



Rochester Scientists Meet Mrs. Hoffend's 4<sup>th</sup> Grade Students

*Thanks are extended to all the scientists who participated in this science/writing project with my fourth grade students during the 2011-2012 school year.*

***Special thanks are extended to:***

Dr. Danielle Benoit—University of Rochester  
Amy VanHove—University of Rochester  
Michael Hoffman—University of Rochester  
Michael Baranello—University of Rochester  
Dr. Kanika Vats—University of Rochester  
Jason Inzana—University of Rochester  
Kathleen Burke—University of Rochester  
Tom Rickey—University of Rochester-public relations

Donna Hoffend  
4<sup>th</sup> Grade Teacher  
Klem Road South Elementary School  
Webster, New York

## **Dr. Maryann Herman**

By Sai Bommisetty

Dr. Maryann Herman is a scientist and biology teacher who works at St. John Fisher College. She is currently looking for plants and animals that can remove lead from soil to make contaminated homes in Rochester, New York safer. Also, she is researching for an antibiotic-resistant bacteria in the Genesee River and Lake Ontario.

Dr. Herman was born in Clarence, New York in the year 1980. She received a Bachelor of Science degree in biology from Allegheny College in Meadville, Pennsylvania with a minor in psychology. She got her PhD in plant pathology from Cornell University in Ithaca, New York with minors in physiology and microbiology. In her free time, Dr. Herman likes to play with her daughter Fiona, hunt for mushrooms, read, and go cycling and horseback riding.

When she was in fourth grade Dr. Herman really enjoyed exploration of crystals and when she was in seventh grade she liked frog dissection. She was interested in the brain and neuroscience, but ended up finding plants and environmental science much more interesting. Dr. Herman was able to spend a semester in Ecuador studying ecology.

Dr. Herman loved being able to design her own experiments in the field. Her college thesis advisor, Dr. Camen, was a strong female scientist and great role model. Her advisor encouraged her to pursue her own research interests. Dr. Camen also help “seed” her love of plants!

The best part of Dr. Herman’s job as a professor in the biology department at St. John Fisher College is to help students learn and get excited about science. She enjoys mentoring undergraduate school! Dr. Herman finds it satisfying to see students succeed at their future endeavors. Sometimes it is difficult for her to balance family work and school work. During the semester it often means staying up late at night grading and prepping for classes. Work goes home with her.

The contemporary scientific issue she is most concerned about is the loss of species diversity and the destruction of habitats. She believes we are losing valuable resources and damaging OUR planet. “It is difficult for scientists to persuade others of the dangers

when we are not sure of what is being lost!”

Dr. Herman’s advice to students who love science is that if you love it; keep working towards your goal. Science can be difficult, especially in college, but whatever career you choose, your daily job will be much easier if you enjoy the subject. She recommends students get as much hands-on experience as they can.

Dr. Maryann Herman is a scientist who wants to take care of the Earth to save our valuable resources.

**“Science is exploring ways to explain the workings of the universe.”**

## **Kathleen Burke**

By Brianna Cocuzzi

Kathleen Burke is currently a graduate student in the Biomedical Engineering Department at the University of Rochester where she hopes to get her PhD. She was born in Rockville Centre, New York which is near New York City. At 23 years of age she loves science! She is trying to find a cure for breast cancer and discover what makes it spread faster. Kathleen believes that studying science is the best path for her to try to change the world.

Miss Burke got her undergraduate training at the State University of New York at Stony Brook where she earned a Bachelors of Engineering degree in Biomedical Engineering.

Kathleen is very concerned that people get diagnosed with breast cancer. She knows she is making a change in the world as she studies the different kinds of tissues and different kinds of cells.

Free time is important and Miss Burke likes to play volleyball and hang out with her friends. When she is not in the laboratory she likes to be outside as much as she can.

Kathleen Burke had two teachers that got her interested in science. The first one was her 7<sup>th</sup> grade biology teacher who motivated her to get her work done and enjoy it. The second one helped her and talked to her a lot about science. She loves getting results that show good things about the work she does. Kathleen likes the feeling that she is helping real people and trying to make people feel better. She would like to be a professor, but after graduate school she would have to complete another 4-6 years of school!

Right now Kathleen is using microscopy to look at pieces of cancer tissue to find out how sick a person may get. Her work is very important to the health of people.

**Kathleen believes that “Science is the study of how things happen, how they work, and how we can help to make things better. Science is all around you, you just need to start asking questions!”**

## **Dr. Jacqueline Abranches**

By Allison Marquardt

Dr. Jacqueline Abranches is a professor at the University of Rochester who is studying the relationship between tooth decay and heart disease.

