In this Issue:
Message from the Dean and Scientific Director    2
Faculty News and Publications    2
Faculty Grants    3
Student/Post-doc Awards and News    3
Building and Core News    3
Growing as a Graduate Student by Kyle Doty    4
Group News    4
Past and Upcoming Events    5-7

Life Sciences Research Building
1400 Washington Avenue
Albany, NY 12222
Message from the Dean and the Scientific Director

We are pleased to bring you the fourth issue of Life Sciences News, the mouthpiece of the Life Sciences Research community at UAlbany. The Life Sciences Research Program brings together faculty, students, post-docs and staff from the Departments of Biological Sciences, Chemistry, Physics and Psychology, and The RNA Institute in a dynamic, collaborative environment. In this issue we feature accomplishments of our community, summarize recent events and present upcoming events for this spring and next fall. Most exciting are written contributions from a PhD student in Chemistry and an undergraduate student in Biology that reflect the vibrancy of our collective endeavor.

As a scientific community, we need to be aware of the changes in our political environment and how this affects us. Science is being devalued, with a de-emphasis on facts and the truth, and a propagation of myths. We need to be the scientific resistance, the force that drills for facts, individually and globally, adding to the knowledge that will carry us forward. One of us has written a rallying cry to scientists. Besides hunkering down to do our own work, we need to spread the scientific message in digestible form to non-scientists. We need to make them understand the value of science, which provides the basis to cure disease, to purify water and grow food, to invent for a bright economic future, and to help save the planet (http://blogs.biomedcentral.com/bmcblog/2017/01/30/science-as-tranquilizer-and-trailblazer/).

Marlene Belfort  
Distinguished Professor  
Director, Life Sciences Research

Edelgard Wulfert  
Dean, College of Arts and Sciences  
Professor of Psychology & Collins Fellow

FACULTY NEWS

Dan Fabris will be hosting Dr. Alice Sosic, University of Padova, for one year through a Marie Curie Global Fellowship grant entitled “Novel strategies for anti HIV-1 therapy: small molecules targeting RNA partners of the nucleocapsid protein”. The proposal will be funded by the European Commission (EC.)

Mindy Larsen was awarded a Chancellor’s Award for Excellence in Scholarship and Creative Activities for the 2015-2016 academic year. She also became a member of the Journal of Dental Research Editorial Board.

Prash Rangan’s lab’s research was featured on NPR’s The Academic Minute on NPR on January 12, 2017 (https://academicminute.org/2017/01/prashanth-rangan-university-at-albany-fruit-flies-offer-fertility-clues/).

Cover Yigit Lab

General Faculty Publications: http://www.albany.edu/lifesciences/doc/spring-2017-newsletter/Life-Sciences-Faculty-Publications.pdf
**Faculty Grants**

Alan Chen is the recipient of a prestigious NSF CAREER Award, which he received in December 2016 ([http://www.albany.edu/news/75198.php](http://www.albany.edu/news/75198.php)).

Ken Halvorsen is the recipient of a technology development grant awarded by the National Cancer Institute, “Single-molecule mechanical detection of protein and microRNA cancer biomarkers”. He is a co-investigator with Dr. Wesley Wong at Boston Children’s Hospital.

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**STUDENT/POST-DOC AWARDS AND NEWS**

Juliana Agudelo (Halamek Lab, Chemistry Department) was a recipient of: 2016 Lawrence and Marie Shore Graduate Scholarship in the Life Sciences, 2016 Great Lakes National Scholarship Program Award, Graduate Student Association Professional Development Grant, and 2016 Leadership Development Award from the Younger Chemist Committee of the American Chemical Society to attend the 2017 ACS Leadership Conference in Dallas, TX. She was also an invited speaker to the “Bridge to the Ph.D. Program” Annual Symposium at Columbia University, New York, N.Y.

