

Interview with Dr. Bob Yee

From December 2013 IDM newsletter

by Mr. Joseph Pawlak

Earlier this Fall the laboratory research in IDM moved from several floors of Parran Hall to the newly constructed GSPH Lab Pavilion. This is not the first time that IDM moved, having moved from the Municipal Hospital to Parran Hall in 1957. You were part of that first move. I'd like to get your insights on that, and the Department in that era.

Question: What brought you to IDM?

It was 1952 and I had just finished my Master's degree in the Department of Biological Sciences at the University of Pittsburgh. I didn't want to remain there as a teaching assistant. I heard there was a position available at the new Graduate School of Public Health (GSPH). At that time I knew nothing about public health, but they wanted a technician. The person that conducted the interview was Dr. Horace Gezon. The first thing I told him was that if he could not pay a salary of \$3000 annually, I was not interested in the job. He said that salary was no problem. In those days, that was a lot of money, and faculty were free to make decisions on their own. I thought that if I ever made \$10,000 a year I would be very happy.



Dr. Gezon was an associate professor in the Department of Epidemiology and Microbiology, studying basic bacteriology. This was important as I was trained as a bacteriologist and not a microbiologist. Also on the faculty were William Hammon who was a virologist, Francis Sargent Cheever who was an infectious disease clinician and Sidney Cobb, a chronic disease epidemiologist who was a full professor. Gezon was interested in the effects of antibiotics on Shigella. This is the organism that causes bacillary dysentery. This dovetailed with my interests in bacterial physiology. Dr. Gezon and a member of his group Dr. Sylvia Pan from Shanghai China, were the only ones really doing basic bacteriology. At that time they were doing techniques that I was not familiar with. The rest of the department including Dr. Hammon and Dr. Cheever were interested in isolating etiological agents. Dr. Hammon was a foremost expert in arboviruses. He was also carrying out national field trials on the effects of gamma globulin in preventing polio. There was no vaccine at that time so they were using gamma globulin to create passive immunity. Jonas Salk was also located in the municipal hospital, having been recruited in 1947. When Hammon came to the new GSPH a year later, he knew that Jonas Salk had the same interest in finding a cure for polio. Hammon met with Salk to discuss how they might collaborate, but Salk was not interested. It was his nature to be very secretive. I had a classmate who later became my brother-in-law and worked in Salk's research group. He was never allowed to talk about his research, even to his family.

Question: What are some of your recollections of Municipal Hospital?

Municipal was a hospital for individuals with infectious diseases - sort of like a quarantine. It was run by the city. On the first floor were the diagnostic laboratories. At that time there was no county health department. Horace Gezon was director of the laboratory. It was from him that I learned about infectious diseases, epidemiology, and diagnostic microbiology.

Question: That seems like a big difference in the model where you would have a governmental apparatus, in this case a local government working directly with a research and academic institution. There isn't anything like that now.

It was unusual even at that time because the faculty was primarily interested in research and teaching students. They were not interested in applied public health. When the city and county wanted to make Horace Gezon a lab official, the other faculty members discouraged it. So Gezon eventually dropped out of the job, and they had to find a new director of the laboratories.

Question: You talked about the potential collaboration between Salk and Hammon. Tell me a little more about that relationship.

They simply did not talk to each other anymore. Hammon decried this missed opportunity and was saddened about it. One of the things that was fortunate for me was that Jonas Salk taught an animal virology course which I was able to take. It was taught by him and Jules Youngner. It was a very good course.

Question: So Hammon was working on a non-vaccine treatment for polio?

It was based on the fact that gamma globulin contained antibodies to polio. This was injected into individuals when there was an outbreak of polio to provide temporary protection against the organism by giving them antibodies. It was successful but it was only temporary.

Question: Was it in a forerunner to Salk's work?

No, these were two completely different paths. Hammon's work was passive immunity while Salk's work was active immunity.

Question: Did you have any professional interactions with Salk?

Not really, just to say "hi". There was very little contact among GSPH people and Salk's group, although Salk had a secondary faculty appointment in our department.

Question: What were your recollections of the perceived impact of that announcement of the Salk vaccine in 1955 on the School and the Department? Did you have any thoughts personally?

There was a great deal of excitement and joy in the School and Department, although some reservations were quietly expressed. Some still favored the Sabin approach, a live vaccine. Others were worried that, at some point, the lots of the Salk vaccine would contain some live virulent virus. The "kill curve" approached but never reached zero. I myself welcomed it because one of my undergraduate classmates was crippled by polio and Bob Rotuno and Don Wegemer, my graduate school classmates, were part of the Salk team. Also I could say I had taken Animal Virology taught by Jonas and Julie Younger.