Dr. Abranches was born in Rio de Janeiro in Brazil. Her undergraduate degree is in biology from the Federal University of Rio de Janeiro. Her graduate degree is in Microbiology and Immunology from the same university.

There wasn't one specific experience in her life that led her to pursue a career in science. She thought all science was fascinating. One teacher really stands out in her mind though. Her 6<sup>th</sup> grade biology teacher taught lessons on the body functions and how people get sick. This interested her and made sense to her.

The best part of the work that Dr. Abranches does is making sense of why certain things happen, collecting data/information and reporting her findings as publications in science journals. She likes to attend meetings and conferences to exchange ideas with other scientists. The downside of her work is that she and other scientists have to work long hours because of certain experiments that have to be done.

In her free time Dr. Abranches likes to play with her daughters, go for a four-mile run, read books, cook and go to the movies.

Dr. Abranches is showing the world how tooth decay can lead to heart disease. Her works shows how bad oral hygiene habits can lead to illnesses of the heart.

**“Science is fascinating!”**

## **Dr. Burns Blaxall**

By Morgan Smith

Dr. Burns Blaxall is an Associate Professor of Medicine and of Pharmacology and Physiology at the University of Rochester. His lab has eleven students. Some are undergraduate and graduate students. There are some technicians too. They are trying to understand how heart failure works and they are trying to develop new drugs to help prevent heart failure.

Dr. Blaxall was born in Lethbridge, Alberta, Canada and was raised in Calgary in Canada. He went to Brigham Young University and received a double major undergraduate degree in Zoology/Biology and Spanish. Then he went to the University of Colorado Health Sciences Center and got his PhD in Pharmacology. Dr. Casey went to Duke University Medical Center to get postdoctoral training in the Department of Surgery. Then he joined the staff at the University of Rochester where he currently works.

Dr. Burns Blaxall likes to ride his mountain and road bikes in his spare time, snow shoe, water ski, and hike and spend a lot of time with his family.

He feels that the best part of his work is the excitement of answering questions that have not been answered before. Sometimes his job is hard because he has to travel to meetings and conferences and has to be away from his family. He has to spend a lot of time writing grants to receive money for his research too.

Dr. Blaxall had 4<sup>th</sup>, 5<sup>th</sup>, and 8<sup>th</sup> grade teachers that encouraged him to explore a career in science. He also had two college professors that were very helpful to him.

He has some advice for students who like science. They should think about questions they have and find ways to answer these questions. "As you find your thirst for new knowledge increases, look for opportunities to not only learn scientific facts, but to do research to answer the unknown."

Dr. Burns Blaxall is making a difference in our world because he hopes to help the nearly six million Americans who suffer from heart failure.

**"Science is the invigorating pursuit of the unknown, the unending quest for new knowledge."**

## **Michael Hoffman**

By Ethan Fame

Michael Hoffman is a 24 year old graduate student researcher in the Biomedical Engineering Department at the University of Rochester who is working on developing a system to deliver cells and drugs to bone with defects to help them heal.

Hoffman was born in Rochester, New York and attended schools in Greece, New York. He always enjoyed math and science in school. When he got to college he pursued engineering because it uses all areas of science to solve problems.

Michael Hoffman's high school chemistry teachers were amazing! They made science "cool, fun and exciting." They opened his eyes to science and engineering.

In his free time Mike likes to play sports and exercise. He really likes to be in triathlons so he can swim, run and bike!

Mike believes that biomedical engineers are important because they solve problems to make people's lives easier. The work that he does in his projects involves patients and hospitals. It makes him feel good to know that he can help improve the way people are treated so they can go back to living their normal lives. This is the best part of his work. There are some downsides too. All of his work does not go right all the time and he has to troubleshoot problems. This takes a lot of perseverance on his part, but he knows eventually "everything works out." He is very concerned about health care for patients and how it needs to be improved.

Michael Hoffman has some good advice for students who are interested in careers in science. He thinks if you are interested in a topic you should research it and ask questions. Read, use the Internet, come up with more questions that interest you and do more research to learn. Get excited about science. "It's fun to be a science geek!"

Michael Hoffman is a good role model for kids and is making real contributions to improve people's health.

**"Science is the process of using problem solving techniques in a cooperative environment to answer questions about the world around us and improve our general understanding."**



**Dr. Kanika Vats**  
By Monique Hardy

Dr. Kanika Vats is a post-doctoral fellow in the Biomedical Engineering Department at the University of Rochester.

Right now Dr. Vats is doing research to develop biomaterials to control neuron cell behavior. She is trying to use these new materials to make long tubes. These tubes could be put into areas in the body that have big cuts or injuries and they would help the damaged cells so they could work the same way they did before the injury.

