



# **GSoLS INSIDER**

**Thomas H. Gosnell School of Life Sciences**

**New School Head  
MiSeq and Research  
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New Advisory Board**

**Awards and Recognition  
Renovations in GOS  
Gosnell Endowment  
Graduation 2017**

**Fall 2017**



# Dr. André Hudson

## Department Head of GSoLS

Dr. André Hudson was appointed the next Head of the T.H. Gosnell School of Life Sciences in August 2017. Dr. Hudson is trained as a biochemist and the major themes of his research are vested in biochemistry and microbiology. More specifically, in the areas of amino acid metabolism, structural analyses of enzymes involved in amino acid and bacterial peptidoglycan metabolism, and the isolation, identification and genomic characterization of plant associated bacteria.

Dr. Hudson has secured approximately \$1.3 million in federally funded grants and contracts as PI and or Co-PI from the NIH, NSF, Bayer Corporation, Sweetwater Energy and Natcore Technology. He has published 43 peer-reviewed articles, and presented more than 28 conference presentations in addition to 29 invited talks. Dr. Hudson is also a highly respected and well liked teacher. He has mentored and engaged many students in research and has published in peer-reviewed journals with a number of them.

Since joining RIT in 2008, Dr. Hudson has served on numerous School, College, and Institute Committees, including the GSoLS Curriculum Committee, the College of Science Faculty Evaluation and Development Committee, and the RIT Isaac L. Jordan Faculty Pluralism Award Selection Committee.

Dr. Hudson replaces Dr. Larry Buckley who was recently appointed to the Associate Dean for Academic Affairs position.



### A NOTE FROM OUR HEAD...

*Welcome to a new academic year. I would like to thank you very much for the opportunity to work with and for you as the new head of GSoLS. I see my current role as an opportunity to promote, protect and advocate for student, faculty, staff and alumni. We have some interesting and exciting times ahead and I look forward to working with you all as we forge ahead. Specific information about the initiatives and activities for the upcoming year is provided in this newsletter.*

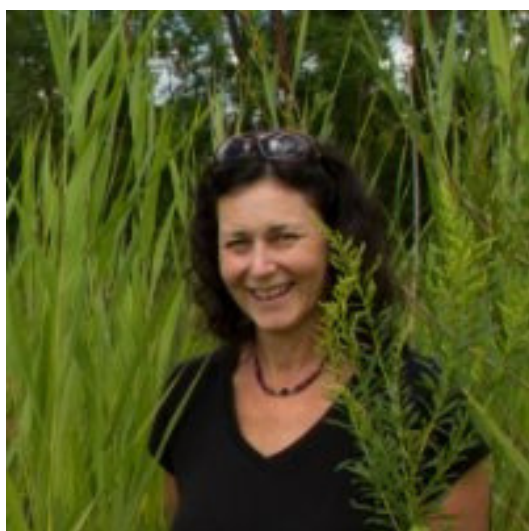
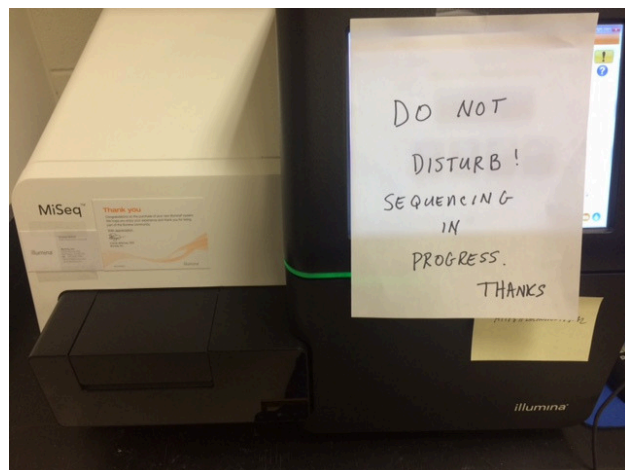
*Please feel free to stop me in the hallways and you are more than welcome to stop by the office (GOS-2106) anytime. I would love to chat with you about all things related to science teaching/research, chess and Bob Marley.*

*Sincerely yours and 10vE,  
Dr. André Hudson*

*Follow him on Twitter  
@HUDSONLABRIT*

# Research

In late June 2017 we brought home a brand new MiSeq DNA Sequencer for running high-throughput Next Generation sequencing. Dr. David Lawlor worked with the GSoLS lab staff in researching a variety of machines and taking into account our present and future needs. A technician will be hired to operate the machine for the department.



