

Structures



Hauptman-Woodward Medical Research Institute, Inc.
An Independent Non-Profit Biomedical Research Institute <http://www.hwi.buffalo.edu>

President's Column

New CEO Search A Challenge



Dr. H. A. Hauptman
Nobel Laureate

Last month Dr. George DeTitta informed our Board of Directors that, effective April 2008, he intends to relinquish his position as Chief Executive Officer of Hauptman-Woodward Medical Research Institute. George has served as our CEO during what arguably has been one of the most exciting and significant periods of our growth. He led the Institute through the design and construction of our signature building and has excelled in the challenging job of leading a group of independent and creative thinkers. He has allowed each individual at HWI the freedom to work on research which inspires her and the room to grow and develop to her full potential.

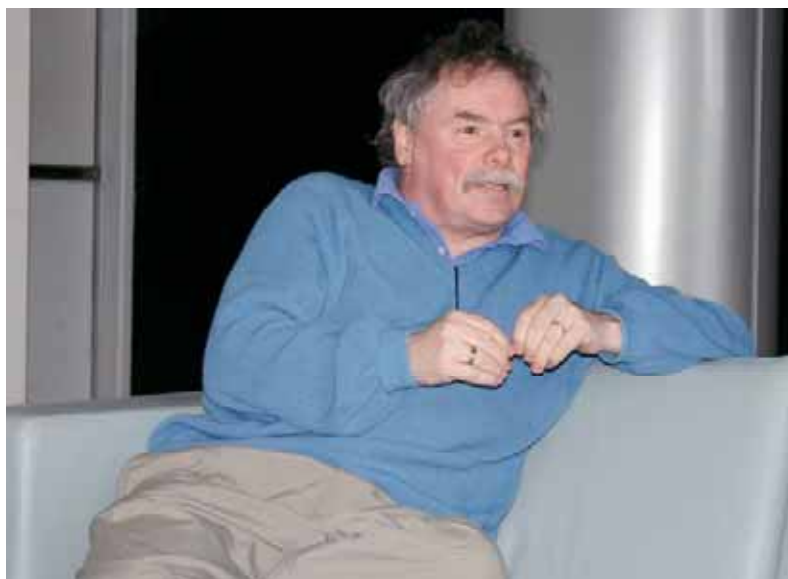
We fully support and understand his decision to return to the lab next year, and are confident that the search committee and board will secure a successor who will build on the foundation that George has established to continue the lab's success into the future.

However, the selection of a new CEO is never an easy task for any organization. For Hauptman-Woodward, it is particularly difficult because our new CEO must possess in great measure at least two distinct and rare qualifications. He must, first and foremost, have the ability to lead a group of independently motivated research scientists who are capable of carrying out biomedical research of sufficient quality to generate support for their work. In addition, in order not to compromise his ability to lead, he must himself be an eminent scientist, capable of conducting biomedical research of such quality as to command the respect of the staff he leads.

Our Board faces a daunting task; a year will not be too long.

Hauptman-Woodward CEO, Executive Director Announces Resignation

HWI Board to Conduct Local, National Search to Place Successor by April 2, 2008



As many of you may now be aware, Hauptman-Woodward's Chief Executive Officer and Executive Director Dr. George DeTitta officially announced on Monday, April 2 that he would be returning full-time to his lab within one year's time.

Below is a conversation with DeTitta that may answer some questions you have about this decision.

STRUCTURES: Why have you decided to resign your position as CEO and what is the effective date?

DETTITA: It was always my intention to serve in the CEO role for a limited time. In fact, I have been in a conversation about stepping down that dates to early 2005, and at that time I informally notified the board that I intended to step down no later than 3 years hence. I reiterated that decision in 2006 and in early 2007. My primary passion is in the lab and I am anxious to devote all of my time to scientific work once again. The effective date of the transition will be April 2, 2008.

STRUCTURES: How long have you been in the executive position?

DETTITA: I have served in an executive capacity since July 1999.

STRUCTURES: During the next year, do you plan to continue to implement new ideas and make leadership and directional decisions for the Institute?

