



BIO BITS

Biology News from Jewett Hall

SCIENCE CENTER TO BE COMPLETED SPRING 2014

Hard to believe, but the new Science Center is largely complete and we will be moving in this summer!

We will always have fond memories of Jewett Hall. However, the new Science Center will allow us to more effectively offer our students real world collaborative opportunities for learning and research. Classroom and laboratory spaces will combine smart technologies and innovative designs to support myriad styles of teaching and learning. Formal and informal spaces will enable collaborations and intellectual exchanges between students and faculty, and new state of the art equipment and instrumentation will support faculty and student research. The Science Center will also include an observatory and greenhouse, an atrium featuring a café with seating and science displays, a science courtyard featuring native plants and examples of local geologic features, student reading rooms and conference rooms. Please visit the Science Center webpage at <http://www.fredonia.edu/sciencecenter/> to access our live webcam, our 360 vision camera, a simulated walk-through of the completed science center and information about naming opportunities in the new building.



SCIENCE CENTER DEDICATION AND HOMECOMING 2014



Please save the date of October 17, 2014, on your calendar. That's the day we will officially dedicate the new Science Center at SUNY Fredonia!

The day-long series of events will include an official ribbon-cutting ceremony, dedications of all named spaces, and tours of the 92,000-square-foot, state-of-the-art facility.

The Science Center will open as classes begin next fall. However, the true celebration will occur when all friends and Fredonians, past and present, gather and revel in this exciting new era in the campus' history.

The celebration will continue on October 18 with a special Science Alumni Conference in the new facility. Current students, accomplished alumni, and expert faculty will deliver presentations, share posters, and discuss their research.

As the date approaches, you'll receive more details about the full schedule of events. Meanwhile, please follow the building's progress online at www.fredonia.edu/sciencecenter. There's also still time to explore several naming opportunities which remain in the impressive, new campus centerpiece. Those can be found at www.fredonia.edu/sciencecenter/naming.asp. You can also find lodging and other information on our alumni website, www.fredonia.edu/alumni.

Alumni Portal

If you have not yet visited the Portal, please do so and fill out an alumni survey, join the Biology group and indicate your preference for how you wish to receive future newsletters. Go to <http://fredonia.edu/biology/> and click on 'For Alumni'. We also encourage you to submit your reminiscences about your time in Jewett Hall or your recent accomplishments that you may want to share with other alums.

Alumni Admissions Ambassador Program

Will you consider using your expertise and experience to help us find the best and the brightest potential students to make our campus even stronger? We invite you to refer family, friends, students, or other members of your community you feel would be a great addition to the campus. We would love to meet them and show them all that SUNY Fredonia has to offer. Once referred, we will give your nominee VIP treatment. In addition, freshmen applicants will be eligible for consideration for a limited number of scholarships. Find out more by visiting our website! www.fredonia.edu/admissions/alumni_ambassador/



Biology Professor Jon Titus and Professor Emeritus Ken Mantai share a smile at the 50th anniversary dinner after it was announced that Jon's research lab in the new Science Center is being named in honor of Ken!

ALUMNI and EMERITUS NEWS

Fiftieth Anniversary Celebration of Jewett Hall a Huge Success

In 1963, Jewett Hall opened its doors to begin a new era in science education. For the last 50 years, it has been the academic home for two thousand Biology department majors, and several hundred Chemistry, Physics, and Geosciences majors. SUNY Fredonia celebrated this landmark anniversary on September 28-29 during Homecoming 2012. More than 200 alumni and faculty reminisced and reflected on the days spent in Jewett Hall, and looked forward to another new era of science education in the Science Center.

The celebration kicked off early Friday with guest lectures and round table discussions by Dr Greg Roth '84, and Dr. Diane Pennica '73. A Friday afternoon student reception and poster session was followed by the keynote seminar offered by Dr. Dennis Thiele '78, Department of Pharmacology and Cancer Biology, Duke University Medical Center; more than 100 alumni, campus and community members were in attendance. The seminar was entitled 'Biology of Copper: From Mammalian Development to Anti-Microbial Weapon'; Dr. Thiele also discussed his professional journey from SUNY Fredonia to Duke University.



The sign said it all!



Don Einhouse, '81, and Professor Emeritus Wayne Yunghans at the 50th anniversary breakfast.