Dr. Christy Tyler is the PI on a \$13,206 project entitled "Gateway Building Green Infrastructure Project." In partnership with the City of Rochester, the Rochester Museum of Science Center, and the Water Education Collaborative, RIT faculty and Environmental Science students will develop and implement a monitoring program for the proposed Gateway Building Green Infrastructure Project. A keystone of our undergraduate environmental science program is our year-long group capstone course required of all majors during their final year at RIT.



Dr. Carrie McCalley was also awarded a grant in 2017 with her Co-PI Dr. Varner for ~\$63,000 from NASA-IDS. Their project is titled "From Archaea to the Atmosphere: Integrating Microbial, Isotopic and Landscape-Scale Observations to Quantify Methane Emissions from Global High-Latitude Ecosystems".



Dr. Dina Newman (PI) and Dr. Christina Goudreau were awarded a new grant in 2017 of about \$420,000 from NSF for their project titled Transforming the Organic Chemistry Lab Experience: Implementation and Evaluation of a Reformed Organic Lab Curriculum Across Institutions.



# Research



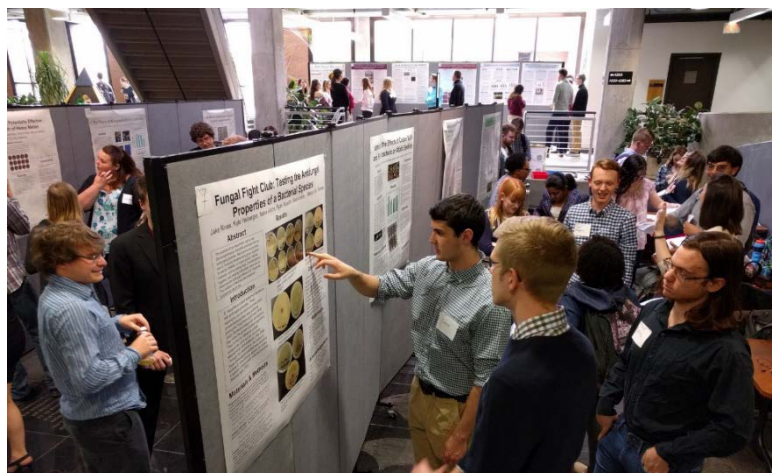
*Left to right: Dr. Lea Michel (Co-PI), School of Chemistry and Materials Science, Tina Chapman DaCosta, Dr. Jennifer Connelly (Co-PI), School of Physics and Astronomy, Dr. Dina Newman (Co-PI), Gosnell School of Life Sciences, and Dr. Scott Franklin (PI), School of Physics and Astronomy. Dr. Elizabeth Hane (Co-PI), Gosnell School of Life Sciences, not pictured.*

RIT was awarded a \$1,000,000 grant from the Howard Hughes Medical Institute (HHMI). Through this initiative (The Howard Hughes Medical Institute's Inclusive Excellence Initiative), HHMI seeks to broaden access to science excellence for all students, especially those who come to college via nontraditional paths. This is a big deal for our college and our university. RIT was selected from an initial pool of 500 proposals, and we are one of only 24 institutions across the country to receive such an award! This is the first grant RIT has received from HHMI.

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The Annual RIT Undergraduate Research Symposium highlights research across campus and demonstrates the breadth and depth of our students!



Class poster sessions are a highlight of the spring semester for students and faculty! Students work for weeks to conduct a project and prepare to present their work at one of the many poster sessions in April and May.



# GRADUATION 2017!

In 2017, GSoLS graduated 19 students with B.S. degrees in Biology, 39 in Biotechnology, and 11 in Environmental Science.

Our graduate programs continue to prosper, as we graduated 5 students with M.S. degrees in Bioinformatics and 11 in Environmental Science.





# Baldwin Awards

Annually, the Thomas H. Gosnell School of Life Sciences faculty award Baldwin Scholarships to students deemed to be outstanding scholars with recognized service to the School, RIT, and Community. Applications are accepted from students who have achieved 3rd year status and have earned a minimum cumulative GPA of 3.40.



## And the Recipients are ...

Pictured from left to right: Ali Cala, Austin Bartl, Dr. Susan Smith-Pagano, Abigail Frawley, Elise Walsh, Dr. Dina Newman, Callie Donahue, Dr. Irene Evans, Maria Smith, and Dr. Feng Cui.

