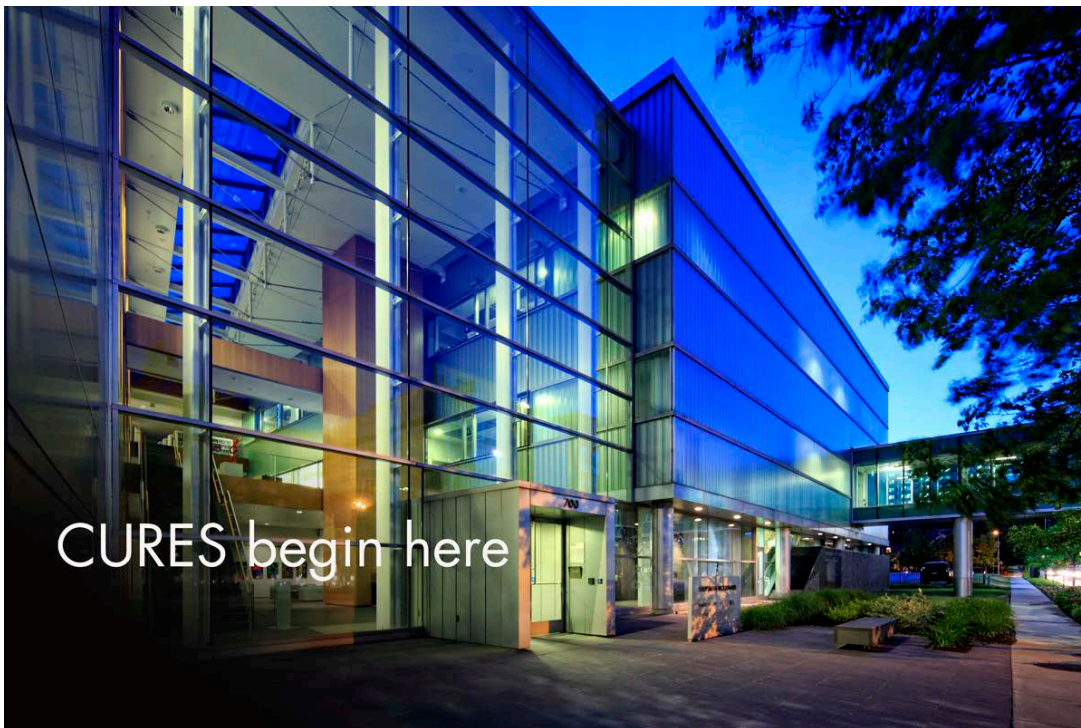


The Hauptman

Woodward Medical Research Institute in Buffalo



CURES begin here

by *Lynne Belluscio*

Helen Woodward was born in 1899 and was the youngest of the Woodward children. Her father owned the Genesee Pure Food Company which produced Jell-O.

The family was very wealthy and although Helen lived a life of relative luxury, she also was a quiet philanthropist, giving millions of dollars to establish a variety of institutions. In 1956, she gave \$3 million (equivalent to \$26,427,000 in 2016) to the Buffalo Medical Foundation under the guidance of her personal physician, Dr. George Koepf, an endocrinologist. Helen died in 1965, but her legacy continued at the research center. In 1970, Dr. Herbert Hauptman joined the crystallographic staff of the Medical Foundation and in 1972 became the Research Director.

In 1985, Hauptman received the Nobel Prize in Chemistry together with Dr. Karle "for their outstanding achievements in the development of direct methods for the determination of crystal structures". The two scientists developed equations that that allowed the determination of the phases of diffracted X-Rays through crystal structures. In

1994, the Medical Foundation of Buffalo was renamed the Hauptman-Woodward Medical Research Institute, as a tribute to its founder, Helen Woodward and the Nobel accomplishments of Dr. Hauptman.

This past week, during the Historical Society's spring trip, our group visited the Hauptman-Woodward Medical Research Institute in Buffalo. Helen Woodward's granddaughter, Connie Constantine, made arrangements for us to meet with Dr. Edward Snell, the director and CEO. Appointed to this position in 2014, Dr. Snell had served eight years at the research center as a Senior Research Scientist. Previously he was a staff scientist in NASA's Structural Biology Laboratory at the Marshall Space Flight Center in Huntsville, Alabama. "Eddie" as he introduced himself to us, explained in very simple terms, the work that is being done at the Hauptman-Woodward Institute. They create crystals which they bombard with x-rays to determine their effectiveness in a variety of diseases - breast cancer, prostate cancer, diabetes.

He also shared with us some exciting experiments that he and his wife have designed

that are being done on the International Space Station. (The experiment is being done today, Monday May 8. Dr. Snell will be in Cleveland communicating with the astronauts who are doing the experiment.) This is from a newspaper article that appeared in the Buffalo newspapers:

"While it's not the first time that Buffalo samples from Hauptman-Woodward have been in space, it still ignites excitement each time something heads upward.

These particular solutions will be kept on the International Space Station for the best opportunity to thaw them, start the experiment and watch the results from the ground. That will go on right in Buffalo. Snell said the astronauts will put the experiment on a microscope and then staff at Hauptman-Woodward will be able to see the images live as the experiment runs, orbiting the earth every 90 minutes.

At Hauptman-Woodward, he is trying to identify which samples will grow better and which will not. "In space, liquids flow differently, and sometimes, but not all the time, crystals grow much better," said Snell, who previously worked

as a staff scientist at NASA before coming to Buffalo to head Hauptman-Woodward.

The experiment on the International Space Station will test his prediction.

Growing crystals and studying them with X-rays allows the scientists to reveal their shape. "Almost," Snell said, "like opening up the hood of a car to see how the engine works. The better the crystal, the better detail that can be seen, and the more complete understanding we get," Snell said. "The faster we can design a new drug."

Once the experiment is concluded, the crystals will be returned to earth to be studied further. They will splash down in the Pacific, and we'll be on the West Coast to pick them up."

Helen Woodward had no idea that her "investment" in medical research would result in such phenomenal results, but thanks to her philanthropic generosity, exciting things are happening. After I posted a short note about this project, on LeRoy Then and Now, two people responded. Carol Bonaquisti mentioned that her granddaughter, Emily worked there two years ago on a research project. And Diane Carson mentioned that her son, Al Reger studied under Dr. Andy Gulick at the HWI while working on his Phd.