Saturday morning started with breakfast for alumni, faculty and emeritus faculty in the Jewett Hall lobby. Participants enjoyed viewing the many photographs, stories and reflections submitted by alumni. Following breakfast, Dr. Thiele was honored as an outstanding alumnus at the SUNY Fredonia Alumni Luncheon. A Science Alumni Conference followed in the Williams Center in which more than 30 SUNY Fredonia science alumni offered pres-

entations on diverse topics such as organic dairy farming, invasive plant species, pharmaceutical development and advances in diagnosis and treatment of disease. Alums offering biology, medicinal and pharmaceutical seminars included Jeanette Almekinder '04, Deborah Ellwanger Bruner '85, Mark Bruner '84, Jeffrey Diers '00, Terri Minunni Ercole '84, Dr. Jason Gestwicki '97, Fred Guerriero '71/'74, Frank Priznar '76, Jonathan Sanford '09, Dr. Paula Sperry '77 and Dr. Shari Yudenfreund-Sujka '77. The celebration then moved off-campus to the College Lodge for a late afternoon tour of the forest, after which alumni and faculty enjoyed a reception and dinner at the Lodge. The 50th Anniversary festivities closed with a nostalgic and humorous series of memories and reflections offered by Emeritus Professors Kevin Fox, Ken Mantai and Wayne Yunghans.

NEWS FROM OUR ALUMNI

Many of our alums brought us up to date on their activities via email or at the Jewett Hall celebration. Please go to the Biology homepage at <http://www.fredonia.edu/departments/biology/> and click on 'About Alumni' on the bottom of the left hand column. You can then find out what's new with former classmates Gary Schmalfeldt '74, Karen Wood '74, Robert Clerman '75, Jeff Gardiner '75, Edward Strauser '75, Donna Zittel '75, Joseph Cimino '77, Claire Vasios '78, Michael J. Carlton '79, Cynthia Moncreiff '79, Timothy Desmond '80 & '83, Thomas Arnone '82, Hugh M. Share '82, Chris H. Demiris '83, Marvin Hymanson '83, Robert P. Kerr '83, Edward J. Peterson, Jr. '83, Laurel Baglia '84, Scott Crocoll '84, Young Lee '84, Andrew Henriksen, '85, Marianne Joyce Hauswirth '86, Jeffrey Rothrock '86, Marlene Schmitt '88, Mark A. Somerville '88, Paul Carlson '89, Rob Demuro '92, Gaye Gill '93, John Genet '95, Eric Head '95, Jonathan Lelito '03 & '06, Cory Mavis '05, Kristen Patterson '09, Holly Kaas '09, and Mark Herron '10.



Damian Salerno, '04, '12, and Biology Professor Ted Lee at the 50th anniversary dinner.



Professor Emeritus Kevin Fox, Jane Schuster Falcone, '74, Dennis Thiele, '78, and Joe Falcone, '74, chat after Dennis' keynote seminar.



Professor Emeritus Moti Sharma and Lisa Gustafson, '87, at the 50th anniversary breakfast.



Bela Babus, '72, and Professor Emeritus Allen Benton enjoyed catching up with each other as well as on news in Biobits and The Leader!

Messages from Emeritus Professors

Dr. Allen Benton tells us he is having an enjoyable winter watching the birds at the feeder outside his picture window. He was most pleased at how many alums he knew at last year's Homecoming. He will turn 93 this year, and hopes to attend Homecoming 2014 and the dedication of the Science Center.

Dr. Kevin Fox shares the following – "I'm delighted to send my very warmest regards to all you alumni out there. And my special thanks go to all of you who took time to contact FSA and voice opposition to the College Lodge Logging plan. We are optimistic that the forest preserve will be spared - Professor Jon Titus now serves on the College Lodge Advisory committee and will keep us apprised. Thanks Jon! I am looking forward to seeing many old friends at the Science Center Dedication in October. See you there, I hope." (For additional information about the Lodge, please see page 7)

Dr. Ken Wood tells us that he and Jean are both in reasonably good health at the age of 90, and reside in Maine. They live in an apartment on Hen Cove and can watch the tides from their dining area. Their son Duncan and his family live 4 miles away, and sometimes during good weather Ken rides his bicycle to his son's home and back, over the ledges of Maine. They are 6 hours from Montreal where their daughter Deborah and her 2 boys live. Ken and Jean will attend the dedication ceremony.

Also attending Homecoming will be Emeritus Professors **Dr. Ken Mantai** and **Dr. Wayne Yunghans**, as well as former Director of the Environmental Resource Center **Dr. Tom Storch**. A particularly special part of the festivities will be the dedication of the spaces named in honor of Drs. Benton, Fox, Mantai, Storch and Wood.