# Faculty Spotlight: Dr. Maureen Ferran

**Can you share a funny memory from your**

**time teaching?** Many years ago my daughter, who was likely 3 at the time, was sick. She couldn't go to daycare and my husband was out of town, so I had to bring her to my Virology class. I brought her coloring books and lots of crayons, but she wanted to listen. About 10 minutes into the lecture, she stands up in the center aisle and announces at full volume "Mommy, how do you expect your students to learn about viruses if you don't speak to them in English". It was pretty funny and the students got a real kick out of it.

**What is something that we DON'T know about you?** Likely shouldn't admit this, but I never took a virology course. Wish I had though!



**Is there anyone in your professional or personal life who has really impacted you for the better?** Too many to count! In high school I had an opportunity to volunteer in a research lab with my teacher, Mr. John LaMassa. That was the one of the greatest experiences of my life because it introduced me to research and I never questioned what I wanted to do after that summer. My graduate school advisor Dr. Jean Lucas-Lenard is an amazing woman and has had a profound impact on my life and career. Like many first year graduate students, I wasn't sure what I wanted to focus on. She shared her passion for viruses with me and I have never looked back. Personally, of course my parent's love and support made it possible for me to pursue my interests. Without the support of my husband Jean-Francois D'Arcy I would not be able to survive. He never complains when I need to stop at lab to take care of cells or finish an experiment.

**Do you have any advice for upcoming seniors and graduate students?**

It is so important to talk with people you meet along your journey and really listen. Ask them how they achieved their goals and the lessons they have learned. Mentors are essential so seek them out and appreciate what they do for you, and then pay it forward! Try to learn something from every experience, no matter how difficult it may seem at the time.



# Staff Spotlights

**What's your title and length of service?**

10 years Sr. Lab Specialist

**What do you do in GSOLS?** Many hats....manage stockroom, washroom, autoclave, greenhouse, animal room, building plants, trouble-shooter, "Keeper of Knowledge"

**What did you before you started working at RIT?**

...same kinds of positions at Genesee Community College (GCC), raised kids, had a dog obedience school, tutored at GCC, research work at U of R.

**What are your hobbies/interests outside of RIT?**

Kayaking, dog training (agility, obedience), gardening, xc skiing, biking

**What's the best part of your day at work?** When students gather at the stockroom to spend time....just to eat, get coffee, talk about their day.



**Jennie Liedkie, MS**



**Gabby Crandall, MS**

**What's your title and length of service?**

Lab Technician, This is my 5th year!

**What do you do in GSOLS?** I coordinate all of the laboratory prep for the biology teaching labs. I am also the supervisor for all the GSOLS students who work on the laboratory support team. (I do all the hiring/training, etc)

**What did you before you started working at RIT?**

I was working as a tech in an immunotoxicology lab at U of R looking at how developmental exposure to various "harmful" environmental factors affect the immune response to respiratory infection later in life

**What are your hobbies/interests outside of RIT?**

I read a lot of books, watch a lot of sports/play fantasy football, and love to travel.

**What's the best part of your day at work?**

Working with the students! Many of them stay employed with us for 2-3 years and seeing them grow as academics and young professionals is one of the things I love most about my job.



# Gosnell Endowment

During his lifetime, Mr. Thomas Gosnell served as a model of generosity through a commitment of time and resources in support of Rochester Institute of Technology. His legacy endures as RIT celebrates the dedication of the Thomas H. Gosnell School of Life Sciences.



*Pictured above: Former RIT President Dr. Bill Destler, Mrs. Georgia Gosnell, and RIT Provost Jeremy Haefner*

Gosnell's wife, Georgia, joined RIT President Bill Destler to participate in a celebration on May 2, 2012. That formal announcement accompanied a \$5 million deferred commitment from Mrs. Gosnell to benefit the school, which incorporates the university's academic programs in biology, bioinformatics, biotechnology and molecular bioscience, and environmental science—all housed within RIT's College of Science. When the gift of \$5 million is realized, it will target multiple functions, including renovations and enhancements to classrooms and laboratories in Gosnell Hall. Funds will also be directed in support of faculty recruitment and undergraduate research fellowships. In 2017, GSoLS will be awarded an initial disbursement of \$500,000 to be used for immediate needs to support the School, while the remaining \$4.5 million will become our endowment to perpetually fund a portion of GSoLS functions and initiatives each year.

