BIOFEEDBACK

Newsletter of the Biology Department and BioClub of Saint John's University and the College of Saint Benedict

Calendar of Events

Feb 20	Biology Club Field Trip - Science Museum
Mar 2	Horticultural Therapy Conference
Mar 2	Biology Seminar - Dr. John Schneider
Mar 4	Biology Seminar - Ms. Kelly Wolfe
Mar 8	100 Acre Quarry Park meeting, Perkins, St. Cloud
Mar 10	Biology Seminar - Mr. Dominic Ackerman
Mar 16	Central Minnesota Audubon Society meeting, St. Cloud
Mar 17	Biology Seminar - Ms. Colleen Corrigan
Mar 24	Biology Seminar - Ms. Bee Schlotec
Apr 14	Biology Seminar - Dr. Marianna Wood
Apr 15	Undergraduate Research Symposium at St. Mary's
Apr 19	Biology Seminar - Mr. Joe Sullivan
Apr 20	Landscaping for Wildlife - Carroll Henderson, DNR
Apr 30	MN Academy of Science meeting, Fargo-Moorhead
May 2	Biology Seminar - Mr. Matt Parris
May 7-8	Undergraduate Research Forum at SCSU
May 10	Biology Seminar - Dr. David DeGroote

Homecoming Brat Sale

The Biology Club would like to thank the following people for making the annual Homecoming Brat Sale a Huge success:

Arturo Albanesi
Elizabeth Clysdale
Tim Haeg
Jessica Jachimiec
Steve Katras
Matt Kennedy
Jill Kuchera
Ryan Lohstettar
Ann Montague
Jim O'Neill
Kristine Peterson
Dr. J. Poff
Dr. C. Rodell
Pat Ryan
Krist Sandness
Amy Saupe
Erin Saupe
Dr. S. Saupe
Christine Schubert
Bernadette Steele
Brett Stolzenberg
Joe Sullivan
Tom Weitzel
Shannon Welch
Merkel Wiederholt
Jenny Winkler
Kelly Wolfe

Spring Semester Seminar Schedule

All students in biology have been mailed the Biology seminar schedule for Spring Semester. The seminars all begin at 4:00 P.M. and are held in Science Center room 326. Refreshments will be available. In addition to these seminars, others will likely be scheduled. Keep a watch for posters. Please join us for these seminars - they are an extremely valuable way to learn and keep abreast of recent developments in the field.

The Roving Reporter asks "Where are the islets of Langerhans?"

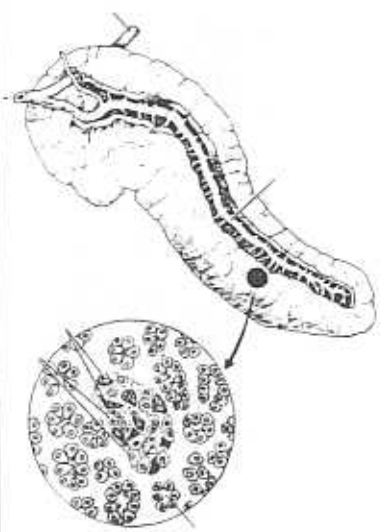
by Gina Soriya, Senior Biology Major

Michelle (Junior)
"It sounds like they're somewhere in the Caribbean.

Scott (Sophomore)
"Aren't those in the large intestine?"

Rachel (Sophomore)
"Those are the chain of islands off Alaska."

Mike (Senior)
"I have no idea, maybe on the northern part of Canada."



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Karen (First-year)
"They're connected with the Virgin Islands."

Molly (Junior)
"Either the kidney or the pancreas. And they do have something to do with sugar."

Kevin (First-year)
"They're in the Caribbean but more south, like down by South America."

The truth is that the Islets of Langerhans are found in the pancreas. They are clusters of endocrine cells where insulin and glucagon are produced.

Advice for Veterinarians

by Ann H. Montague, Sophomore Biology Major

Last semester, I attended a talk by Dr. Peter Poss, a veterinarian from the University of Minnesota who specializes in poultry. He did a concise and informative job outlining the courses needed for admission into the University of Minnesota Veterinary School and the criteria considered by the admissions committee.