DETTITA: I will continue to lead with strength and enthusiasm and use the same approach which I have used to lead the Institute since the first day I took the executive position. It will be business as usual. We expect to continue recruiting new scientists, compete for grants and conduct basic research.

STRUCTURES: Are you leaving HWI entirely?

DETTITA: I am not leaving HWI at all. I am simply returning to the lab and handing the CEO reins over to someone else.

STRUCTURES: What do you anticipate your role will be with HWI on April 2, 2008?

DETTITA: I fully expect to return to the lab and focus solely on my research to develop new tools and methods for more effective and efficient high-throughput crystallography.

Hauptman-Woodward Scientist Receives \$1.7 million NIH Grant

Dr. Michael G. Malkowski receives grant for multi-faceted work that one day may lead to better therapies for treating arthritis and other inflammatory diseases



Dr. Michael G. Malkowski

Dr. Michael G. Malkowski, Hauptman-Woodward research scientist, has received a \$1.7 million grant from the National Institutes of Health in support of his work to better understand the biological processes that occur as the human body reacts to anti-inflammatory medications.

When people take anti-inflammatory medications, such as aspirin, the aspirin inhibits an enzyme in the body (COX-2) which normally responds to injury by producing pain and swelling. Hence the aspirin gives the patient relief. For similar reasons, aspirin is effective in the prevention and treatment of cardiovascular conditions, but in that case the aspirin binds to a different enzyme (COX-1) to keep veins open for blood flow.

Why is this important?

Aspirin has proven over the last 100 years to be one of the safest and least expensive pain relievers used to treat a variety of ailments. While the aspirin affects both enzymes, it has a radically different effect on each. This difference leads to the importance of Malkowski's research. The aspirin inhibits COX-1 making it nonfunctional and improving heart functionality. But in the case of COX-2, the aspirin forms another complex that has very potent anti-inflammatory properties.

Malkowski's research is focused on understanding why and how that process happens – knowledge which is critical to the long-term future development of a new or combined therapeutic approach for the treatment of arthritis and other inflammatory diseases, such as asthma, atherosclerosis, cardiovascular diseases, etc., with fewer unwanted side effects. His research has the potential to have medical relevance for literally millions of people worldwide.

"The medical relevance of this work for so very many people who suffer from inflammatory diseases – and who now in some cases, suffer from the side effects of the medications that are intended to treat those diseases is simply immense," Malkowski said. "On a number of levels this study is similar to work I have conducted previously in my career so it is a topic that continues to fascinate me."

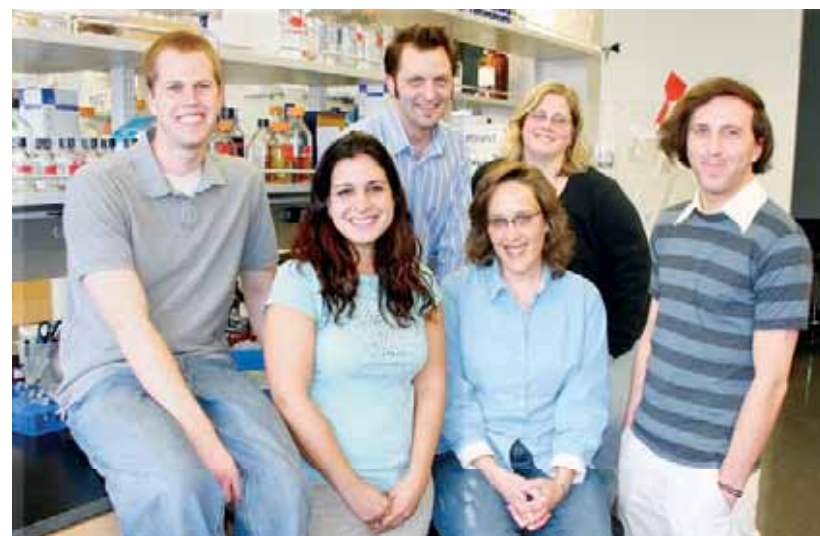
How long will the study take and who will conduct the research?