Dr. Vats was born in Karnal which is a small town in India. She was born in India and went to the University of New Delhi. She received her Masters degree at the Indian Institute of Technology in India and her PhD at Pennsylvania State University. Much of her training is in chemistry and biochemistry.

Dr. Vats is 32 and has two children. In her spare time she likes to read and play with her children.

She remembers a great science teacher from her past, Ms. Aarti Paul. This teacher loved biology and would take her students to greenhouses and gardens. Dr. Vats said she learned a lot by making observations and this helped to inspired her!

Dr. Vats hopes that her work will help people live pain-free lives. She likes to go to work each day and plan her experiments. She knows that there are downsides to her work when her experiments do not turn out as planned, but believes that negative results help her to learn.

Dr. Kanika Vats is a scientist whose work will help many people recover from injuries and have better lives!

**“Science is explaining different natural and manmade phenomenon by observation and experimentation.”**

**Jason Inzana**  
By Jessalyn Willmont

Jason Inzana is a graduate student in the Biomedical Engineering Department at the University of Rochester Medical Center.

Jason was born in Blacksburg, Virginia. He earned a Bachelor of Science degree in Biological Engineering. He had two minors—biomedical engineering and mechanical engineering. Right now he works in the Center for Musculoskeletal Research. His work involves trying to determine how people with certain diseases break their bones easier than healthy people. This will help him try to figure out ways to strengthen bones and keep people from getting injured.

When he is not working Inzana likes to hike, play sports and spend time outside.

Jason Inzana didn't have any one experience that made him want to have a career in engineering or science. He did like math and science more than history and English. When he was in high school his biology and math teachers suggested he look into careers in science or technology.

Inzana likes his work because he likes to collect data and analyze it. He thinks that you can make some interesting discovering if you look at your data from different "angles." Sometimes the results don't make sense, but he thinks that trying to find out what went wrong is also very rewarding.

Jason Inzana is interested in stem cell research in the field of tissue engineering. He thinks that this could help people with injuries in the future.

His best advice to students is to have a good work ethic. "Even a brilliant person cannot make a discovery or develop a new invention without putting in the time or work."

Jason Inzana is making life better for people with injuries.

**"Science is discovery. Engineering is innovation."**

**Dr. Jacques Robert**  
By Austin Riesenberger

Dr. Jacques Robert is a lab director and professor at the University of Rochester Medical Center. He is studying how the immune system has evolved and how it adapts to infectious organisms.

Dr. Robert grew up in Geneva, Switzerland. That is where he got his undergraduate degree in biology. He also got his PhD in Geneva where he studied gene regulation during the metamorphosis of the frog. Dr. Robert went to the Basel Institute for Immunology in Switzerland for the first part of his post doctorate program. Then he traveled to the University of Rochester to complete his post doctorate program. He has been there for fifteen years as an Associate Professor of Microbiology and Immunology.

He was inspired to be a scientist when he was in sixth grade. He learned about the life and work of Charles Darwin. Also, he was lucky enough to meet a scientist at the Museum of Natural History in Geneva who helped him find the wonder of science and nature. Dr. Robert had an exceptional teacher named Roland Hafner. He feels that this teacher showed him how wonderful science was and also taught him about classical music. When Dr. Robert goes back to Geneva he visits his former teacher who is now seventy years old.

Dr. Jacques Robert likes his work because he gets to work with students at all different levels. His students are post-doc, graduate, undergraduate and even high school students. Together they all share a passion for science and want to learn more. The downside of his work is the paperwork he must do to get funding for his research projects.

The best advice he would offer to students interested in science is to find out what you are most interested in. This will help you keep your motivation in your work.

In his free time Dr. Robert likes to read, play sports like volleyball, spend time with friends, and listen to classical music.

Dr. Jacques Robert is helping all of us and is great at his job!

**“Science is the best discipline to learn tolerance and to realize how ignorant we are about our world.”**

**Echoe Bouta**  
By Samantha DeZutter

Echoe Bouta is a student in the Biomedical Engineering Department at the University of Rochester.

Echoe was born in Gillette, Wyoming. She received her undergraduate degree in biomedical engineering from Michigan Technological University. Right now she is working on her PhD at the University of Rochester. Echoe Bouta is trying to find new treatments for arthritis.

In her free time Echoe likes to be outside and ride her bike.

Echoe Bouta loved running science experiments in high school. A professor in her undergraduate program encouraged her to go to graduate school and become a scientist.

Echoe Bouta likes the work she does because some day she might help someone.