The course requirements for the pre-vet student are 8-12 credits of English composition, one semester of math, one year of general chemistry and one year of organic chemistry, one of introductory biology, one year of physics, one semester of biochemistry, one semester of genetics and one semester of microbiology.

The two major criteria that the Admissions Committee considers for acceptance to the program are (1) GPA, especially the most recent cumulative GPA (the last two years); and (2) the Graduate Record Examination (GRE) scores. Minnesota students have an advantage over out-of-state students; GPA and GRE scores can be lower for the Minnesotans. The typically range is about 3.02 - 4.00 for the GPA and 1470-2310 for the GRE. I was surprised to learn that only the *general* GRE needs to be taken and that the VCAT is not necessary.

Dr. Poss also stressed the importance of getting experience with animals, and, if possible, getting a job or internship with a veterinarian.

If you have any questions or want more information, contact: Larry Bjorklund; Director of Admissions; University of Minnesota; College of Veterinary Medicine; 462 Vet Teaching Hospital; 1365 Gortner Avenue; St. Paul, MN 55108; (612) 624-4747. You can also contact Dr. Ron Henry in the Biology Department.

Alumni Interview: Steve Cummings

by John Conzemius, Senior Biology Major

How many times have you asked yourself, what am I going to do when I graduate? How can I use what I'm learning at St. Ben's and St. John's out in the "real world"? Most every science student is concerned about finding an interesting and enjoyable job in his or her discipline. To shed some light on these questions I have been talking with alumni who graduated with degrees in the sciences.

I recently had a discussion with Steve Cummings, who graduated from St. John's in 1983 with a degree in Natural Science. After graduation, Steve attended graduate school at the University of Minnesota where he earned his Master's degree in toxicology. After working for an engineering company when he learned the basics and the business side of his field, Steve and a partner started their own environmental consulting firm called NOVA Environmental.

When asked how his degree in Natural Sciences applies to his career and how it has helped him get to where he is now, Steve said that his degree from St. John's gave him a good base for his graduate work at the University of Minnesota where he learned his technical skills and the more specific knowledge concerning his career. The basics in biology, chemistry and physics that he obtained at St. Ben's and St. John's was very important for getting onto the path of his career.

When asked what courses he took as an undergraduate student were the most valuable, Steve felt that Colloquium (the precursor to Symposium) and Chemistry were the most important. Steve stressed the importance of the writing skills learned in his Colloquium course. In his field, Steve encounters a great deal of formal writing for which good writing skills are essential. Steve explained that many science-oriented people lack these skills and it can be somewhat of a roadblock for an individual. A good base in Chemistry was particularly important for Steve because his company deals in large part with chemically based aspects and issues regarding the environment.

Steve also expressed that he would like to have had more of a background in different areas of the sciences. More knowledge in biochemistry and geology in particular would

be of help to him in dealing with environmental issues. Steve also expressed the importance of a well-rounded background in the liberal arts. There are many opportunities for students with backgrounds in science, but a well rounded background including non-science areas only increases one's ability to deal with many types of situations.

When asked what advice he had for students in their post college planning, Steve emphasized getting background and experience in the field or area of interest through internship-type programs. He mentioned that this is extremely helpful for getting into graduate schools and other post-graduate programs.

This is one example of what can be done with a major in the sciences after we graduate and enter the "real world". I would like to thank Steve for taking the time to share with us his advice and how he is putting to use what he learned here at St. Ben's and St. John's.

NEW AUTOCLAVE INSTALLED AT SJU

By Bernadette Steele, Junior
Biology Major

A new autoclave has been installed in the SJU Science Center. Why? Because the old one was hazardous to our health. Now the Biology Department has this most beautiful, wonderful, big, silver machine that sterilizes things. Yes, that is what an autoclave does — it sterilizes with the use of moist heat and pressure.

The autoclave delivered on September 7, was in the installment process for around 3_ weeks! (Do you remember all the drilling noise?) It weighs 719.5 kg (1583 lbs) and is 194 cm (6 ft 5_ inches) tall. No wonder it took them so long.

On Friday, October 8th the autoclave was officially ready for use. Dr. Ellen Jensen broke it in by cooking a turkey in it! After all, it is just a huge pressure cooker. The 17_ pound turkey was overdone after one hour in the autoclave. How did it taste? Dr. Jensen said it was good.