The study is expected to take approximately five years, but may take longer based on the outcome of the research. The work will be led by Malkowski and conducted by all members of the Malkowski lab which includes: post-doctoral fellows Drs. Christopher Goulah and Mary Rosenblum, senior research associate Tracy Lloyd, research aide Adam Krol, as well as graduate students Danielle Simmons and Alex Vecchio.

Is the work supported by others in addition to NIH?

Malkowski's initial funding for the project came from the Arthritis Foundation. With those funds, Malkowski was able to conduct all of the preliminary research needed to both test the viability of his project's hypothesis, and to develop the study to a level where it could be considered for funding by the NIH.

"This work would not have been possible without the support I received from the Arthritis Foundation. They believed in the work and supported the project until it reached a stage where we could then leverage their investment into additional financial support – in this case, support from the NIH," Malkowski said. "This is the ideal case where a foundation or a private philanthropist supports a scientist's work through its beginning stages and sees a return on their investment not only in the results of the research, but also in the resulting support from other financial backers."



Pictured above from left to right are, front row, Adam Krol, Danielle Simmons, Tracy Lloyd and Alex Vecchio; back row, Drs. Christopher Goulah and Mary Rosenblum.

Quiet Demeanor, Warmth and Charm Define HWI's Peggy Cegielski

Only Employee to have worked in all Three HWI Buildings, Began at HWI in 1959



Margaret Cegielski

Few could contend that Peggy Cegielski is not a truly special individual. With her warm charm and quiet demeanor, Cegielski is open, honest and real. She touches lives personally and professionally. And her dedication to HWI and basic biomedical research for over 30 years is only one of the many attributes that make her an extraordinary individual.

Different Labs, Changing Supervisors, A Constant Love of Science

Cegielski graduated from Niagara University with a degree in natural sciences in 1959. While looking for employment, Cegielski was referred to HWI (then known as the Medical Foundation of Buffalo) by two physicians who worked for both Roswell Park and MFB. Soon thereafter, Cegielski was hired as a research technician.

During her long employment at HWI, Cegielski has worked in a number of different labs under a number of different supervisors. Shortly after being hired, she joined a lab that was run under group supervision by Drs. Roy Slaunwhite, Avery Sandberg and George Koepf, who would meet once a week to discuss laboratory developments. In later years, Cegielski worked in the labs of Drs. John Plager and Yoshio Osawa. She currently is in Dr. Wayne Schultz' lab where she is working to purify and crystallize SARS proteins, and to understand some of the criteria that result in the successful transfer of the SARS infection.

The Evolution of Research Methods

Cegielski also can attest to the evolution of scientific research methods over the past few decades. When her career at HWI first started, Cegielski remembers that laboratory research consisted of performing clinical assays on steroids and experimentation was slow and non-automated. Cegielski also recalls experimenting on the ears of lab mice and on dogs to test stress and metabolism levels.

Today, laboratory research has reached new heights with the advent of computers, electronics, kits, and Protein Purification and Preparation (PPP) strategies. With a smile, Cegielski remarks, "It's amazing that the equipment we used back then can now be found in a museum. The advancements made in technology are amazing."

Memories from all Three HWI Homes

Cegielski is also the only HWI employee to have worked in all three locations. When asked to touch on her experiences in each, Cegielski looks back on the memories fondly. The first location was a carriage house on Delaware Avenue. Cegielski remembers this house as "beautiful and elegant," but also much smaller than the other two locations. The house had previously been a private home and was equipped with a bath house and a pool, where employees could swim during lunch breaks and on weekends. The home also was originally equipped with a tennis court which was converted into a parking lot for employees.

Although Cegielski was fond of the first HWI location, she says she cannot pick a favorite. "My favorite time of life is where I am right now," Cegielski says. "You take what you have at that moment and enjoy it." Cegielski also added that while she may have enjoyed her time at the first location, it would be an impractical work space with today's advanced equipment and instrumentation.

In 1963, after a devastating fire which destroyed years of hard work, Cegielski and her fellow employees moved in to HWI's second location on High Street after a very brief stay at Roswell Park. Cegielski remembers the High Street location as "new and shiny." She also recalls that the builders of the facility let the employees choose the bench and countertops for the labs. This employee interaction with the builders had special significance to Cegielski. "It was our work place and they allowed us to make it comfortable and pleasing to us," Cegielski remembers. "We were made part of the planning process."