She has some good advice for students who like science. She thinks you should work hard and find something you really like to do.

Echoe Bouta is a good scientist who is trying to find a cure for rheumatoid arthritis to help people.

**“Science is the search of things no one understands yet.”**

**Dr. Danielle Benoit**  
By Celia Darling

Dr. Danielle Benoit is a lab supervisor in the Biomedical Engineering Department at the University of Rochester. In her lab she is working on tissue engineering.

Dr. Benoit was born in Fort Kent, Maine. She grew up there too. For her educational training she went to the University of Maine and got her undergraduate degree in biological engineering. Her minors were in chemistry and biomedical engineering. Later she got her Masters degree and her PhD in chemical engineering at the University of Colorado. Right now she is working on therapeutic biomaterials, drug delivery and tissue engineering.

In her free time Dr. Benoit enjoys biking, hiking, gardening and reading.

Danielle Benoit thinks that to help a child become a scientist “You must learn as much as you can in all your classes and not just learn it for exams. Find a passion and pursue it. Don’t let anything stand in your way! Listen to your parents.”

Dr. Benoit was encouraged in science by Horace “Grampie” Johnstone, her AP physics teacher. He was a good mentor for her. She also had chemistry and biochemistry teachers and professors in college that encouraged her and gave her good advice.

The best part of her work is working with smart, enthusiastic people. The downside of her work is the long hours and paperwork.

Dr. Danielle Benoit is a hard worker and is very concerned about human health.

**“Science is the careful examination of phenomenological behavior to better understand/appreciate our physical world.”**

**Amy VanHove**  
By Lauren Fairchild

Amy VanHove is a PhD student in the second year of a Biomedical Engineering program at the University of Rochester.

Amy was born in Richfield, Minnesota and is 24 years old. She received her Bachelor of Science degree from Boston University. She also has a Masters degree from the University of Rochester.

In her free time Amy likes to go for bike rides with her friends. She also likes playing with her pet rabbit (Chloe), reading, watching movies, cooking and knitting. In the winter she likes snowboarding and cross country skiing.

Miss VanHove had a good experience in science class in school when she made a pressurized air bottle rocket. Amy said, "That was a lot of fun and it was very exciting to see how well the different designs flew!"

A teacher who encouraged Amy to explore a career in science was her AP physics teacher, Mr. Lowe. Amy said, "Not only was he a great teacher who did lots of hands-on demos, but he was very supportive of my ambitions."

Amy VanHove is currently working on developing a material to help patients recover after having a heart attack.

Amy really likes designing experiments and learning things that no one else has ever learned before from experiments. Amy knows that her work will help sick people in the future and finds this very rewarding. A downside of her work is that it takes a lot of time to get something to work right, which can be very discouraging. However, she will tell you, "You just have to push through and once it works it is so exciting!"

Miss VanHove is most concerned about how difficult it is to get new drugs and treatments from the research lab to people who need it. She stresses that there needs to be a balance between making sure the drug is safe while not taking a long time to get FDA approval.

Amy has some good advice for students interested in a career in science. She says, "Work hard in school even in your non-science classes and don't stop playing with science---it is fun!"

Amy VanHove is a very important person because she is trying to help cure sicknesses and diseases.

**"Science is how we learn about our world; it is the way we find out the answers to "How does this work?" and "Why does that happen?"**

**Dr. Andrea Blitz**  
By Sean Capizzi

Dr. Andrea Blitz is a veterinarian at the Village Vet in Webster, New York whose job is to make animals feel better.

Dr. Blitz is 27 years old and was born in Webster, New York. She got a Bachelor of Science degree in biology from Ithaca College and her Doctorate in Veterinary Medicine from Cornell University. She is currently working to keeping cats and dogs healthy.

In her free time Dr. Blitz likes to go to the gym and hang out with friends.

She was interested in being a vet after learning about the human body and taking health classes. Her biology teacher in high school, Carmen Gumina, made her explore science and made up songs to help teach the class biology.

Dr. Blitz is currently working hard to be a good vet. The best part of her work is to make pets feel better. The downside of her work is to see animals die, “but it is a much better place to be if they are very sick.”

Dr. Blitz is most concerned about the cancer that people, and dogs and cats get.

Her advice to students interested in science is to volunteer and participate in activities.

Dr. Andrea Blitz helps dogs and cats and if it wasn't for her then animals would be sick.

**“Science is always changing! The capabilities we have currently make the possibilities for our scientific future endless!”**



**John Varrone**  
By Luke Stowell

John Varrone is a graduate student at the University of Rochester currently working on developing a vaccine for MRSA induced bone infections.

