours the RNA Institute (left) and COVID surveillance testing lab (right).

The College of Arts & Sciences' RNA Institute, the School of Public Health, and the UAlbany Emergency Management Office have been running the COVID surveillance testing program since the Summer of 2020. The program began as an off-shoot of an ongoing collaboration with SUNY Upstate Medical University to track SARS-CoV-2 sequence variant across the state of New York. For this testing program the RNA Institute adapted a non-invasive direct saliva testing method based on the protocols from the Yale and University of Illinois. Starting initially with just samples collected from UAlbany faculty, staff and students, the program grew to help provide COVID surveillance services to a large number of external partners throughout the capital region.

In the spring of 2021, New York Congressman Paul Tonko (D-NY) visited the RNA Institute to learn more about the surveillance program and the exciting work happening at the RNA Institute. Congressman Tonko was one of the original supporters of the RNA Institute and had previously visited the Institute in 2013 during its construction and opening. The visit was also to learn more about the RNA Institute's \$1 million federal earmark request to purchase new equipment to enable research, detection and sequencing of dangerous COVID variants.

Update - Through the tireless efforts of Congressman Tonko and his staff, along with Senator Schumer, this [Capital Region Community Project](#) earmark to the RNA Institute was part of the FY2022 federal budget.

!Thank you Congressman Tonko and Senator Schumer!



RNA Institute COVID testing staff (left to right: Lindsey Jones, Tammy Reid & Morgan Williams) prepare saliva samples for testing.

A few of the Institute's external testing partners — helping to keep the capital region health and safe.

The RNA Institute have provided us with a critical tool to help remain open and educating our students

***- Christopher P. Gibson,
President Siena College***

Community Engagement: Raising Awareness

International Myotonic Dystrophy Awareness Day

Myotonic Dystrophy (DM) is a multi-systemic inherited disease that is the leading cause of adult-onset muscular dystrophy. The disease, which is caused by a toxic RNA repeat, affects 1 in 2100 New Yorkers yet it is misdiagnosed, leaving patients waiting years for an official diagnosis. Given the strong role played by RNA in this disease, DM is a logical research focus for numerous researchers at the RNA Institute.

In 2020, the RNA Institute partnered with clinicians and researchers at the University of Rochester Medical Center (URMC) to work towards establishing a center to research myotonic dystrophy and other toxic RNA diseases. Across the two NY institutions, there are 8 different research groups working on DM and DM-related issues. This diverse group includes over 30 researchers, comprising undergraduate researchers, graduate students, postdoctoral fellows, and staff scientists.

Since awareness of DM is one of the major challenges affecting patients and doctors alike, a global alliance of the world's leading myotonic dystrophy-focused organizations and institutions was formed. One of the first efforts of this group, which includes the RNA Institute, was to have September 15th declared as **International Myotonic Dystrophy Awareness Day**. Working with NY State Senator Neil Breslin, NY State Assembly Member Patricia Fahy and their teams, Institute Director Andy Berglund and staff scientist John Cleary, both DM researchers, helped push a proclamation in the NY Senate designating September 15th as the DM Awareness Day.

In honor of this first International DM Awareness Day, the RNA Institute helped initiate the “Purple shines Green” campaign in the capital region to coincide with other events across the world by other Global Alliance members. On September 15th, local Capital district SUNY landmarks were lit up with green lights to mark the occasion. At the same time both RNA Institute and SUNY social media accounts provided information regarding DM to help raise awareness. The RNA Institute will continue this campaign in following years to help raised awareness of this devastating and often overlooked neuromuscular disease.



International DM Awareness Day Logo



Clockwise: UAlbany campus center fountain, SUNY Central building, Carillon Tower, and RNA Institute DM researchers

Capital Region Outreach

This year we had the privilege of sharing our efforts on research, COVID-19 surveillance testing, training, and our work on a Myotonic Dystrophy center with a number of local dignitaries, donors and politicians.

State Senator James Tedisco 49th senate district

In the early fall, the RNA Institute hosted State Senator James Tedisco, along with the Genzano family, to discuss our efforts around myotonic dystrophy (DM) - the leading cause of adult-onset muscular dystrophy. Both Senator Tedisco and the Genzano's have a close connection with DM and were pleased with research and fundraising efforts towards establishing a Center for research on Myotonic Dystrophy at the RNA Institute. Several Institute faculty have decades of experience researching Myotonic Dystrophy, including Drs. Berglund, Cleary and Reddy.



State Senator Tedisco and Genzano family visit RNA Institute
(left to right) Tammy Reid (R&D Manager), Dr. Andy Berglund (Director), Jill Genzano, Joey Genzano, Emilio Genzano and Senator Tedisco.