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Medical Foundation of Buffalo (HWI) first location was a carriage house on Delaware Avenue



HWI's second location 73 High Street



HWI's present location 700 Ellicott Street

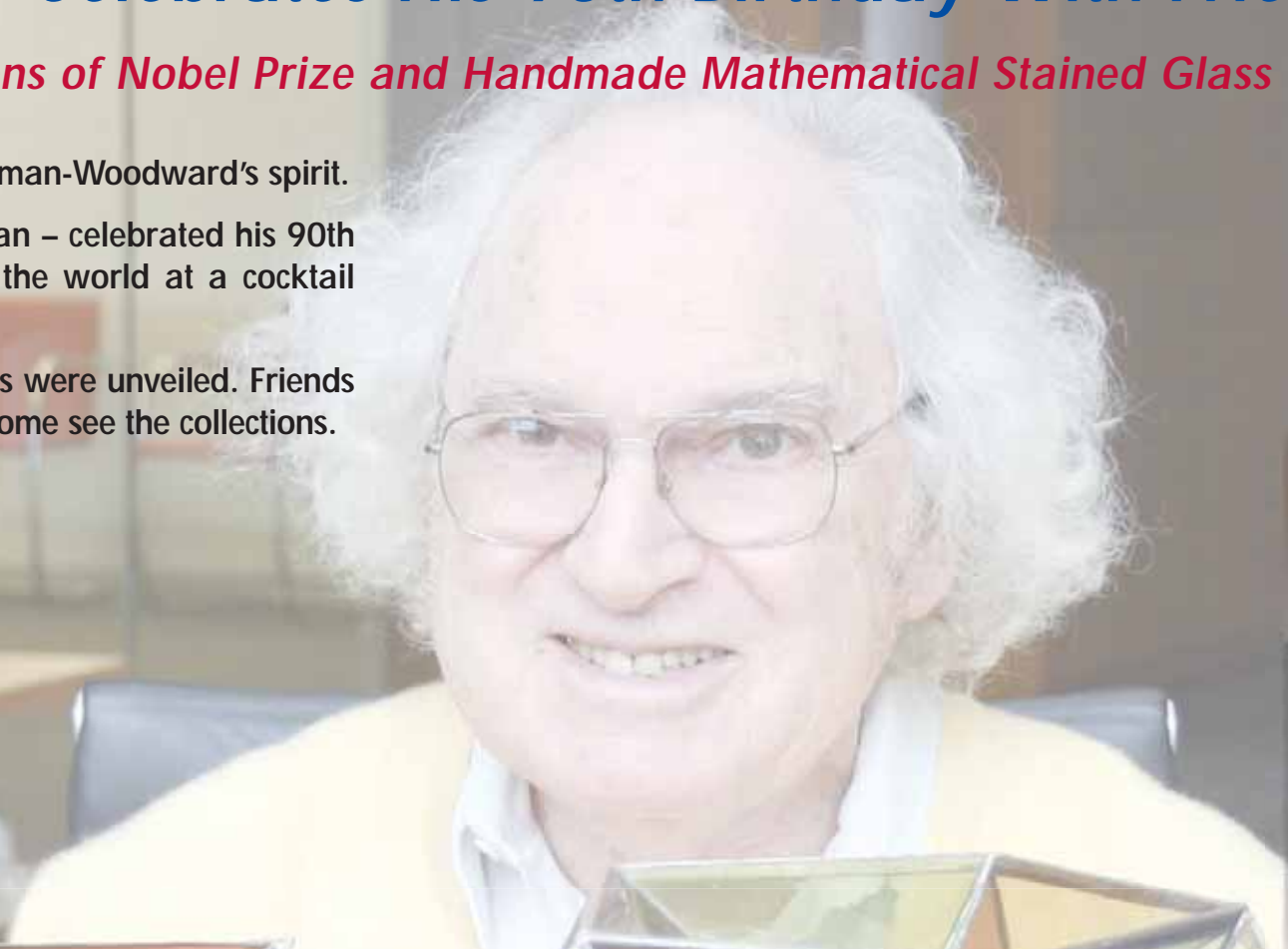
Buffalo's Only Nobel Laureate Celebrates His 90th Birthday With Friends and Family

Historically Significant Collections of Nobel Prize and Handmade Mathematical Stained Glass Unveiled

A storm blew into Buffalo on February 14 but it didn't put a damper on Hauptman-Woodward's spirit.