John Varrone is 31 years old and was born in New Haven, Connecticut. He went to Pennsylvania State University and Southern Connecticut University and received a Bachelor degree in biology.

In his free time John enjoys working on his house and yard, and snowboarding.

In elementary school he had to submit a science project. He remembers the fun he had working on it with his mom. In middle school he learned about acids and this seemed to make science very fascinating for him. When he got to high school he decided he was very interested in anatomy. His teacher, Mrs. Dellert, was an inspiration to him. If kids are interested in science as a career he advises them to “go for it!”

There are some downsides to his work. It takes a lot of hard work and focus in the lab to do his experiments.

He is most concerned about the overuse of antibiotics.

John Varrone is a great researcher who will do good things to help sick people.

**“Science is discovering the unknown.”**

**Anna C. Jacobs**  
By Olivia Johnson

Anna C. Jacobs is a very talented person in science. She is a graduate student working on her PhD in microbiology at the University of Rochester. She studies bacterium called *Acinetobacter baumannii*. She is trying to find out how antibiotics work to treat infections.

Anna was born in Omaha, Nebraska and is 28 years old. She got her undergraduate degree in genetics from Iowa State University.

Anna Jacobs has always enjoyed learning about science, specifically biology. She learned so much from these classes that she was inspired to study science in college. “It is very rewarding to know that my discoveries may lead to new antibiotics for the treatment of infections.”

Anna C. Jacob has a goal to help people who are sick. This is the best part of her job. The downside of her work is that research can be very hard and takes a lot of time. Sometimes experiments don’t work the first time so they have to be repeated over and over until they work.

Anna C. Jacobs is an inspiration who will help make sick people better.

**“Science is ever-changing—meaning that there is always something new to learn or discover. That is why science is so much fun!”**

**Megan Leyrer**  
By Bryanna Holloway

Megan Leyrer is an undergraduate student studying neuroscience at the University of Rochester. Neuroscience is the study of the brain and how it works. Megan hopes to receive a Bachelor of Science degree in May 2012. She wants to continue her studies and receive more training to get a Masters degree or PhD.

Megan was born in Rochester, New York. Her interests are horseback riding, theater, drawing and painting.

Dissections showed Megan how amazing it was to see firsthand how systems in the body functioned. She enjoyed chemistry labs where she could see chemical reactions take place in a controlled environment. When Megan got a chance to extract her own DNA in a high school lab she found that lab work was fun. Some of the teachers that encouraged her were her chemistry teacher (Mrs. Leason), her biology teacher (Mr. Borland), and her physics teacher (Mr. Carusone).

Right now Megan not only goes to school, but she is able to teach other students at the university. She really likes this. The downside to her work is that she has to give up time with friends or watching television to go to the lab.

Megan is concerned about finding genetic links to neurological diseases such as Parkinson's, Huntington's, and even autism.

Her advice to students interested in a career in science is to start exploring science now. "It is never too early; you are never too young to start." She believes students should question how things work.

Megan Leyrer is a student who will make great contributions to our world to make health better.

**“Science is the art of questioning and exploring the unknown.”**

**James Pascucci**  
By JD Thomann

James Pascucci is a manufacturing resource team program manager at Xerox. He is currently working on new programs.

He was born in Batavia, New York and is 50 years old.

James Pascucci got a Bachelor of Science degree in Mechanical Engineering from Rochester Institute of Technology and a Masters degree in Global Operations and Engineering at Clarkson University.

One of the things that influenced Mr. Pascucci was his shop teacher, Mr. Finnegan. Other things that influenced him in a career in science were his classes in shop, drafting, and physics.

The best part of Mr. Pascucci's work is developing products to sell to customers. The downside to his work is that there are long hours and travel for extended periods of time.

Mr. Pascucci is worried that there aren't enough people wanted to have jobs in science. His advice to student interested in science is "Expose yourself to as many different science studies as you can to find the one you are most excited about."

Mr. James Pascucci is a Xerox Science Consultant who comes to my classroom and does experiments to teach me about science.

**"Science is the process of using known technologies, formulas, processes, and methods, and arranging them in such an order that produces an object/thing/product that it was designed to do."**

## **Dr. Carmala Garzione**

By Kaitlyn Rieger

Professor Carmala Garzione studies the interactions between large mountain belts and climate. She works at the University of Rochester.

Dr. Garzione was born in Washington, DC. She received her Bachelor of Science degree from the University of Maryland and her Master of Science and PhD degrees from the University of Arizona.

In her spare time Carmala Garzione enjoys spending time with her family, working in her garden and doing outdoor activities.

Professor Garzione loves being outdoors and has always been curious about processes of the Earth. As a child she always found herself asking questions about how landscapes, rocks, and mountains formed.