Question: Was Dr. Hammon someone you worked closely with during any point in your career?

Yes because Hammon made the whole place like a family. Everyone was treated the same. Socially everyone was treated the same. He was interested in everyone. One of the great annual events was when the school year started the faculty, students, and staff would meet at his house for a dinner in the evening and socialization. This was a total of 25 people or so. In those days we did not have as many students, and all the students were in their late 20s and early 30s. Some were in their 40s and 50s. Almost all of them were paid by their organizations. These were professional people who were working on advanced degrees. There were also a lot of people from other countries. There were a number of students from Japan, Central America, and particularly Thailand. The school was training future faculty members for other schools of public health in other countries.

Question: What did you do early-on in your career?

My early work involved research in the metabolism of antibiotics against Shigella. Horace Gezon was a lieutenant commander in the Navy as an epidemiologist. While he was in the Navy he was trying to determine the effect of ships expelling their waste into the ocean. He was in charge of studying the impact where a destroyer discharge their waste on coastal waters in North Carolina. They used a bacillus that formed black colonies to track it. Horace liked to recall that at that point the captain had to turn the ship over to him.

Horace was not just interested in conventional research. For example, there was an outbreak streptococcus in the north side of Pittsburgh. He would say he was going to collect some samples, telling me to prepare agar plates. Horace was very much hands on. That is how I learned about diagnostic bacteriology. At that time he was well recognized as an expert in epidemiology of infectious diseases. When there was outbreak of salmonellosis caused in Lancaster, they called on him to investigate it. They believed it was a milk-borne epidemic. So he took a team that included me and my associate Barney Ferraro who was the head of the city's diagnostic laboratory to set up a lab in Lancaster. He also took three or four epidemiology student to participate in the study. At that time we had so much influence that we received culture media prepared by the Baltimore biological company. The Maryland state police drove the media to the Pennsylvania border where it was picked up by Pennsylvania State police and brought to Lancaster. We discovered that the epidemic was caused by a human carrier. At that time they were using the so-called slow pasteurization method which required constant stirring. When one worker lifted up the lid to stir the contents of the vat he put his bacterial laden hands on the inside top of the lid. Condensation from the heating process then dripped into the milk causing the contamination.

There was another example of an outbreak of "gonorrhea" in southwestern Pennsylvania among elementary school girls. A local physician diagnosed the discharge of these girls as being associated with gonorrhea. The physician insisted he didn't need help and claimed experience with gonorrhea based on the review of dozens of slides. Upon further investigation we was discovered that the discharge was not gonorrhea, but just a normal discharge.

Question: You said that you did not have a lot of students in that era. What other differences were there in terms of your interaction with and observations of students at that time?

In those early days I learned a lot more from the students than I could teach them. They had much more experience than I did. I remember a time that we were studying an outbreak of gram negative bacteria at Magee Hospital. There was a student from the Maryland public health department. We needed some containers to collect samples, and he suggested Dixie cups. I didn't think Dixie cups survive autoclaving, but to my amazement they did. In general all the students had more input into their research. However at some point, public health organizations stopped sending students, because they were hiring students with advanced degrees. When the younger students started to come in, they required more help from the faculty.

Question: When did you see that change?

Probably in the late 1960s - early 1970s, because I can recall having a lot of discussions with the students about the war in Vietnam. A lot of these new students had no idea of what public health was. Once a week there was a public health seminar that everyone was required to attend. Peer pressure, not the threat of any kind of punishment, got everyone to attend.



Question: Having just lived through a move of the department, I can tell you it was a traumatic ordeal for many people. What was the move like in 1957?

The move was smooth. The reason was that we were allocated the space and designed the laboratories. Having designed the space, we knew where everything was going once it was moved.

In those days (the 1950s) there was only one kind of laboratory in our perception. A lot of the faculty did not want the architects involved in the design. Even the kitchen (the autoclave facility) was designed by faculty. Unfortunately the University decided on the furniture for the labs based on the low bid. Some of the laboratory cabinets were not the best and bench-tops were Formica. We discovered that laboratory burners were putting out enough heat to make the Formica bubble. We had to put asbestos pads to put under the burners. Another problem was that the floors were just thick enough to meet the legal specifications. As a result we had to buy special tables, with heavy tops, because the floor in the lab vibrated whenever someone walked down the hall.