Tony Hoang (Chen Lab, Chemistry Department) is one of the Albany Business Reviews 2017 Technology Award Winners ([http://www.bizjournals.com/albany/news/2017/01/19/albany-business-review-winners-tech-awards.html](http://www.bizjournals.com/albany/news/2017/01/19/albany-business-review-winners-tech-awards.html))

**The RNA Institute** awarded 4 Student Travel Awards for Winter 2017: Dr. Irfan Khan and Dr. Sweta Vangaveti from the RNA Institute, and to Dr. Rebecca DeVaux from BioMedical Science and Ms. Caroline Horizny CNSE. They each received $600 to present at scholarly conferences. Additionally, Dr. Irfan Khan gave an oral talk and a poster presentation at the Gordon Research Conference on RNA Nanotechnology, which was held 01/22/2017 - 01/27/2017 in Ventura, CA.

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**BUILDING AND CORES NEWS**

Faces Software for Instrument Reservation by Kim DeWeerd (Director, Molecular and Tissue Core) and Vladimir Ermolenkov (Director, Structural Chemistry Core)

The LSRB Core Facilities have adopted Faces software that was designed by the University of Georgia for reserving various instruments. The site is [https://faces.ccrc.uga.edu/](https://faces.ccrc.uga.edu/) and the group name used for the Molecular and Tissue Core instrumentation is UA_MOL_TIS_CORES and for the Structural Chemistry Core it is Chemistry Core. The reservation system is designed to alleviate any conflicts, allow the Cores to gather usage statistics and to make everyone’s research more efficient! To learn more about using the system and to view usage ([http://www.albany.edu/lifesciences/doc/spring-2017-newsletter/Faces-Software-for-Instrument-Reservation.pdf](http://www.albany.edu/lifesciences/doc/spring-2017-newsletter/Faces-Software-for-Instrument-Reservation.pdf))
Learning and Growing as a Great Dane Graduate Student by Kyle C. Doty, Graduate student

Being part of the University at Albany (UAlbany) community has taught me that it does not matter where you go for graduate school, but what you do during your time there that can help lead to success in achieving your goals and following your dreams.

My interest in Chemistry piqued while completing a dual-degree undergraduate program in Chemistry and Forensic Chemistry at SUNY Buffalo State College (BSC). Then, after two years at Bausch + Lomb, Inc., I decided to pursue my childhood dream of obtaining my PhD. I chose to attend UAlbany to complete my doctoral studies in Chemistry and could not be happier with my decision.

As a Chemistry graduate student for the last four years, UAlbany has afforded me a plethora of résumé-enhancing accomplishments including co-authorship of nine peer-reviewed research articles and one book chapter, presentations at ten scientific conferences, numerous awards, and a National Institute of Justice graduate research fellowship. These achievements were made possible via the exceptional resources available at UAlbany, including diverse research instrumentation facilities, knowledgeable faculty and staff, and specialized Chemistry course offerings. However, I owe much of my success to the support of my exceptional mentor, Professor Igor Lednev, without whom I would not have progressed as far. As a student with a diverse background, I have learned a lot and would like to share my Great D.A.N.E. points of wisdom for all (graduate) students to reflect on:

1. **Do not be afraid to ask the “dumb” questions.** Remember that any question not asked will result in it being unanswered. Usually the ‘reward’ outweighs the ‘risk’ in asking even the most basic of questions, and you can learn a wealth of information including how to avoid making the same mistake someone else already has.

2. **Apply, apply, apply!** Apply for any and all awards, scholarships/fellowships, etc. for which you’re eligible. You have a 0% chance of obtaining any of these aforementioned accolades if you do not apply. Be sure to make your best effort when building your application, including checking spelling/grammar.

3. **Never stop challenging yourself.** Strive to do outstanding work with the intention of building upon your skill set. Work on different projects, mentor other students, or lead a group/department activity. More importantly, know that it is ok to ask for help and encourage constructive criticism.

4. **Evaluate all options when selecting a PI.** Choosing your advisor is one of the most important decisions of your graduate career. You will spend 4+ years with your PI (and eventual colleague) so, although you should be interested in his/her research, you should also ensure that you will get along well together.

Ultimately, my time at UAlbany has been life changing. I have strengthened my skill set and learned how to think critically, write scientifically, and perform high-quality research. Through my experiences, I know that UAlbany has successfully prepared me for the next steps in my career, which will commence by working as a scientist in a federal agency after graduating this semester.