Dr. Brian Moskalik gives 2013 Biology keynote seminar at 2013 Homecoming

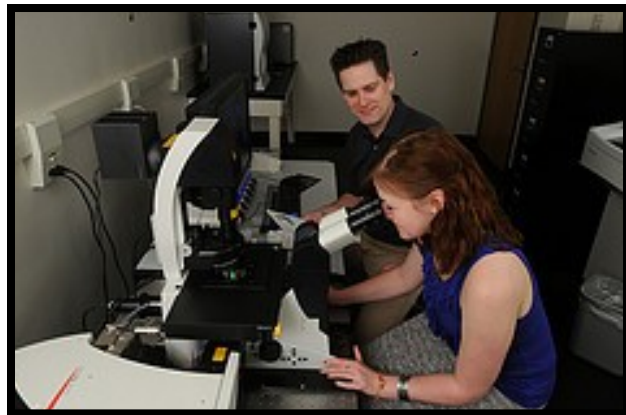


Dr. Brian Moskalik, '03 and '06, gave the Biology keynote seminar at the 2013 Homecoming weekend. Dr. Moskalik is an Assistant Professor of Biology at the University of St. Francis, Joliet, Illinois. His presentation was entitled 'Conflict, Cooperation, and Communication: Using spiders as diverse evolutionary models'. Faculty, staff and students enjoyed hearing Dr. Moskalik's discussion of how, through the use of observational techniques, laser doppler vibrometry (LDV) and high-resolution imaging, spiders have provided us with unique insight into the evolutionary topics such as sexual cannibalism, social evolution, and signal development. He ended his seminar with a discussion of his journey from SUNY Fredonia to the University of St. Francis.

DEPARTMENT NEWS

Dr. Scott Ferguson awarded \$250,000 NSF grant

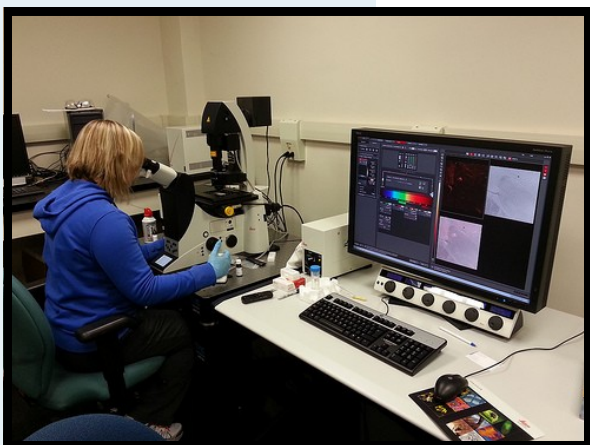
Biology professor Scott Ferguson has been awarded a \$250,000 Research in Undergraduate Institutions grant from the National Science Foundation. The funding will allow him to conduct a three-year research project, "Genetic Analysis of Gurken Translational Control in *Drosophila*," that has the potential to assess how humans develop and are affected by disease. It is the largest award ever earned by a SUNY Fredonia Biology faculty member, and recognizes Fredonia as a destination where students receive world-class training in the sciences.



Key elements of the grant include: a research collaboration with Roswell Park Cancer Institute for whole-genome DNA sequencing and bioinformatics analysis; acquisition of new research instrumentation and materials to study gene expression in biological specimens; annual support for three students to perform summer research on campus; and travel expenses for Dr. Ferguson and his students to attend national research conferences.

SUNY Fredonia Biology students will benefit greatly from the award. Each summer, the grant will fund individual \$4,000 stipends for three students to be engaged in full-time research experiences with Ferguson. The students will be intimately involved in the design and execution of the experiments and have the opportunity to present the results at regional and national meetings. The research will directly impact not only the students working in Ferguson's laboratory, but also students enrolled in the two lab courses that he teaches.

New confocal microscope in Biology Department enables 3D imaging of cells



A sophisticated, research-grade confocal microscope was recently purchased by SUNY Fredonia for use in the Biology Department. The Leica Microsystems SP8 Laser Scanning Confocal Microscope takes images of structures inside of cells with exceptional clarity. The confocal allows users to take 'optical sections' through a specimen; the sections can be reassembled in a computer to generate a 3D representation of the cell and its structures. The microscope has already generated exciting data in Dr. Ferguson's research lab and his Molecular Genetics lab course, and it will serve as a key instrument in his \$250,000 National Science Foundation funded research project. Dr. Scott Medler is also utilizing the microscope in his research studying skeletal muscle physiology and the effects of exercise on muscle fiber types. Dr. Nick Quintyne will be using the

microscope for his research, performing fixed and live-cell analysis of mitotic progression in cancer cells and organization of the microtubule cytoskeleton. The microscope, which carries a price tag of \$311,000, was purchased using money from a dedicated equipment budget that is part of the science center's construction fund.