There was also a big debate about whether the building should have central air conditioning, considered a luxury at that time. Some spaces had window air conditioners. However, this was not practical in labs where air blasting could cause contamination. At the last minute, the school found a million dollars to put in a Carrier air conditioning system. This was later discovered to be a mistake, as oil soaked filters in the air conditioning units captures a lot of dirt which in time began to blow-out of the vents. Ultimately the vents had to be covered with cheese cloth.

Question: Prior to Parran Hall what was in the space in currently occupiees?

It was a combination of residential structures and Fifth Avenue retail stores.

Question: How did people feel about the encroachment of the school into this space?

There was really no concern, primarily because back in the 50s there was a great deal of residential and commercial space available.

Question: Let's talk a little more about the faculty that were here in the 1950s. Tell me about the recruitment of faculty and their development during that period.

In the beginning it was a classic faculty primarily composed of epidemiologists. They were all MDs. PhD's who came on board at that time were given the position of research associate. Technically according to University policy, research associates were actually faculty members. One of my friends during the 1950s Ernie Ludwick was a research associate virologist. A faculty position opened up for an associate professor position at Penn State. Ernie interviewed for the position and they were so impressed by him that they offered him the position as a full professor. It was only later on as research associates did more teaching that we became recognized as faculty members.

In addition to being the chairman of the department, Hammon and his wife were also missionaries in Africa. I recall that what they liked least about Africa was the inability to grow tomatoes.

Sarge Cheever was a perfect gentleman, frequently stepping in to resolve the disagreements. He had a Bostonian accent and an aristocratic bearing. He owned an old De Soto automobile. Around that time Cheever was appointed vice chancellor for health services. It was also around that time that they recruited Monto Ho (1959).

Question: What was your degree level at that time?

I received my PhD in 1957 and served as a research fellow. As I became more active I was recognized as a faculty member.

Question: What did other people think of the new facility?

Everyone loved it.

Question: What did you think?

I thought it was pretty nice. We had a lot more room, more than twice the space we had in the hospital. For the first time we got dedicated office space. Prior to that we had a desk in the lab.

Question: In addition to space one of the other reasons for moving to the graduate school of Public health was to obtain state-of-the-art equipment for the new facility. What were some of the state-of-the-art pieces of equipment at that time?

One of the most important changes was the modernization of all sterilization equipment. That was a big deal. Prior to moving to Parran Hall all the dishwashing for the labs was done by hand. At that time this required six people. We tried to improve the skills of all the people who worked in the autoclave facility. Many of these people became laboratory technicians including Mary White and Delores Oliver.

I think that at that time we not only wanted to work together but to be together. Today the focus appears to be more on the individual.

Question: Looking back at the past is sometimes a good point of departure for looking toward the future. Where do you see public health and perhaps specifically infectious diseases going in the near future? What are the new frontiers? What are the challenges?

It is hard to say because when I retired, I dropped-out of public health. When I was active I read one journal article every night before I went to bed. I think it is hard to predict where public health is going today because there are so many things you cannot do today that you could do in those days. I cannot agree with what John Cutler did, but he was a great man. Perhaps the biggest issue in public health today is how to deal with the politics and what is politically correct. You can no longer say you're going to do something because it is good for the public.

One of the things you have to learn, even though we were awash in money at that time, was to economize. I don't see that anymore. Instead people say that there is not enough money to conduct research. I don't think we can continue to use all these sophisticated techniques at such high costs. In five or 10 years, will we have enough competent scientists to conduct research? The way the environment is today it is discouraging students from going into pure or academic science. More and more of these individuals are going into industry. The impact of online teaching also creates additional uncertainty in the field. Graduate training is really about interaction between students and faculty members. When I was teaching I never answered the students question directly. Rather I attempted to tease the answer out of them.

When I was active in the Department, it was really bustling; there was always someone rolling a cart down the hallway. Today the labs seem empty. I still think it takes a strong work ethic to do the things you want to do.

I thought it was interesting that you had to design your laboratories so that people could communicate with each other. In my days communication occurred naturally. One thing we had in those days was our own cafeteria. This gave people an opportunity to talk. The Dean always made it a point to sit with different groups.

Another big social event was a picnic at Horace Gezon's farm where he raised sheep. The entire department turned out.

In my day there was no bureaucracy. Consequently I could manage the administration, the recruitment, interviewing, and admissions of students, the development of the curriculum, and consulting with the faculty. The rest of the faculty did not have to spend time on these matters, leaving more time for research and teaching.

