

A Newsletter for IRREC Advisory Committee Members, Faculty, Staff and Students

From the Director



Photo by
Velma Spencer

For the first time in the University of Florida's history, a Bachelor of Science degree in Microbiology and Cell Science is being offered by distance education. Our UF location, the Indian River Research and Education Center (IRREC), is honored to serve as one of two pilot programs intended to meet a growing need for this degree. As the region segues into the "Research Coast," and as it attracts more research firms that conduct biotechnology, marine, medical, and agricultural investigations, the need for those who are educated in microbiology continues to grow.

Not only is the field emerging—it is growing rapidly in this region. Employment opportunities are available now in research laboratories with more than 10 private and public research firms within commuting distance of the Research Coast. Opportunities in medical careers are also growing as the state's population increases. In addition to the educational foundation this degree offers its graduates, it is the university's most popular degree for students who intend to pursue medical school upon completion.

A requirement for entrance into the new B.S. in Microbiology and Cell Science is an Associate in Arts degree from a community or state college. Course requirements are listed within this newsletter.

On behalf of the University of Florida, prospective employers along the "Research Coast" and to our UF Indian River Research and Education Center Microbiology charter students: Welcome! Welcome to IRREC! Welcome to the beginning of a promising education and lifelong career. This newsletter introduces six of our new students. Next month's issue will introduce more students in a new degree program that offers our residents exciting futures.

Pete Stoffella

Inside this issue

From the Director.....page 1
 Andrew Stygar.....page 2
 Hayley Alber.....page 3
 Jacqueline Taylor.....page 4
 Emily Westermeier.....page 5
 Christy Richardson.....page 6
 B.S., Microbiology and Cell Science.....page 7
 Fall Semester 2011.....page 8

Andrew Stygar



Andrew Stygar visiting Empire State Building in New York, New York

Sebastian resident Andrew Stygar intends to pursue a career in medical immunology or pharmacy at the University of Florida. He is about to begin the B.S. degree in Microbiology and Cell Science. In addition to a new start at UF IRREC, Andrew was recently accepted for an internship position at UF's Florida Medical Entomology Laboratory in Vero Beach.

"I'm interested in the diversity and complexity of immunology and how innate it is—how the body develops immunological memory," he said.

Andrew has for has for five years been employed at Indian River Estates Retirement Life Community in Vero Beach. There, he held positions with increasing roles of responsibility: from food runner, then server, to host and cashier, and trainer.

He is a member of Crossroads Fellowship in Sebastian where he participated in a missions trip to Mexico. As a volunteer, he served a Christian Outreach program, Campus Life, at Storm Grove Middle School in Vero Beach.

Andrew was earlier this year honored with the Treasure Coast Gator Club Scholarship Award. He graduated Summa Cum Laude from Indian River State College (IRSC) in spring of 2011 with an Associate in Arts degree in General Studies, and with a 3.95 grade point average.

During his tenure at IRSC he was recipient of the Bright Futures Medallion Scholarship, and the Daryl C. Jacobs Memorial Scholarship Fund. He was also recipient of five student scholarships presented to him by his employer, Indian River Estates in Vero Beach. He graduated from Sebastian River High School.

Hayley Alber



“You have to have the dedication to get through it all. Every day I try to do something more helpful towards my ultimate goal of becoming a doctor,” said Hayley.

Life Community as a Certified Nursing Assistant, or a CNA. There she works along with the community’s physicians and nurses, assisting them with patient care.

When Hayley earns the B.S. degree her next step will be pursuit of a Master of Science degree and certification to become either a Physician Assistant or as a Nurse Practitioner to gain experience as she continues her medical school education.

Serious and devoted to a lifelong medical career, Hayley meets regularly with practicing Physician Assistants and Nurse Practitioners to learn more about their work.

“You have to have the dedication to get through it all. Every day I try to do something more helpful towards my ultimate goal of becoming a doctor,” said Hayley.

Hayley is at this time seeking an internship for summer 2012 in which she will gain more insight in her field. Frequently she enjoys visiting residents at the assisted living facility where she works to provide companionship.

“I like to visit residents who may find themselves alone on a holiday—it really brightens up their day.”

A lifelong Sebastian resident, Hayley Alber’s well-defined career vision will lead her to become a doctor specializing in ear, nose and throat medical care. Upon completion of the UF Bachelor degree in Microbiology and Cell Science, she intends to apply to medical schools and continue with her education until she reaches her goal.

Her interest in the field began at an early age as a patient. She wanted to understand why doctors had to respond to so many possibilities for one symptom.

“So many people had to examine me for a medical problem somewhere in my sinuses and I asked so many questions about their procedures. I was amazed how the smallest issue can affect so many other areas of the body,” said Hayley.

She will soon graduate from the Honors Program at Indian River State College with an Associate in Arts degree in General Studies.