Dr. William Brown named Kasling Lecturer

Dr. Bill Brown was named the Kasling Lecturer for the 2013-14 academic year, and gave the Kasling address on Tuesday, Oct. 8, 2013. "Extraordinary Insect Behavior" was the title of the presentation given by Dr. Brown, whose work on the courtship of praying and Chinese mantises was featured in a New York Times article. He was also interviewed and quoted in the Discovery News article, "Virile Cricket Hits Copulation Record." The Kasling Lecturer designation recognizes a faculty member for outstanding achievement in scholarship or artistic performance which has enhanced the reputation of the university. It is named for Dr. Robert Kasling, professor of geography at SUNY Fredonia from 1946 to 1966.



The Department of Biology welcomes Dr. Todd Backes and the Exercise Science Program

The Exercise Science program, home to 124 students, has moved from the Department of Sport Management and Exercise Science to the Department of Biology. Moving the program into a traditional science department brings added strength to the scientific basis of the curriculum which will benefit all Exercise Science students and will be particularly important for those wishing to pursue graduate level studies. As Exercise Science is related to health studies; entering a department that has provided a great deal of education and service to pre-health students will also be of benefit to students majoring in Exercise Science.



The Department of Biology welcomes Dr. Todd Backes and the Exercise Science Program—continued

Dr. Todd Backes, Coordinator of Exercise Science, has also moved to the Biology Department and is an Assistant Professor of Biology. Dr. Backes performs research in the areas of hydration and drinking behavior and exercise performance as well as cognition and exercise. His primary research focus is evaluating hydration needs of exercising individuals. He has also been examining how acute bouts of physiological stress (exercise) alter working memory and executive functions. Other areas of investigation include how physiological stress results in small, transient changes in immune system function and how nutritional interventions may affect immune system response to exercise.



The Biology Club enjoying a day of hiking at Arkwright Falls.

Dr. Nicholas Quintyne, Cell Biologist, joined Biology Department in Fall 2013



Dr. Nicholas Quintyne joined the Biology Department as an Assistant Professor Fall 2013. He received his Bachelors degree in Biology from Dickinson College, his PhD in Biology from The Johns Hopkins University, was a post-doctoral fellow at The Johns Hopkins University and the University of Pittsburgh, and an Assistant Professor at the Harriet L. Wilkes Honors College at Florida Atlantic University. A cell biologist, Dr. Quintyne will be

teaching courses in Molecular and Cell Biology, Cancer Biology and Cell Signaling at SUNY Fredonia. Dr. Quintyne's research focuses on the activity of various microtubule-associated proteins and cytoskeletal organization as well as cell cycle and mitotic progression in cancer cells. He uses cell culture and microscopy techniques to examine defects in mitotic progression and has been characterizing the effects of various drugs and carcinogens on inducing or preventing mitotic defects.



The Biology Club wins the Kickball Tournament. This competition is held amongst all science departments.

Dr. Courtney Wigdahl, Freshwater Ecologist, joins the Biology Department in Fall 2014

Dr. Courtney Wigdahl will be joining the Biology Department as an Assistant Professor of Biology in the Fall of 2014. She received her B.S. and M.S. in Biology from the University of Wisconsin- La Crosse, and her PhD in Ecology and Environmental Science from the University of Maine. Dr. Wigdahl is currently an aquatic scientist with the Jordan Pond Buoy Project, Friends of Acadia, and an adjunct faculty member at the University of Maine. She is a limnologist and plankton ecologist, and her research focuses on algal and zooplankton ecology over varying timescales as well as whole lake response to environmental change. Dr. Wigdahl will be teaching a variety of courses in support of the Biology and Environmental Science programs.