As the Department grew bigger it became increasingly difficult to manage. We wanted Monto Ho to become department head but he said he didn't have the time because he was already chief of infectious diseases at Presby, chief of infection control at Presby and also head of the diagnostic microbiology laboratory at Presby. I

told Monto that if he took care of the academics I would take care of the administration. We split the job and were able to work as a team.

Today, I don't know how I would do it. I think there still exists a schism between the basic researchers and public health. We used to say that we needed do something to set-up a facade so that we (basic researchers) can exist in the school of public health. There was always a movement to combine our department with something else.

Question: *In the schism between the basic researchers and public health, where did you come down?*

I was on both sides of the fence. I owe this to Horace Gezon. He was doing basic science, but he also got me into public health. I was fortunate. I came here as a basic bacteriologist/physiologist. I left as still basic, and also a public health professional.

Pittsburgh Municipal Hospital for Contagious Diseases was constructed in 1941 as a Public Works Administration project on land the University of Pittsburgh had given to the city. The 225-bed hospital was intended to be used primarily to treat communicable diseases. By 1947, antibiotics had virtually eliminated the need to quarantine patients, and the building was remodeled to house Jonas Salk's virus research lab in the basement (formally the morgue). The fourth and fifth floors were active polio wards with patients in iron lungs. Salk expanded to newly renovated facilities on the first and second floors in 1951, and moved to Scaife Hall when it opened in 1956. Importantly, the hospital also housed the newly established Graduate School of Public Health (GSPH) from 1949 to 1957.

William McDowall Hammon, M.D., was the first Chairman of the forerunner of IDM, i.e., Department of Epidemiology and Microbiology, and a researcher best known for his work on arboviruses. His important work on passive immunization against poliomyelitis with gamma globulin has been extensively documented by Dr. Rinaldo (Am J Public Health. 2005; 95:790-799).

Horace M. Gezon, M.D., was a researcher whose work focused on the metabolism and pathogenesis of shigella, staphylococcus, streptococcus, and paratuberculosis. After a distinguished career in the US Navy, he served on the faculty of the Department of Epidemiology and Microbiology, and then as a research scientist at Atlantic Antibodies in Windham, Maine, in the early 1990s.

Francis Sargent Cheever, M.D., served at the University of Pittsburgh as Vice Chancellor of Schools in the Health Professions, President of the University Health Center of Pittsburgh, Dean of the Medical School, and professor in the Department of Epidemiology and Microbiology at GSPH.

Silvia Pan, M.D., was a microbiology researcher whose research interests included shigella in Dr. Gezon's laboratory. Dr Pan is still active in research in both Taiwan and mainland China.

Sidney Cobb, Ph.D., was an epidemiologist who conducted research ranging from the impact of stress in the work place to the study of cancer rates near nuclear reactors. Dr. Cobb served on the faculty of the Department of Epidemiology and Microbiology in the 1950s and 60s.

Julius Youngner, Ph.D., is a virologist and member of the Salk team that developed the polio vaccine. Dr. Youngner was responsible for establishing techniques to produce poliovirus on a large scale, and helped develop the process for inactivating the virus for use as a vaccine.

Jonas Salk, M.D., was a virologist who developed the first successful polio vaccine while a faculty member at the University of Pittsburgh. He left to establish the Salk Institute for Biological Studies in La Jolla, California in 1960.

For a sample of the research of Bob Yee and others mentioned in this interview, see the publications below.

This paper was Dr. Yee's PhD thesis:

Yee, R.B., Pan, S.F., and Gezon, H.M. Studies on the metabolism of Shigella. III. The inhibition of the oxidation of glutamate by Aureomycin. *J Bacteriol.* 75:56-62, 1958.

Pan, S.F., **Yee, R.,** and Gezon, H.M. Studies on the metabolism of Shigella.1. The occurrence of a tricarboxylic acid cycle in Shigella flexneri. *J Bacteriol.* 73:402-409, 1957.

Gezon, H.M., Thompson, D.J., Rogers, K.D., Hatch, T.F., Rycheck, R.R., and **Yee, R.B.** Control of staphylococcal infections and disease in the newborn through the use of hexachlorophene bathing. *Pediat* 51:331, 1973.



Thanks to the alumni and others who have donated to the Bob Yee Scholarship Fund (see page 16). The establishment of this Fund is one of the greatest highlights of my career. As a result, we have been able to provide some financial support to a few of the masters students, especially ones pursuing a career in public health. We may some day be able to support all of the masters students. To reach this goal, I hope all of you will become sustaining donors by contributing \$25 annually to the fund. Once again, thank you. I miss the good old days working with all of you. I remember each and everyone of you.