The autoclave was also very expensive, but a good investment. The old autoclave lasted for twenty-eight years, so long live the new one!

PLANTS AND THE HOLIDAYS

by Jessica Jachimiec, Senior
Biology Major

(note - as this article shows, we are a trifle behind on our publication schedule, ed's)

With the beginning of November comes the anticipation of the upcoming holiday season. For many, the end-of-the-year holiday season is one that is synonymous with food. Although the cranberry is one of the more common holiday foods, many people do not know much about it. Read on for some interesting information about the familiar holiday fruit.

DID YOU KNOW... that the cranberry is one of the very few (maybe three others) commercially important fruits native to North America? It was utilized by the North American Indians as food and medicine. Its juice was also used as dye.

DID YOU KNOW... that the cranberry is high in vitamin C? In fact, sailors on clipper ships and long whaling voyages carried barrels of them while at sea and ate them to prevent scurvy.

DID YOU KNOW... that the cranberry has been called several names? However, the name we recognize today can be attributed to the Pilgrims. They thought that the pink cranberry blossoms looked like the head of cranes. "Crane berry" later became "Cranberry".

DID YOU KNOW... that the cranberry is grown in bogs or marshes? Here, the water levels can be raised or lowered according to the need of the berry. In the fall, the bog is ultimately flooded. Machinery then loosens the berries from the vines so that they can be collected. This harvest usually begins in September and continues through late fall. The timely harvest is obviously one reason why cranberries are so prevalent during the holiday season.

DID YOU KNOW...that the cranberry is not widely distributed in the U.S.? They are cultivated chiefly in Massachusetts, New Jersey, Wisconsin, Washington and Oregon because the climate and soil are optimal.

DID YOU KNOW... that the way to tell if a cranberry is fresh is by bouncing it? The bruised and rotten berries do not bounce.

Treat your body to the cranberry, one of North America's oldest fruits. After all, they are low in calories and sodium and high in vitamin C.

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BIOFEEDBACK is a monthly publication of the Biology Club and the Biology Department at Saint John's University and the College of Saint Benedict. Send contributions for publication to one of the editors at:

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DEVELOPMENT OF IMMUNE SYSTEM

by Susan Switras, First-year Premed

In the fall, I attended a lecture entitled "Development of the Human Immune System" by Dr. Tucker LeBien from the University of Minnesota Department of Lab Medicine and Pathology. This lecture focused specifically on B-cell development.

B-cells are formed in the bone marrow. T-cell and B-cell stems begin in the bone marrow, but T-cells migrate to the thymus. B-cells mature in the bone marrow, then migrate to other areas in the body where they are needed.

Dr. LeBien is currently doing experiments involving Pre-B and Pro-B cells and their receptors. A B-cell is thought to have either the kappa receptor or the lamda receptor, but not both. The speaker and his colleagues have discovered some B-cells that have both and are currently working on an explanation. One possibility is that these cells were in the midst of switching from kappa to lambda. I found the speaker to be very good and the subject very interesting.

CONSERVATION BIOLOGY or HOW TO GET INTO MEDICAL SCHOOL

by Bob Lyngen, Sophomore Pre-physical therapy

I had the opportunity to attend a lecture entitled "Perspectives in Conservation Biology", by Dr. Kendall Corbin from the University of Minnesota. After a brief description of conservation biology, the primary focus of his presentation was to describe the requirements to get into the graduate program in Conservation Biology at the University of Minnesota. I will list some of the requirements for this program.

Your undergraduate GPA should be about 3.0 or better. A person needs a strong undergraduate record to be accepted. Concerning exams, GRE scores are usually around the 95th percentile. If you are thinking of applying you should have a clear vision of what you want to do. You should be self-motivated and a "go-getter". A big part of whether or not you are accepted depends on if an advisor can be matched up to you.

Probably the most important thing to do is to visit the school and try to have someone pull some weight for you. Three excellent letters of recommendations are important too. The people you pick to write letters should be able to point out your strengths.

Overall, the lecture was very informative about requirements for graduate school wherever you want to apply.

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