The Biology Club will be busy this spring with the following activities planned:

- White Water Rafting at Zoar Valley
- Biolympics—A physical and mental competition between teams
- Biology Club Picnic
- Tour of Southern Tier Brewery

Mrs. Dawn Hunt receives the Barbara Saletta Meritorious Service Award

Biology Department Secretary Dawn Hunt was awarded the Barbara Saletta Meritorious Service Award at the SUNY Fredonia Secretarial/Clerical Conference on October 18, 2013. Criteria for the award include outstanding service attitude, helping others, creativity and resourcefulness, demonstrated team effort, personal integrity, leadership and an enthusiasm for SUNY Fredonia, its mission, and its students. Dawn has been Biology Department Secretary since the fall of 2009, and we are grateful for her talents, enthusiasm and positive attitude!



President Virginia Horvath presents the Barbara Saletta Meritorious Service Award to Biology Department Secretary Dawn Hunt.



Ecology students run transects at the College Lodge to generate species area curves as a way to measure tree biodiversity.

Update on the College Lodge Nature Preserve

It is now deep winter at the College Lodge Nature Preserve and the snow has come and gone and come again over the past six weeks. The vegetation is dormant but most wildlife species are actively working at making it through the long winter. During this quiet time, we are busy planning activities and management to influence the future of the College Lodge Nature Preserve. At the end of last summer, a Biological Survey was initiated that is being managed by Twan Leenders of the Roger Tory Peterson Institute. This study will enable us to better evaluate the natural resources the Preserve protects. Already, a remarkable array of amphibian species were observed in the forests, the bird list was augmented with new species, and the plant list was expanded to more than 300 species. A detailed effort to map the plant communities at a finer scale has commenced.



Graduate TA Rebecca Watro teaches tree identification at the College Lodge to students from BIOL 331 Ecology Laboratory.

During the spring and summer of 2014, the pace of these efforts will intensify and will include a Bioblitz scheduled for July 18 and 19. A BioBlitz is an event in which scientists, naturalists, students, families, teachers, and community members work together to find and identify as many species of plants, animals, fungi, and other organisms as possible. These events include specialists from many different fields and allow cross-training for people of differing interests and skill levels. It is a fun event for everyone who wants to be involved. Once the Biological Survey is finished at the end of summer 2014, the information will be used to reassess future management options. Please join us for the Bioblitz and make your opinions known about what role you believe the College Lodge Nature Preserve should serve at SUNY-Fredonia. If you would like to know more about the Bioblitz or have questions about nature at the College Lodge please contact Dr. Jon Titus at titus@fredonia.edu. You can also check out Jon's College Lodge nature blog at <http://www.collegelodge.com/NatureBlog.aspx>.

Senior Capstone Experience

After analyzing recent assessment data, the Biology faculty determined that all our majors need to complete a senior capstone experience that emphasizes inquiry based learning and written and oral communication. There will be 3 options: Capstone Research, Capstone Internship and Capstone Course. Students will be advised into options based upon their interest capabilities and career objectives. The senior capstone will strengthen our programs and greatly benefit our students. As a result of this program change, we are attempting to develop a larger number of senior level internship experiences for our students. Some students have performed internships under the supervision of our alums and have had wonderful experiences. If you are in a situation where you are willing and able to consider taking a Biology department senior for a summer or semester internship, please contact Patricia.Astry@fredonia.edu.

Health Professions Advisory Council Update

Fredonia has a new articulation agreement with SUNY Upstate Medical School that will allow high school seniors from rural counties and students from underrepresented groups in medicine to apply to an early assurance program; we are happy to report we have a freshman currently in this program.

As it is very important pre-health students get shadowing and interning experiences, any alumni who are willing to let a student get some experiences in a health office can contact Ted Lee ([716-673-3816](tel:716-673-3816) or theodore.lee@fredonia.edu) to discuss this; any support would be greatly appreciated.

The Health Professions Advising Committee also assists alumni interested in applying to health professional schools. If you are interested in pursuing a career in medicine, dentistry, optometry or veterinary medicine, please contact Dr. Lee. We are happy to work with alumni in this area, many first year medical school students are not 22 years old. If you think this is your calling, please contact us.



Medical Technology Intern Jon Flasher working at the microscope at WCA Hospital.

Medical Technology program now "licensure eligible"

As of September 2013, New York State requires medical technologists employed in hospital and clinical laboratories to be licensed by the NYS Education Department. In order to take the NYS licensing exam, a student must graduate from a Medical Technology program approved as "licensure eligible" by NYSED. We are pleased to announce that the SUNY Fredonia Medical Technology program has been approved as licensure eligible. To obtain this approval, SUNY Fredonia had to meet a series of rigorous expectations put forth by NYSED.