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**Group News**

**WOMEN IN SCIENCE EVENTS:**

(Wo)MEN in STEM: A Workshop Discussing Pathways to Success by Ryan Bernhardt, Undergraduate Student

This workshop was organized by Dr. Betty Shadrick as part of a monthly series, and was held on October 28th, 2016. The workshop consisted of a panel of four women in STEM, Drs. Marlene Belfort, Cheryl Frye, Jayanti Pande and Rabi Musah. As a male attendee of the workshop I found the speakers to be quite encouraging of not just women, but men like myself. The message of each speaker not only transcends the male/female dichotomy, but also is quite applicable to all people interested in STEM fields and beyond (http://www.albany.edu/lifesciences/doc/spring-2017-newsletter/Women-in-STEM-workshop.pdf).
Past Events

October 25, 2016 - Biology Undergraduate Research Symposium

Undergraduate students from 11 universities participated in the first Undergraduate Research Symposium in Biology sponsored by the Department of Biological Sciences on Tuesday, Oct. 25, 2016, organized by Dr. Caren Stark. Students delivered oral presentations and posters on their research projects and enjoyed a keynote address by Nobel Laureate, Thomas R. Cech entitled “How to win a Nobel Prize.”

October 25, 2016

Women in Science and Health (WISH)  (http://www.albany.edu/wish/)

April 7, 2017 - WISH meeting

Colleen Costello: CEO and Founder of Vital Vio, a biomedical company based in Troy, NY

Colleen Costello, a woman entrepreneur based in Troy, NY, is the co-founder and CEO of a biomedical company named Vital Vio which specializes in developing lighting design and technology for bacterial decontamination in a hospital environment. Colleen not only has an excellent background in scientific research from RPI, Weill Cornell Medical College and Mount Sinai School of Medicine, but also complementary skills in product development and management.

October 6, 2016 - Chemistry Undergraduate Research Symposium

This year, our department hosted the second annual Chemistry Undergraduate Research Symposium, co-organized by Professors Alan Chen and Qiang Zhang. Our goals for the symposium are to provide our undergraduate researchers an opportunity to formally present their research and to inspire undergraduates who are not yet in a lab to get involved in research. The symposium provides a platform to connect our alumni, current students and the department. There were a total of 60 registered undergraduate participants from UAlbany and College of St. Rose. Our prominent alumnus Dr. Kantor was plenary speaker. (http://www.albany.edu/lifesciences/doc/spring-2017-newsletter/Chemistry-Hosts-Second-Annual-Undergraduate-Research-Symposium.pdf)

October 25, 2016

The inaugural talks of the lecture series, Life at the Interface of Science and Engineering, were part of a two-day collaboration between the University of Albany and Rensselaer Polytechnic Institute (RPI). The lecture series was endowed by Dr. Marlene Belfort, a Distinguished Professor at UAlbany, and Dr. Georges Belfort, Institute Professor at RPI. The featured speaker was Nobel Laureate Thomas R. Cech, Ph.D., Distinguished Professor, University of Colorado Boulder; Director, University of Colorado BioFrontiers Institute; and Investigator, Howard Hughes Medical Institute. Dr. Cech presented a seminar at the UAlbany entitled, “Long Noncoding RNAs and Epigenetic Gene Silencing”, and at RPI entitled, “CRISPR Genome Engineering Gives New Insights about Telomerase and its Role in Cancer”. There were packed audiences, great enthusiasm among attendees at both events, and collaborative discussions between UAlbany and RPI faculty.
Upcoming Events

**Biological Sciences:** [http://www.albany.edu/biology/news_and_events/events/main.shtml](http://www.albany.edu/biology/news_and_events/events/main.shtml)

**Chemistry:** [http://www.albany.edu/chemistry/docs/Spring%202016%20Seminar.pdf](http://www.albany.edu/chemistry/docs/Spring%202016%20Seminar.pdf)

**Hudson Valley RNA Club (HVRC):** [http://www.hudsonvalleyrnaclub.org/meeting-schedule/](http://www.hudsonvalleyrnaclub.org/meeting-schedule/)