Hayley has for five years been employed at Indian River Estates Retirement

Jacqueline Taylor



Sydney and her mother, Jacqueline Taylor



Jaqueline Taylor and Dr. Bradford Kay

Jacqueline Taylor's aspiration is to continue her education until she earns a doctorate in infectious diseases. She was inspired by a biology professor who led a highly successful career in the field while a student at Indian River State College. And, she recognizes the purpose in carrying out such work.

Upon completion of the Bachelor of Science degree in Microbiology and Cell Science, Jacqueline intends to secure a position working in a laboratory and then pursue a Master of Science degree in Public Health. Her dream is to one day work for the Centers for Disease Control and Prevention in Atlanta and earn a doctorate while employed.

A lifelong Vero Beach resident, Jacqueline has served local physicians as a receptionist. She was for many years employed at oncologist Dr. Michaela Scott's office. It was during this time when Jacqueline realized she wished to pursue

a career in medicine. She applied to nursing school and was accepted, but decided to pursue a Bachelor's degree in Microbiology and Cell Science while at IRSC.

Jacqueline's career inspiration came to her as a student at IRSC. She said faculty member Dr. Kay imparts his work experiences to students from a long and successful career while employed by some of the world's most prestigious medical institutions. They include: The World Health Organization, The Centers for Disease Control and Prevention, and The Johns Hopkins University Hospital. Dr. Kay also has experience working with global health in Bangladesh.

"Dr. Kay knew I was interested in a career in infectious diseases and explained what pathways to use," she said. "He is an excellent professor and encourages his students to go further and shows them how they can accomplish their goals."

Jacqueline said she performs her best work under pressure. A full-time student—and a full-time mother, her children are ages two, seven and 10.

Upon completion of the Bachelor's degree in Microbiology, Jacqueline will seek a position working in a laboratory to study either infectious diseases and bacterium or viruses. She said she would like to help with cancer research.

"My background working with cancer is very strong. I've realized it has become more prevalent and I hope one day a cure is found."

Emily Westermeier



Jackie White, Coordinator of Student Services, and Emily Westermeier, visit the laboratory in which Microbiology and Cell Science laboratories will be instructed

Emily Westermeier intends to pursue a career in physical therapy, but she said the new IRREC Bachelor of Science degree in Microbiology and Cell Science is applicable to many other honorable occupations. She recently completed an Associate in Arts degree at Indian River State College (IRSC).

A Vero Beach resident, she is a native of Tennessee. Fluent in French, Spanish and Swedish languages, she lived in Spain for nearly five years, where she attended law school. She then lived in Sweden, before her return to the U.S.

During her studies at IRSC she was deeply inspired by Chemistry Professor Dr. Karpen-Hayes. Karpen-Hayes, she said, is passionate about science, and many of her students follow her enthusiasm.

"It was fascinating to learn literally everything around us can be broken down into a carbon chain," said Emily.

"It gives you a solid feeling about life."

Her favorite course was Organic Chemistry because, she said, it was the first time she realized how living organisms operate. Emily maintained an outstanding grade point average at IRSC and was named to the Dean's List all semesters, with the exception of her final semester, when she was placed on the President's List.

At this time Emily is observing careers in outpatient and inpatient clinics. She shadows physical therapists to learn more about the work they carry out.

"I'm thrilled about the Micro degree and am excited about starting classes soon," said Emily. "It's a great program for a great career."

Christy Richardson

"I looked at the courses and found chemistry and biology---all of the courses I loved at IRSC. I am so happy I can continue my education and enroll in courses I really want for my future."



Christy Richardson and St. Lucie County School Board Chairman Kathryn Hensley

When Fort Pierce native Christy Richardson saw the curriculum for the Microbiology and Cell Science Bachelor of Science degree, she felt the program was designed with her in mind. It was exactly what she had been looking for to achieve her goal: to conduct research in a medical laboratory.

A Fort Pierce native, Christy wishes to pursue an education and remain a resident of the town she loves. She completed an Associate in Arts degree in Chemistry at Indian River State College. Her favorite courses were in chemistry. Dr. Horton, chair of the Chemistry Department, was an outstanding professor whose great skills in teaching others the complicated topics in chemistry, greatly inspired her career vision.

She was accepted to IRSC's biotechnology program, and had been considering a Bachelor of Science degree in Biochemistry offered at Florida Atlantic

University (FAU) when she learned about the new IRREC Microbiology bachelor's degree. A devoted mother of three young children, she was in search of a program that would allow her to care for her children and own a higher degree.

Commuting to FAU was not a possibility. Kathryn Hensley, St. Lucie County School Board chair and longtime IRREC supporter, had previously recommended the IRREC B.S. in Environmental Management. At the time the B.S. in Microbiology was not yet available. When Kathryn learned about the new program she knew it was the right selection for Christy.