SUNY Fredonia has contracted agreements with WCA Hospital, Jamestown; Rochester General Hospital, Rochester; and Saint Vincent Hospital, Erie, Pa. Students enrolled in the program study three years at SUNY Fredonia and one year in an accredited clinical hospital program. Approximately 40 students are presently enrolled in the Medical Technology program, which graduates eight to 10 students each year. Recent graduates have obtained employment as clinical laboratory scientists in hospital laboratories, biomedical research facilities, forensic laboratories and the pharmaceutical industry and as sales representatives for pharmaceutical, medical instrumentation and computer corporations.

STUDENT NEWS

Biology students awarded first place honors at research symposium

SUNY Fredonia biology students Jordan Johnson and Maxwell DeNies were awarded first place honors at the Regional Science Consortium's 9th Annual Research Symposium. They perform research under the mentorship of Dr. Scott Medler.

The symposium was held Nov. 6 to 8 at the Tom Ridge Environmental Center at Presque Isle in Erie, Pa. The consortium, of which SUNY Fredonia is an Associate Member, has its home in the biological center located on the shores of Lake Erie, and is a collaborative non-profit organization that focuses on and coordinates educational and research projects for Lake Erie and the upper Ohio River Basin.

The two students presented a poster entitled, "Diet Induced Obesity Alters Skeletal Muscle Fiber Types of Male But Not Female Mice," and were awarded First Place Overall in Undergraduate Poster Presentations.

DeNies also presented an oral presentation entitled, "The Power of Proteomics: A Study of Viral Mediated Post Translational Modification," and was awarded First Place Overall in Undergraduate Oral Presentations.

Biology Major Maxwell DeNies wins 2013 SUNY Chancellor's Award for Excellence

Maxwell DeNies was awarded the 2013 SUNY Chancellor's Award for Excellence. Mr. DeNies was the recipient of a National Science Foundation summer fellowship to perform research at Marquette University during the summer of 2012. During the summer of 2011, he received a full scholarship as part of the National Institutes of Health-National Heart, Lung and Blood Institute Summer Institute for Training in Biostatistics at Boston University, and during the 2012 J-Term was an intern at the Erie County (N.Y.) Public Health Laboratory. He was president as well as a setter and defensive specialist for SUNY Fredonia's nationally ranked Men's Club Volleyball team. Also an accomplished violist, Mr. DeNies was selected through competitive audition to perform with the Fredonia Chamber Orchestra, and performed in a quartet selected to participate in a master class with world renowned cellist Yo Yo Ma during Mr. Ma's 2011 residency in the Fredonia School of Music. He is the recipient of many scholarships and awards, including the Fiat Lux (Let There Be Light) Scholarship, and has completed the university's Honors Program.

Senior Nancy Levensailor wins prestigious award from the Genetics Society of America

Senior Molecular Genetics student Nancy Levensailor has won a national travel award in a competition sponsored by the Genetics Society of America (GSA). The award will enable her to attend and present her research poster at the society's 55th Drosophila Research Conference March 26-30, 2014, in San Diego, Calif. Only 11 of 52 undergraduates who applied received the 2014 Victory Finnerty Undergraduate Travel Award, placing her in what the society calls "the top tier of early career geneticists."

Levensailor will present the poster, "Visualization of Sqd-grk Interactions in Live Drosophila Oocytes Using Tri-molecular Fluorescence Complementation (TriFC)." The poster describes the results of two years of her research into developing a new technique to see interactions between regulatory proteins and the RNA for a gene called *gurken* in living cells. Levensailor began working on the project during her sophomore year under the guidance of Dr. Scott B. Ferguson.

2012 and 2013 Student Summer Research

Fellowships to support summer research in the SUNY Fredonia Biology Department come from the Holmberg Foundation Research Award, the Constantine Barker Memorial Fund, the Dr. Robert Wettingfeld Undergraduate Research Award Endowment, the Yunghans-Dieter Research Award and the Yunghans/Mirabelli Scholarship.

A record number of Biology Department students performed summer research during summer 2103. Ten students performed summer research at SUNY Fredonia; eight were funded by the awards listed above; two were supported by Dr. Scott Ferguson's NSF RUI grant. Five students performed NSF-funded REUs at other institutions.