In fact, Buffalo's only Nobel Laureate – our very own Dr. Herbert A. Hauptman – celebrated his 90th birthday with more than 200 friends, family and colleagues from around the world at a cocktail reception in the atrium of the Hauptman-Woodward building.

Permanent collections of his Nobel Prize and mathematical stained glass pieces were unveiled. Friends and supporters who were unable to be here for the celebration are invited to come see the collections.



Research Scientists Receive \$100,000 Grant to Expand Research on Infectious Diseases

Drs. Wayne Schultz and Timothy Umland have received a \$100,000 grant from the William G. McGowan Charitable Fund to finance their work in studying infectious diseases. The grant will be used to initiate a new project in virus-host interactions.

Umland and Schultz are both very enthusiastic about how the grant will affect their research. "This will help us to determine how a virus interacts with its host," Umland said, "specifically the SARS virus and how it interacts with human cells."

"In addition, the seed money provided by the McGowan Foundation will allow us to generate critical preliminary results necessary to obtain federal funding," Schultz said.

This is not the first time McGowan has supported HWI. In fact, in 2004, McGowan provided funding to develop a Center for the Study of Infectious Diseases at HWI. The National Institutes of Health previously provided \$600,000 for Schultz and Umland to study SARS virus proteins required for virus replication.



Dr. L. Wayne Schultz



Dr. Timothy C. Umland

HWI CEO, Executive Director Announces Resignation

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STRUCTURES: How is your successor being chosen?

DETITTA: The board of directors is forming a search committee which will conduct the search and selection process for my successor. That committee will make all decisions related to the qualifications and criteria for the next HWI CEO and the decision will be approved by the board.

STRUCTURES: Who will sit on the search committee to choose your successor?

DETITTA: The board of directors will select the members of the search committee. Our intention is to ensure that the search committee includes representation from the Institute's boards, employees, as well as other select members of the campus community.

STRUCTURES: Do you feel your replacement should be a scientist?

DETITTA: The final decision on my successor will be made by the search committee and the board of directors. However I do believe that there is significant value to having the Institute run by a leader who is a scientist.

STRUCTURES: Do you have in mind any prospective candidate within HWI or outside of the Institute?

DETITTA: I do not have one particular candidate who I feel must step into the role, however when called upon by the search committee for input, I will be happy to suggest a few ideas for potential candidates at the appropriate time.

STRUCTURES: Will you be involved in the process to select your successor and if so, to what degree?

DETITTA: I plan to be involved in the process at the discretion of the search committee and will provide them with counsel as they request advice. This is a decision that will be made, not by me but, by the board of HWI.

STRUCTURES: You have spent a fair amount of time leading the Institute. Based on your experience, what qualifications would you like to see in your replacement?

DETITTA: From my experience, I think the Institute can benefit from a leader who is a scientist, who can lead a variety of different personalities and skill sets – who can manage in an adaptive way to handle the financial highs and lows of a non-profit organization that relies on research grants, and someone who can serve as a strong and positive community ambassador.

STRUCTURES: When will your successor be chosen?

DETITTA: I expect that it will take approximately six to nine months which is why I have given 12 months notice to ensure that the Institute's leadership transition is smooth.

STRUCTURES: Will this be a local or national search?

DETITTA: It is my understanding that all qualified candidates will be considered and the best possible candidate will be chosen.

STRUCTURES: What will happen if your successor is found prior to April 2, 2008?

DETITTA: If my successor is chosen prior to the one-year mark, I will joyfully return full-time to my lab.