She was inspired by one of her high school teachers who studied entomology—the study of insects. In college, after she chose to major in geology, one of her professors invited her to do a research lab project. This exposed her to research and this really turned her into the idea of pursuing a career in science.

Currently at the University of Rochester, Dr. Garzione is doing field research and gets to travel to the Tibetan Plateau in China and the Andes Mountains in Bolivia and Peru.

The most enjoyable part of her work is teaching undergraduate and graduate students. She also loves to get away from her desk to travel and do field work related to her research. Sometimes her work can be time consuming and because she cares about her job so much she can sometimes work more than forty hours a week. She does her “extra work” in the early morning and evening when her family is sleeping so she does not miss spending time with them.

Although this is not related to her research Dr. Garzione is concerned about global warming and the effect that it has on our environment.

Her advice to students interested in science is to “Feed your curiosity and pursue what you enjoy the most. Don’t worry about whether that career will earn you a lot of money.”

**“Science is exploration and discovery.”**

**Adam Bosen**  
By Garrett Benson

Adam Bosen is a graduate student in the Biomedical Engineering Department at the University of Rochester. His current work is on studying how good people are at telling where different sounds come from, and how this ability changes as people get older.

Bosen was born in Albany, New York and is 25 years old. He received a degree in computer engineering from Rochester Institute of Technology. When he was there he learned how to build electrical things, program computers and do some “very cool math.”

In his free time Adam likes to take care of foster dogs until good homes are found for them, run, play video games, and write music.

When he was in high school he did programming for a FIRST Robotics team. He saw that it was challenging to make robots move and made him think about how studying people’s movements would help in building robots which could do more complicated tasks. Mr. Witte, one of his high school teachers, encouraged him and pushed him and told him not to be lazy.

The part of his work that Bosen likes the most is learning something as a result of an experiment that no one knew before. One of the downsides to his work is that it is very complicated figuring out what is going wrong inside a robot.

Adam is concerned that there are too many people on our planet and that soon our planet will not be able to support everyone.

His advice to students is to pay attention to the world around you and ask questions about how things work.

Adam Bosen is a scientist who will help our world.

**“Science is learning more about the world around you by asking questions and answering them in an organized way.”**

**Dr. Homaira Rahimi**  
By Jamie Mielcarek

Dr. Homaira Rahimi is a physician at Golisano's Children's Hospital. She is studying why children develop arthritis. Arthritis is a disease in which a joint becomes swollen, red or warm. There are medications to make it better.

Dr. Rahimi was born in Afghanistan. She received a Bachelor of Science degree from Seton Hall University, a Masters degree in translational research, and a medical degree from a medical school in New Jersey.

The best part of Dr. Rahimi's work is when an experiment gives her interesting results that prove her hypothesis. It helps her put a "piece of the puzzle into place" and it makes her feel great! In her office the best part of her job is when sick patients feel better from the medicine she gave them. It makes her glad to be a doctor. The downside to her work is that sometimes experiments can take a long time which can mean long hours. However, she feels it is worth it when the experiments are successful.

The issue in science that Dr. Rahimi is most concerned about is the effects of global warming, which is the slow heating of our planet. She worries about pollution and all the garbage that people generate that contributes to this warming. She feels we need to take good care of our planet so it can take care of us.

If kids are interested in a career in science Dr. Rahimi says, "Go for it!" She thinks a career in science is exciting, challenging, thrilling, and rewarding. However, kids should be prepared to study hard in science, math, English and social studies. She thinks that students need to be curious about everything and have to like solving puzzles.

Dr. Homaira Rahimi is a pediatrician working to make life better for children suffering from rheumatoid arthritis.

**"Science is knowledge that is gained by careful study of the world around you."**

**Dr. Liam Casey**  
By Mason Rzepkowski

Dr. Liam Casey is a science instructor who works at the University of Rochester. He tries to find the best ways to teach students about science.

Dr. Casey was born in Hartford, Connecticut, but he grew up in New York City. He received his Bachelor of Science degree in biology from SUNY Geneseo and then graduated from the University of Rochester with a doctorate in biology.

To relax, Dr. Casey likes to read, cook, exercise, and have fun with his family and friends.

When Dr. Casey took AP Biology in high school he learned a lot of interesting ideas and so he decided he wanted to have a career that would let him learn more about biology. He was inspired by his high school AP Biology teacher, and his Cell Biology teacher in college. They were very passionate about biology and got him very interested in biology.

Dr. Liam Casey likes his job a lot because he likes to share his love of science and science education with others. He likes to see the excitement when his students learn or experience something new. Since his job is paid for by the federal government he is not sure if his job will continue to be funded because of the trouble our country is having with the economy.