# Recognition and Awards

## Nominees for RIT Presidential Awards for Outstanding Staff 2016:

Allison Healy, Jennie Liedkie, and Gabrielle Crandall.

## COS Honors, Awards, and Recognition 2017:

Allison Healy, Amanda Dolan, and Roseanne Klingler.

Dr. Elizabeth Hane, Dr. Andre Hudson, Dr. Irene Evans, and Michelle Weatherell.



RIT biology professor L. Kate Wright knows it's a good day when her students get a little loud. She likes to hear the volume rise as students discuss Clicker questions, case studies or the models that represent biological structures because it means they're engaged with the material. Wright's student-centered and active classrooms have earned her an RIT Eisenhart Award for Outstanding Teaching in 2016.



2016 Brightspace Excellence Accessibility Award Winner, Dr. Sandi Connelly. The Excellence Award for Accessibility honors those who have demonstrated a superior effort to make online learning accessible to all students, enabling them to reach their full academic potential.

## Alfred L. and Ruby C. Leadership Award 2017

Madison Ricco, Biotechnology

***Congratulations!!***



# Catching up with Alumni



**Zackery P. Bulman** (GSoLS 2011) recently accepted a tenure-track position in the College of Pharmacy at the University of Illinois at Chicago. He reached out to his mentor, Dr. Michael Savka to give him the wonderful news.

Alumni updates needed!  
Share your stories with us!

**Austin McChord**, former Bioinformatics student, was the 2017 COS Commencement Speaker. Austin McChord is the founder, CEO and driving force behind Datto, a privately-held data protection company formed in 2007. A Connecticut native, McChord started the company in his parent's basement after graduation from RIT. He now sits on the Board of the Connecticut Technology Council and is a member of the RIT board of trustees.



## Notable Fall Courses!

### Environmental Microbiology BIOL-370

An advanced class in microbiology taught by **Dr. Jeff Lodge** that details the types and function of bacteria and fungi in soils and water. The class focuses on systems found in Western New York including lakes, rivers, streams, ponds, forest soil, agricultural soil and more. Students study the survival of known human pathogens such as E. coli, Salmonella, Shigella, and Yersinia in these environments and how they might be transmitted to humans. They also look at the level of antibiotic resistance.

### Infectious Disease: Impact on Society and Culture BIOL-460

This course is taught by **Dr. Maureen Ferran**: This course is an introduction to the probabilistic models and statistical techniques used in computational molecular biology. Examples include Markov models, such as the Jukes-Cantor and Kimura evolutionary models and hidden Markov models, and multivariate models use for discrimination and classification.

# Tidbits!



*Renovations of room 1231 have begun this fall and is slated for completion in Summer 2018.*

*RIT's academic calendar changed this year, and we will now be on 14-week semesters. Classes started August 28th.*

GSoLS gained the support of RIT for renovations of laboratory space this year. The project, set to span about three years will include renovating teaching and research laboratories on the first floor of Gosnell Hall. Many of these are labs that haven't changed in as much as 40 years! This summer and fall renovations begin with GOS-1231, the Genomics Lab, GOS-1213 (Microbiology/Genetic Engineering), and GOS-1125 (Molecular Biology). Also included is the washroom, **Dr. Jean Douthwright's** (Professor Emeritus) old research lab, **Dr. Bob Rothman's** lab. In its place will be two all new teaching labs, a new home for the Bioprep team, and a common instrumentation room.

*Follow us on Facebook and Twitter!  
@RITGSOLS*

## NEW! GSoLS Advisory Board!

As part of our generous endowment from the Gosnell Family, GSoLS is forming an Advisory Board to work with students, staff, and faculty on future directions within the School and improving our networking and marketing initiatives for our programs. The Inaugural Board members include **Dr. Sesqui Ramon** (NIH, and Biotechnology 2007), **Travis Money** (Diehlux, Inc, and Environmental Science 2004), **Dr. Terry Wright** (URMC, and Biotechnology 1990), **Dr. Toby Bloom** (NY Genome Center), **Dr. Helene McMurray** (URMC), and **Dr. André Hudson** (Chair, RIT GSoLS).

The first meeting of the GSoLS External Advisory Board will be October 13th on campus - to coincide with Brick City 2017! Board members will meet with faculty, staff, and students to learn more about what we do here and provide some suggestions for new courses, research and coop opportunities, and more.



**BRICK CITY**  
HOMECOMING  
& FAMILY WEEKEND  
OCTOBER 13-15