New York Governor Kathy Hochul



Governor Hochul tours Institute
Dr. Berglund (Director) & Governor Hochul, President Havidán Rodríguez
(background) Photo: Mike Groll

In early 2022, Governor Kathy Hochul visited our Institute to tour the COVID-19 surveillance lab and learn about our exciting research. Governor Hochul was on-campus to update New Yorkers on the State's progress combatting COVID-19 and highlighted the Institute's surveillance program during her follow-up press conference in the Life Sciences Research building. She was joined on the tour by Albany Mayor Kathy Sheehan, Albany County Executive Dan McCoy and other dignitaries including UAlbany president Havidán Rodríguez. The tour included a demonstration of the Institute's advanced 3D projector to highlight the structures of the toxic RNA molecule that causes myotonic dystrophy.

"This gives me a chance to put a spotlight on the fascinating work that's being done here by nation leading researchers and scientists and doctors who are innovating all kinds of therapies and research into rare diseases and I'm proud of the work they're doing here."
- **Governor Hochul**

RNA Institute 2021 Open House

In September of 2021, RNA Institute Director Andy Berglund hosted the Institute's annual open house, a venue for Institute donors, supporters and the general public to enjoy after hours tours of our facility and interact directly with the scientists and trainees who perform our cutting edge research. College of Arts & Sciences Dean Jeanette Altarriba spoke eloquently at the event in support of the Institute describing it as *"A jewel in the crown of UAlbany's College of Arts & Sciences ... and a global enterprise."*



Some of the Institute staff and trainees who helped make our 2021 RNA Institute Open House a success!

Next Generation Sequencing Facility

The next generation of tools for the next generation of RNA researchers

Sequencing, the determination of the order of nucleotides in an entire genome or transcriptome, has undergone a massive change in scope and technology over the last few decades. The price to sequence a genome has dropped from \$170,000 in the first decade of the 21st century to almost \$500 today. Much of that change has arisen due to **Next-generation Sequencing (NGS)**, the massively parallel sequencing technology that offers rapid throughput, scalability, and speed. This technology has revolutionized the study and application of DNA and RNA sciences, allowing researchers to study biological systems at a level not previously possible. More recently, NextGen sequencing has played a vital role in the battle against COVID-19, allowing researchers and public-health officials to rapidly detect new SARS-CoV-2 variants at an unparalleled pace. In fact, NGS technology is the engine behind the RNA Institute's current collaborative efforts with Upstate Medical University to study SARS-CoV-2 variants on SUNY campuses across New York State.



Massry family tours the Institute to view NGS facility and equipment supported by their donations

(Left to right) Dr. Altarriba (CAS Dean), Dr. John Cleary, Dr. Andy Berglund (The RNA Institute Director), Julie Massry Knox, Micki Massry and Murray Massry

To support these efforts and the RNA Institute's fundamental research, through a **generous donation by the Massry Family Foundation**, we have recently acquired the NextSeq2000, the latest NGS sequencer from Illumina. The sequencer represents the company's combined efforts to entirely redesign their sequencing platform to maximize further proofing and offer affordable sequencing power for a wide variety of high throughput applications. Utilizing a novel super resolution optics system, the machine yields highly accurate imaging data with greater resolution and higher sensitivity than traditional systems. The system can generate 1.2 billion reads per run, over 3 times the capacity of previous systems, and handle upwards of 48 samples at the same time compared to just 8 on older models. Having this instrument in the RNA Institute is already having a transformative impact on not only our research but also research across the UAlbany campus.

The RNA Institute, working in close collaboration with Dr. Altarriba (Dean of the College of Arts & Sciences) and the Vice President of Research, was able to arrange for the operation and maintenance of the instrument by the Center for Functional Genomics. This long-standing partnership enables greater access to the machine while freeing up vital Institute resources. The purchase and placement of the instrument at the RNA Institute has spurred discussion of further ways to improve collaborations across the UAlbany campus. The generous donation by the Massry Family has provided vital resources for the RNA Institute research community while also sparking revitalization and interdisciplinary efforts across the Capital Region scientific community. Combined with our recent investments in single-cell sequencing technology, we are positioned to make the next generation of scientific discoveries and train the next generation of RNA researchers.