2012 Summer Research - SUNY Fredonia

- Thomas Caggianelli, Canandaigua, NY, Possible Mutualism between the *Myrmica rubra* and *Fallopia japonica*, Faculty Mentor: Dr. Jonathan Titus
- David DiPalma, Fredonia, NY, Secondary Structure Determination of the asp-tRNA and the Internal Ribosome Entry Site (IRES) in the 5'-Untranslated Region of Drosophila *gurken* mRNA, Faculty Mentor: Dr. Matthew Fountain
- Jordan Johnson, Saint Albans, NY, Correlation between a Metabolic Fiber Type Regulator (PGC- 1a) and Myosin Heavy Chain Expression in Skeletal Muscle Fibers, Faculty Mentor: Dr. Scott Medler

STUDENT NEWS —continued



Summer 2012 Research Students, Left to right: Tom Caggianelli, Jake Merle, Jordan Johnson, Steve Whittemore, Nancy Levensailor, David DiPalma, Jessica Wooten and Danielle Smith.

- Nancy Levensailor, Glenfield, NY, Fluorescent Visualization of Sqd-grk Interactions in Transgenic Drosophila, Faculty Mentor: Dr. Scott Ferguson
- Jacob Merle, Portland, NY, Translation of Gurken in Drosophila and IRES Mediated Translation, Faculty Mentor: Dr. Scott Ferguson
- Danielle Smith, Corning, NY, Environmental enrichment as a means of increasing male/female social interactions in a critically endangered species, *Macaca nigra*, Faculty Mentor: Dr. Karry Kazial
- Steven Whittemore, Penfield, NY, The Effects of Muscular Fiber Phenotypes on Running Performance: Ghost and Fiddler Crabs, Faculty Mentor: Dr. Scott Medler
- Jessica Wooten, West Henrietta, NY, Suppression of the Invasive Oriental Bittersweet (*Celastrus orbiculatus*) to Preserve Native Plant Communities, Faculty Mentor: Dr. Jonathan Titus

2013 Summer Research - SUNY Fredonia



Terri Minnuin Ercole, '84, Biology Professor Patricia Astry and Cindy Fargo Mellen-Scoda, '75, enjoyed catching up at the alumni breakfast.

- Kaitlyn Crossan, Dunkirk, NY, Forested Wetland Community Description and Analysis – A pre-Emerald Ash Borer Study, Faculty Mentor: Dr. Jonathan Titus
- John Hasper, Great Valley, NY, Next Generation Sequencing of Novel *spn-B* BU Mutants, State University of New York at Fredonia NSF RUI, Faculty Supervisor: Dr. Scott Ferguson
- Lauren Larson, Lakewood, NY, Myosin Heavy Chain Isoforms and Asymmetrical Hybrid Fibers in Rat Skeletal Muscle, Faculty Mentor: Dr. Scott Medler
- Allison Martin, Hudson Falls, NY, Population study of *Lilaeopsis schaffneriana* subsp. *recurva* to determine genetic variability within and between populations, Faculty Mentors: Drs. Scott Ferguson and Jonathan Titus
- Jacob Merle, Portland, NY, Probing for IRES Function in the *gurken* 5' UTR, State University of New York at Fredonia NSF RUI, Faculty Supervisor: Dr. Scott Ferguson
- Ramses Rodriguez, Homestead, FL, The Effect of pH-stressed carbonic anhydrase aCAH3 on triacylglycerol storage in *Chlamydomonas reinhardtii*, Faculty Mentor: Dr. Frederick Harrington
- Thomas Scullion, Holland, NY, An Examination of the role of Song Playback on Courtship Behavior and Multiple Signaling in the Acoustic Communication System of House Crickets (*Acheta domesticus*), Faculty Mentor: Dr. William Brown
- Jonathan Townsend, Stockton, NY, Identifying Important Habitat Features for Bat Conservation Using Acoustic Sampling and GIS, Faculty Mentor: Dr. Karry Kazial
- Rebecca Watro, Webster, NY, Effects of Bat Ultrasound on House Crickets (*Acheta domestica*) & Mate Attraction, Faculty Mentor: Dr. Karry Kazial
- Tiffany Wong, Salt Lake City, UT, Photomorphogenic Effects of UV-B Radiation on *Spinacia oleracea* and *Ipomea purpurea*, Faculty Mentor: Dr. Jonathan Titus