There is one contemporary scientific issue Dr. Casey is concerned about. He wants to make sure that people understand and use scientific thinking to make good choices about their health.

Dr. Casey suggests that students who like science should ask a lot of questions about science or careers in science. He also urges students “to follow their bliss! Do whatever it takes to find the career that gives you the most happiness in life.”

Dr. Liam Casey is making a difference in the lives of students studying science.

**“Science is the way of learning about our universe based on observable, measurable and reproducible evidence.”**



## **Brian McIntyre**

By Ryan Shevchuk

Brian McIntyre is a lab director at the University of Rochester. He is studying many aspects of nanoscience, but his specialty is microscopy.

He was born in Syracuse, New York and went to Syracuse University where he got his Bachelors degree in Chemistry. He got his Masters degree in chemistry from SUNY College of Environmental Science and Forestry.

When he was in high school Mr. McIntyre had some really good physics and chemistry teachers. He remembers setting up a cloud chamber and some radioactive sources to “see” the particles as they were emitted. He also remembers a great experiment in fifth grade that showed him how water condensed on a cold surface. It made him wonder how that worked. He liked math because he thinks it is the language of many sciences.

Brian McIntyre gets a lot of satisfaction from his work when he sees something new for the first time. A few weeks ago he saw the leg parts of a cricket that helps to make the chirping noise. There are downsides to his work such as when his equipment breaks or when he has a lot of paperwork to do.

Mr. McIntyre is very concerned about energy production without our dependence on oil.

He has some good advice for students who want to have a career in science. “Keep wondering how and why things happen.”

Brian McIntyre is a scientist who wants to make the world better using electron microscopy.

**“Science is observing what is and seeing what could be.”**

**Dr. Kristin Piccardo**  
By David Bobowski

Dr. Kristin Piccardo is a very well-educated biologist. She is a professor in the biology department at St. John Fisher College and does research too. She teaches many different classes.

Dr. Piccardo was born in Seneca Falls, New York. She earned a Bachelor of Science degree in biology and her PhD in immunology and microbiology at the University of Buffalo. She did her post-doctorate work at the University of Rochester.

In her free time she likes playing with her kids, Anthony and Marco, and roasting marshmallows in her fire pit.

In sixth grade she took biology and loved it. She wanted to study animals all day long. Mrs. Lucchesi, her science teacher, made it a lot of fun.

The best part of Dr. Piccardo's work is seeing students getting excited about their work and asking a lot of questions. Also, she likes teaching exciting science. The downside to her job is going to meetings.

The contemporary science issue she is concerned about is antibiotic resistance.

If you would like to go into science Dr. Piccardo thinks that you should work hard and ask a lot of questions. "Get your hands dirty and think so hard that your head hurts!"

Dr. Kristin Piccardo is contributing to the world by helping the study of biology.

**"Science is the study of life and is ever changing."**

## **Dr. C. Douglas Haessig**

By Bailey Rogers

Dr. C. Douglas Haessig is mathematics professor at the University of Rochester. He does research in number theory and studies geometric objects to see how their numbers change as they bend and flex.

Dr. Haessig was born in Fort Lauderdale, Florida and is 35 years old. He got his Bachelors degree in mathematics from the University of California (Santa Barbara) and his PhD in mathematics from the University of California (Irvine).

In his spare time he likes to spend time with his daughters. Dr. Haessig likes to challenge himself and learn new things. He has learned how to surf, bake bread, play the banjo, and has read some Greek classics.

Dr. Haessig never knew you could do research in math until he got to college. Before that he thought that everything was already known about math. When he was in high school he learned about the circle, and its radius and the number Pi. Dr. Haessig said he was a “wise guy” and told his teacher that he wasn’t going to use Pi anymore until he learned where it came from. Since he was a good student his teacher did not think he was being rude. His teacher gave him a two page explanation of how Pi was discovered by Archimedes 2000 years ago! Dr. Haessig became very intrigued by math after this because he saw new symbols and long formulas. He also felt like his teacher really cared about him as a student because he took time to answer his question. Dr. Haessig also had a seventh grade teacher that told him he had a talent for writing. So back then Dr. Haessig wrote a fifty page sci-fi novel. He liked that this teacher gave him encouragement and felt like this influenced his life.

Dr. Haessig feels that students who are interested in a career in science or math should persevere and use their creativity. He thinks that students should ask a lot of questions and try new things.

Dr. C. Douglas Haessig loves to teach math and see his students be satisfied with themselves as they learn math. He is helping our world by finding new ways and methods to solve math problems.