Plaque dedicated to Massry Family's support of the RNA Institute's new Next Generation Sequencing Facility

8th Annual RNA Institute Symposium

Day 1 - March 17th, 2022 (In-person)

Keynote Lectures

Viral Noncoding RNAs:
New Insights into RNA Structure

Joan Steitz, PhD

*Molecular Biophysics and Biochemistry,
Yale School of Medicine*

Modular Prime Editing Platforms

Erik Sontheimer, PhD

*RNA Therapeutics Institute,
University of Massachusetts Medical School*

Faculty Talks

Split personality: A Transcription Factor
in *M. tuberculosis* Moonlights as a
Large RNA Binding Complex

Kathleen McDonough, PhD

School of Public Health, SUNY Albany

Atomistic Simulations Reveal the
Mechanism of a Purine-sensing
Riboswitch

Alan Chen, PhD

Chemistry, SUNY Albany

Understanding Nature's Strategies
to Diversify RNA Structures and
Functions

Jia Sheng, PhD

Chemistry, SUNY Albany

Direct Cell to Single Molecule -
A Versatile Platform for Single
Molecule TIRFM

Gabriele Fuchs, PhD

Biological Sciences, SUNY Albany

Poster Session, Dinner & Cocktails

Day 2 – March 18th, 2022 (Virtual)

Trainee Talks

Spotlight on Industry

Rigor and Reproducibility Roundtable

Award Ceremony

A Special Thank You to Our Donors

The RNA Institute would like to thank our donors whose generous contributions help support our research efforts, training programs like our summer bioinformatics program, technology upgrades and many of the other Institute programs that are vital to our continued success.

Major Donors to the RNA Institute

Massry Charitable Foundation
Herb & Annmarie Ellis
The Gorman Group
Weston Family

Elga Wulfert
Kenneth Ellis
Planco Family
Neil B. Eisenband

Donors to the RNA Institute

Anderson family	Garry family	Murphy family	Yasmine Tebha
Baldwin family	Hayes family	Nidhi Nandu	Scott Tenenbaum
Begley family	Hoar family	Newkirk family	Tucker family
Berglund family	Hoffman family	Oberting family	Gregory van Buskirk
Biscone family	Jarocki family	Parikh family	Dr. Katina Villas
Blackburn family	Sharon Kantor	Dr. Rafael Papaleo	Michelle Zudeck
Michael Boots	Paul Kirschbaum	Maryphena Peabody	
Claudia Carroll	Kubikian family	Laura Peppard	
Clark family	Mindy Larsen	Mildred Powers	
Sarah Drazek	Led Duke family	Reisinger family	
Emmott family	Nancy Liotta	Marc Rogers	
Wendy Fast	Loupessis family	Conway family	
Emily Foley	Cynthia Lyons	Marilyn Rose	
Foster family	Kristin Marshall	Dr. Laura Staff	
Gabriele Fuchs	William McDavid	Peter Taubkin	

Photos of some of our generous donors and wonderful friends from our 2021 Open House event.



Future Directions

We are excited by the possibilities for the future of the College of Arts & Sciences' RNA Institute, the University at Albany, and the field of RNA science. As everyone looks forward to a post-COVID world, we are also looking forward to the impact that our RNA-based research will have on the fundamental understanding of biology and chemistry, as well as its technological and biomedical impact on society. As we turn the corner on a crisis caused by an RNA virus, and combatted by an RNA vaccine, we will continue to strive to help the community at large understand the power and promise of RNA.

As we look outward to how we can use RNA to make a greater impact on society as a whole, we also continue our inward journey to promote diversity and inclusivity in the STEM field. As scientists and researchers, we are taught to welcome new ideas, technologies, and paradigms on our quest to better understand the fundamental rules that govern life. Now, both as individuals and as academics, we must strive to accept new ideas and paradigms, both at work and in our personal lives. With new training opportunities, including the Striving to Achieve Gender Equity in STEM (SAGES) program, partially spear headed by RNA Institute and College of Arts & Sciences members Drs. Belfort and Larsen, we are renewing our commitment to making substantial and meaningful changes.

We are particularly thrilled by recent STEM investments at the local, State and Federal levels, including the congressional earmark support by representative Tonko. With new plans between UAlbany and partners like SUNY Poly, Wadsworth Center, and the Health Campus, we are looking forward to increased collaboration and interdisciplinary research opportunities for our faculty, trainees, and staff. We also look forward to working with Dr. Thenkurussi Kesavadas, our exciting new Vice President of Research and Economic Development. The RNA Institute has a leading role in ensuring that as a university we not only maintain our R1 status but that we continue to grow, meet, and exceed research and funding expectations. Our skills and experience in training the next generation of RNA researchers will play a vital role in the next year and we encourage everyone to join us at the RNA Institute to help us **unleash greatness**.

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COLLEGE OF ARTS & SCIENCES **UNIVERSITY AT ALBANY**