HWI's Signature Building Enhanced by Original Art Glass Highlighting Science

A private unveiling of the art glass which graces HWI's front windows was held late last year. Artist Denise Stillwaggon Leone of Hamilton, New York created the piece to reflect the work that is done at HWI in a graceful and original piece of hand sand-blasted layers of glass. Thanks to the generosity of The Cameron Baird Foundation, this piece of art will adorn the building for the community to celebrate the connections between art and the sciences.



Photo Credit: Laurie Elliott Krajina

Susan Baird, representing The Cameron Baird Foundation, who donated the funds for the creation of the art glass; Denise Stillwaggon Leone, the artist who created the piece, and Constance Constantine, Emeritus Board Member and former chairman of the HWI Board. They are pictured with the artist's prototype which was presented to the Bairds in recognition of their generosity.

What is depicted in this art glass piece which graces HWI's front windows?

The art glass incorporates a small sampling of different elements which are related to the science of crystallography and/or have been the result of work done by HWI scientists.

The three large circular images are Laue diffraction patterns of lysozyme. Each spot in the pattern represents diffraction from a plane of atoms in the crystal.

The pattern of molecules running in a wave through the bottom of the piece is the packing pattern of a steroid studied by Dr. William Duax depicting how the molecules arrange themselves in a crystal lattice. Duax has had a 35-year long study of steroid hormones, their analogues and the enzymes with which they interact.

The mathematical formula which runs across the length of the art glass is Dr. Herbert A. Hauptman's minimum function formula which he and his group used to develop a suite of computer programs to help solve large crystal structures.

The small structure in the lower right hand corner as you look from the inside is the structure of insulin which was solved here by Dr. David G. Smith. This discovery explained the different speeds at which insulin crystals dissolve, an important factor in how insulin in injections for diabetics enters the bloodstream.

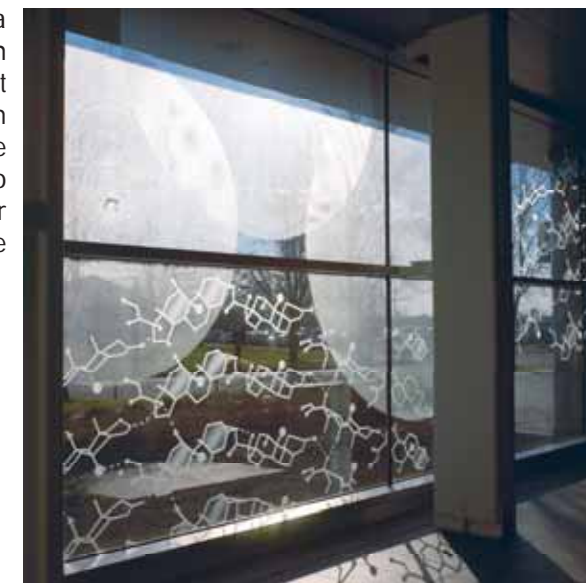


Photo Credit: Biff Henrich, Keystone Film Productions, Inc.

Only Employee to have worked in all Three HWI Buildings

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In April 2005, Cegielski joined her HWI colleagues in the move into the current state-of-the-art facility at 700 Ellicott Street. When asked to describe her thoughts on the new facility, Cegielski says, "phenomenal," which says it all.

Longest-Tenured Employee May Be Longest-Ever Volunteer

Although Cegielski officially retired on October 31, 2006, she has stayed on as a volunteer to continue her work in medical research as a way to keep her mind active and to give herself some structure and routine. Cegielski also sees this as a good way to keep in touch with the many friends that she has become so close with over the years at HWI. When asked how long she plans to stay on as a volunteer, Cegielski replies with a smile, "indefinitely."

When she is not hard at work in the lab, Cegielski still has plenty to keep her running. She is an avid craftsperson, and enjoys reading and traveling to visit her children and grandchildren. Cegielski said that she also has a growing addiction to word and number puzzles.

Peggy Cegielski has come a long way since the start of her career in the late 1950's. Although lab techniques and technology have changed, one thing remains the same - Cegielski's charm and quiet demeanor. She is one of the reasons HWI is a special place to be.

Structures is published three times a year to inform the public about some of the things that are happening at Hauptman-Woodward and the individuals that make it happen.

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