**“Science is mankind’s attempt at understanding the universe we live in.”**

## **Beth Spingar**

By Patrick Staron

Beth Spingar is a person who works as a scientist at Xerox Corporation in Webster, New York. She is also a Science Consultant who visits my classroom to do experiments. She is a mechanical engineer and project manager.

Miss Spingar works on different projects for Xerox. They range from changing computer systems to manufacturing lines to processes people use every day to do their jobs. Sometimes she gets to travel for Xerox.

Miss Spingar was born in St. Joseph, Michigan. She got a Bachelor of Science degree in Mechanical Engineering at Western Michigan University. She has two graduate degrees. One is a Masters degree in Materials Science and Engineering from Rochester Institute of Technology and the second one is a Masters in Business Administration from St. John Fisher College.

In her free time Beth likes to run and train for 5K and 10K races. She likes NASCAR races, read about science, and volunteers at a large animal rescue farm in Sodus.

She began to like science in high school. Some other science experiences came when she worked on her family's farm and worked with her father in the garage. Miss Spingar had a math teacher in elementary school who encouraged her. She had a teacher for 9<sup>th</sup> grade Earth Studies and 11<sup>th</sup> grade Chemistry that suggested a science profession for her.

Miss Spingar likes her job because she gets to learn new things, and meet and work with good people. Sometimes her job is hard because she has little or no budget to make changes. Some of her friends have lost their jobs and when they leave Xerox a lot of knowledge is lost.

Beth Spingar is a scientist who will make a difference in the world of science. Her job as an engineer lets her make quality projects that will make people's lives better. She teaches the students in my class a lot about science such as the solar system and volcanoes.

**“Science is something we do when we don't know what we are doing. It is also fun and exciting when you discover things you didn't know before.”**

## **Dr. Daniel Weix**

By Jenna Villa

Dr. Daniel J. Weix is an assistant professor in the chemistry department at the University of Rochester. He is currently working on and studying new ways to make molecules. Then other scientists use these methods to discover new materials and drugs.

Dr. Weix was born in Milwaukee, Wisconsin and is 33 years old. He received his Bachelor degree in chemistry from Columbia University. He earned his PhD in chemistry at the University of California at Berkeley. Also, he went to Yale University to work on the use of transition metals in chemistry.

Dr. Weix likes to watch football, read books, rock climb, and spend time with his three children and wife.

Dr. Weix had a series of wonderful teachers in high school, but he will always remember Mr. Stenmark, his chemistry teacher. He really enjoyed the classes. Dr. Weix said that this teacher did many amazing demonstrations such as making fires, freezing things, and making light. He also had a chemistry teacher in his undergraduate work, Tom Katz, who convinced him to focus on chemistry.

Dr. Weix has advice for students who like science. "Explore the world, find topics that interest you."

The best part of the work that Dr. Weix does is to investigate ideas of his own. If he gets inspired he can set up experiments and he thinks this is challenging and a lot of fun. He doesn't think there are many downsides to his work. However, he does have to work a lot of hours, and in order to find a job he had to move and lives far away from where he grew up.

Dr. Weix is concerned about people and how they can ruin the Earth by wasting energy, global warming, and pollution.

Dr. Daniel Weix is a good teacher and scientist who enjoys science and teaches students to like science.

**"Science is the ongoing process of developing better explanations for the natural world."**

## **Mike Baranello**

By Elliott Phelps

Mike Baranello is currently a graduate student at the University of Rochester working on a polymer drug. This drug can carry nanoparticles. The nanoparticles can be used in the treatment of leukemia.

Mike is 24 years old and is from Buffalo, New York. He got his undergraduate degree in Chemical Engineering from the University of Minnesota and he is working on his graduate degree. He wants to get his PhD in Chemical Engineering from the University of Rochester.

In his free time Mike Baranello likes to play and watch all kinds of sports. He also likes all types of games such as outdoor, board and video games.

When he was in high school, Baranello liked chemistry and engineering class. When he got to college he really liked science and wanted to go to graduate school. Mike thinks that his high school science teachers and his college professors were experts and he really liked them.

The best part of Mike Baranello's work is the satisfaction he gets from seeing biological systems get better. He really hopes that the nanoparticle system will go from the lab to clinical research and help patients. The downside to his work is that there is not a lot of published information on the materials he works with so there is not a lot of guidance for him in the lab.

Baranello has some advice for students who want to go into science. He thinks you should have a lot of interests and learn as much as you can. As you get further and further into your time in college you can focus on what interests you the most.

Mike Baranello is a good scientist who cares about helping make people better.

**“Science is driven by interests and substantiated with results.”**