"I looked at the courses and found chemistry and biology---all of the courses I loved at IRSC," said Christy. "I am so happy I can continue my education and enroll in courses I really want for my future."

Christy has many years of experience in the medical industry. She attended Fort Pierce Central High School and was involved with the school's HOSA (Health Occupations Student Association). Prior to high school graduation she earned a Certified Nurse Assistant credential and was employed at Lawnwood Regional Medical Center. She then worked as a pharmacy technician in local Walmart and CVS pharmacies. At this time Christy has decided to pursue her dream to conduct laboratory research.

"I want to be part of a team that accomplishes something that contributes to science, especially with upcoming biotechnology and advancements in science," said Christy.

Pursue A Bachelor of Science Degree in Microbiology and Cell Science at the University of Florida/IFAS Indian River Research and Education Center

Eligibility requirements are:

Completion of an Associate in Arts degree or 60 transferable hours

Minimum Grade Point Average of 2.0 from an A.A. granting institution

Completion of the following courses with a minimum 2.5 GPA

Integrated Principles of Biology I and II with Labs (Botany I and Lab or Zoology I and Lab will satisfy Biology I and Lab requirement

General Chemistry I and II with Labs

Analytic Geometry and Calculus I

A transfer guide is available at the following web location:

<http://www.cals.ufl.edu/prospective/documents/2010TransferGuideEffectiveSummerB2010.pdf>

Course lectures are entirely online. Laboratories are held at:

UF Indian River Research and Education Center located at 2199 South Rock Road in Fort Pierce

About 600 undergraduate students are enrolled in the University of Florida microbiology department, the largest number of students in any micro department throughout the entire nation.

This degree is the most popular for UF students who intend to apply for medical school.

Lectures are delivered by faculty who hold doctorates in their field, by distance education platforms. Department faculty members conduct and publish cutting-edge research and results in prestigious scientific journals. Research topics include but are not limited to host-parasite interactions, biofilms, astrobiology, genomics and biofuels.

For more information about the B.S. in Microbiology and Cell Science, please visit the following website:

<http://Microcell.ufl.edu/Students/offcampus>

FOR MORE INFORMATION OR TO ENROLL CONTACT:

Jackie White, Coordinator of Academic Support Services
(772) 468-3922, Ext. 148 or by e-mail: jkwhite@ufl.edu

Fall Semester 2011

IRREC News

8

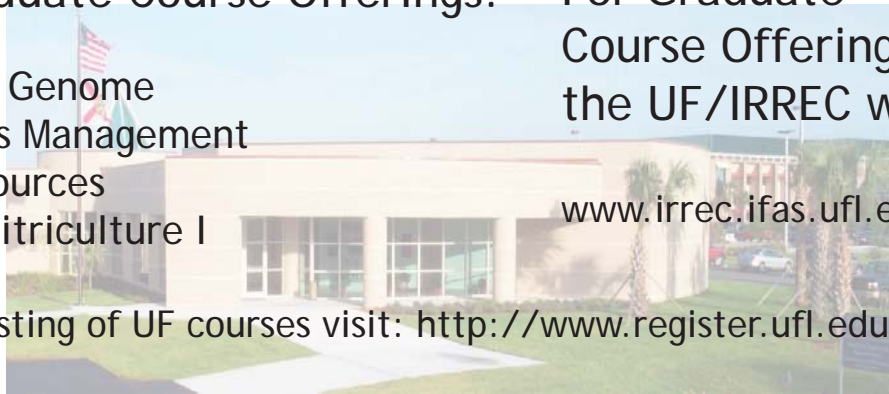
Fall 2011

Undergraduate Course Offerings:

- The Human Genome
- Agribusiness Management
- Human Resources
- Advanced Citriculture I

For Graduate Course Offerings check the UF/IRREC website:

www.irrec.ifas.ufl.edu



For full listing of UF courses visit: <http://www.register.ufl.edu/soc/>

Important Dates:

- Fall semester registration.....until August 19
- Fall semester courses begin.....August 22
- Labor Day Holiday.....September 5
- Veterans Day Holiday.....November 11
- Thanksgiving Holiday.....November 24-26
- Final Exams.....December 10, 12-16

UF/IRREC Degree and Certificate Program Offerings:

Bachelor Degrees:

- Environmental Management
- Microbiology and Cell Science

Master Degrees:

- Ecological Restoration
- Environmental Sciences
- Environmental Horticulture
- Entomology and Nematology
- Agricultural Education and Communication

Certificates:

Undergraduate

- Geomatics
- Urban Pest Management
- Landscape Pest Management
- Pest Control Management

Graduate

- Ecological Restoration
- Non Profit Management
- Sustainable Land Resource and Nutrient Management
- Soil Ecology Services
- Wetland and Water Resource Management