2013 Summer Research – NSF REUs

- Maxwell DeNies, East Aurora, NY, The Power of Proteomics: A Study of Viral Mediated Post-Translational Modification, University of California San Francisco, Faculty Supervisor: Dr. Nevan Krogan
- Danielle Hindes, Rensselaer, NY, Evaluating the Role of the Lipofuscin Bisretinoid A2E in Age Related Macular Degeneration, Weill Cornell Graduate School of Medical Sciences, Faculty Supervisor: Dr. Marcelo Nociari
- Cory Jackson, Schenectady, NY, Morphology of Microglia in the Visual Cortex in MMP-9 and tPA Null Mice, University of Rochester, Faculty Supervisor: Dr. Ania Majewska
- Nancy Levensailor, Dalton PA, Cell Polarity Establishment in the P1 Embryonic Cell of C. elegans, University of Chicago Medical Center, Faculty Supervisor: Dr. Ed Munro
- Maya Mills, Brentwood, NY, In Vitro and Intracellular Investigation of the Interaction Between hC8 and Mcl-1 in Leukemia Cells, University of Minnesota, Faculty Supervisor: Dr. Ameeta Kelekar

2013 Scholarship Winners

- **1929 Graduates' Bioethics Award** – Maria Green, Loudonville, NY
- **Archer and Mabel Fox Memorial Scholarship** – Jenna Johnson, Jamestown, NY, Chelsea Spiegel, Spencerport, NY
- **Bruce and Nancy Garlapow Memorial Scholarship** – Chelsea Spiegel, Spencerport, NY
- **Adele Maytum Hunter Scholarship** – Nicholas Dragonette II, Orchard Park, NY; Brenda Hoglin, Jamestown, NY; Cory Jackson, Schenectady, NY; Hannah Manning, Apalachin, NY
- **Herbert and Marion Mackie Memorial Endowment Fund** – Lydia Gruber, Fairport, NY
- **Alice M. Sam Biology Scholarship** – Maria Green, Loudonville, NY; Brenda Hoglin, Jamestown, NY
- **Willard F. Stanley Memorial Scholarship** – Anthony Lake, Athens, PA
- **Kourelis-Stavrides Award for Outdoor Interests, Alumna '46 Scholarship** – John Hasper, Great Valley, NY
- **The Yunghans-Mirabelli Biology Achievement Scholarship** – Zachary Eklum, Jamestown, NY



Biology senior Cory Jackson and Dr. Dennis Thiele, '78, before Dennis' keynote seminar.



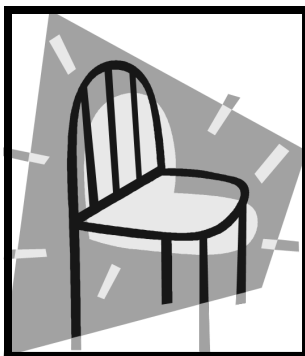
Medical Technology/Molecular Genetics senior Kelci Yousett and Biology senior Nick Dragonette work the registration table at the 50th anniversary celebration.

We are updating our alumni database and would be grateful if you would send us your email address. You may email us at biology@fredonia.edu.

Department of Biology
Jewett Hall
Fredonia NY 14063

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Message from the Chair...

Greetings to our alumni!

In just a few short months, we will say goodbye to Jewett Hall. Although the move will be bittersweet, we are grateful for wonderful memories. And what a fantastic time we had at the 50th Anniversary celebration reminiscing with so many of our alums! We hope we will see many of you this coming October when we celebrate the opening of the new Science Center.

As you read through this issue of BioBits, you will see the Biology Department continues to grow and offer exciting opportunities for our students. Dr. Nick Quintyne and Dr. Todd Backes joined the faculty ranks in Fall 2013, and we will welcome Dr. Courtney Wigdahl in Fall 2014. The Exercise Science program with its' 124 majors joined the department this past July. Dr. Scott Ferguson was awarded a \$250,000. NSF grant; the largest award ever made to a SUNY Fredonia Biology faculty member. We are excited about the growing numbers of students participating in research activities, and the new Senior Capstone required for all our majors that will emphasize inquiry based learning and written and oral communication. And we look forward to using the College Lodge in new and creative ways to enhance our students' education.

Thank you for all you do to support the department and our efforts to provide excellent educational opportunities for our students; your generosity allows us to offer them scholarships and summer research fellowships. The new Science Center will allow us to offer our students even greater opportunities for learning and research, and I hope you will continue to partner with us as we begin a new era of science education at SUNY Fredonia. Please feel free to email or call me with your ideas and comments (patricia.stry@fredonia.edu, 716-673-3283), and I hope to see many of you at Homecoming 2014 when we dedicate the new Science Center!

My thanks to Mrs. Dawn Hunt for her invaluable assistance in the preparation of this newsletter.

Best regards, Patricia Astry