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**November 4, 2016 - 8th Annual Life Sciences Research Symposium**

Awards for Best Oral Presentations (Sponsored by Krackeler)

Jennifer Lin (Forni)
Claire Muro (Lednev)
Maitreyi Upadhyay (Rangan)
Ankana Naik (Forni)

Special Awards for Oral Presentation (sponsored by Sinauer and Krackeler)

Kelsey Fleming (Scimemi) Sinauer
Phensinee Haruehanroengra (Sheng) Sinauer
Danielle Kelley (Belfort) Sinauer
Rachel Cary (Pager) Krackeler

Best Posters (Sponsored by Krackeler)

Pooja Flora (Rangan)
Matthew Koslow (Larsen)
De Modurik (Scimemi)

**November 16th, 2016 - Graduate School Fair** - The graduate fair focused primarily on UAlbany undergraduates. The hope was to attract not just juniors and seniors but also freshmen and sophomores who might be interested in BA/MA programs. Representatives from the Biological Sciences department were Ing-Nang Wang, Cara Pager, Mindy Larsen, Cathleen Green and Justin Waldern.

**February 4th, 2017 - Local Brain Bee Competition** took place at Albany Medical College. This competition was open to any teenager aged 13-19. The winner of the Local Brain Bee Competition is trained by a cohort of “brainy faculty” in the Capital District and will be supported to travel and compete at the US Regional Competition in Baltimore, MD. ([https://sites.google.com/site/sfnhudsonberkshire/brain-bee](https://sites.google.com/site/sfnhudsonberkshire/brain-bee))

Cara Ocobock (Antropology) has organized **Science on Tap**, a monthly event where she invites experts to a local restaurant/bar for a casual presentation to bridge the gap between scientists and the public, being that reaching the public is now more important than ever.

The first event will be Tuesday, Feb. 28 from 7-9pm at the **Pump Station**.

There will be a panel of researchers on hand to discuss what scientists do, why research should inform policy, the dangers of silencing researchers, and why we need funding.
It's a great time of the year...for brain-teasers! If you are interested in learning about the brain, you enjoy being on a stage and have the fire of competition in your heart...you are in the right place at the right time! The Society for Neuroscience Hudson-Berkshire Chapter sponsors two main events during the months of February and March (see also Past Events).

**Brain Awareness Day** takes place at Doane Stuart High School on March 15th, 2017. The Brain Awareness Day is part of a global campaign to increase public awareness of the progress and benefits of brain research and is supported by The Dana Foundation. Activities include open days at neuroscience labs, exhibitions about the brain and lectures on brain-related topics. ([https://sites.google.com/site/sfnhudsonberkshire/bad](https://sites.google.com/site/sfnhudsonberkshire/bad)). We welcome any faculty, graduate or undergraduate student interested in presenting their work or helping coordinate this event. For further information, please contact Dr. Annalisa Scimemi (scimemia@gmail.com).

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**Upcoming Spring Coffee Socials:**
- **February 13:** Alan Chen and Jia Sheng
- **March 6:** Andrew Poulos
- **April 3:** Igor Lednev
- **May 1:** Morgan Sammons and Annalisa Scimemi

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The **RNA Symposium**, [https://www.rna.albany.edu/4th-annual-rna-symposium-rna-science-applications/](https://www.rna.albany.edu/4th-annual-rna-symposium-rna-science-applications/), on Friday March 17 (during Spring Break) will be keynoted by Tom Steitz, Jeanne Lawrence, Melissa Moore and Maria Barna. In addition, Erik Sontheimer, a new member of the SAB, Tom Gingeras, and Marlene Belfort will be chairing three of the four sessions. The workshops starting in the evening of March 15th and continuing March 16th will include miRNA detection using nanoswitch technology, RNA modified nucleoside analyses (both of which will allow you the potential of bringing your own RNA samples for analysis), and RNA Dynamics: Structural Modeling through Simulation workshop.
• Life Sciences website: http://www.albany.edu/lifesciences/.

• With facilities questions please contact Jessica Moran at 518-437-4414 or <jemoran@albany.edu>.

Life Sciences News (February 2017)

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