- Bob Yee

Interview with Mary White

by Mr. Joseph Pawlak

The IDM move from Parran Hall to the GSPH lab Pavilion closes a major chapter in the history of IDM. In 1957, IDM (then known as Department of Epidemiology and Microbiology) moved from space in the Pittsburgh Municipal Hospital to their new home in Parran Hall. Only a few people can put IDM's 56 year tenure in Parran Hall into perspective from first-hand experiences. One of them is Mary White. Mary White came the department in 1959 and has spent the past 54 years here.



Question: What brought you to the Department of Epidemiology and Microbiology?

My mother was here first and she recommended me for a job in the Department. My mom was working in the department in the kitchen of the school's cafeteria. Drs. Gezon and Yee brought my mom down to Parran Hall when the department moved here. My first job in the Department was in the kitchen autoclave facility. Work in the kitchen was extremely important to the work in the Department.

All of the glassware was washed by hand, and at that time before the advent of plastic there was a lot of glass ware. There was no glassware washer at that time. About 9 people worked in the kitchen.

Question: What did you do in the kitchen?

I washed glassware and operated the sterilizers. Working in the kitchen taught me how important the work was. The equipment you prepared went into the labs. If it wasn't done properly, the lab experiment did not work.

Question: Were there any memorable experience from that time in the kitchen?

What I remember most were the people I worked with. I enjoyed everyone around me. I also learned a lot of things there that helped me when I later worked in the lab.

Question: Was this your first job or did you do something else before you came to Pitt?

Before I came to Pitt, I worked in a 5 and 10 cent store.

Question: How long did you work in the kitchen with you mom?

About two years. Then Dr. Hammon took me out of the kitchen and began to train me for a job in the lab. It was important to Dr. Hammon to find opportunities for staff to grow into new jobs. This was a great opportunity for me.

Question: I understand that besides your mom, you had some other relatives who worked in the Department.

Yes, I did. My sister Dolores and my grandson Laron both worked in the Department and both worked in the autoclave facility.

Question: Tell me a little bit about your first job in the lab.

They put me in a lab with Captain French. He was a veteran who was working on his PhD. He trained me on how to do a lot of things in the lab. One of the things he taught me was prepare chicken embryos for his experiments. I worked with Captain French for about 4 years.

After working with Captain French, I worked with Dr. Hammon who taught me how to work with tissue cultures. I prepared cultures for a number of different people in the department. I continued to do chick embryos, but also did rabbit kidneys, mouse embryos, and hamster embryos.

Question: What sort of training did you have prior to coming to Pitt?

I was a high school graduate, but did not have any other training prior to coming here. All of the training related to the job I learned while I was here.

All of my training and all of my subsequent work was done on the lab bench, as there were no biohazard hoods at that time. It was extremely important that protocols were followed carefully so as not to contaminate an experiment. Mouth pipetting was also the standard at that time. Again, you had to be very careful when performing these kinds of procedures.

Question: What did you think of your training?

I thought I was trained very well, and that I caught-on quickly.

Question: Was there anyone who stuck-out in your mind as an exceptional trainer?

After my initial training with George French, the rest of my training was less formal. Essentially I was just building on those initial techniques.

Question: From your perspective, what were recollections of Jonas Salk? Did you ever meet him?

I never met him and did not know him. My mother met him when she was at municipal hospital, but not me.

Question: Because of the significance of his work, were people here in GSPH in awe of Jonas Salk?
They never really talked about him that much. Part of the reason was that he never came down to Parran Hall.

Question: What were your reminiscences of that era as it related to the polio epidemic, and the work on the polio vaccine?

At that time I had two kids. I remember my husband and me taking the kids to get polio shots on the Hill.

Question: What can you tell me about Dr. Hammon?

I really liked Dr. Hammon. He was concerned about everyone who worked for him. He thought of the Department as a family. Every day 3 o'clock in the afternoon all the workers got together to talk over coffee and cookies for 15-20 minutes.

Question: Over the past 56 years were there any jobs that you found particularly rewarding, or that otherwise stuck-out in your mind?

What stands out in my mind was helping the students prepare the tissue cultures that may in some way helped them to get their degree.

Question: Now you work for Dr. Gupta. How do you like that?

I love it. They saved the best boss for last.

Question: After 56 years on the job what are you looking forward to?

Enjoying my kids and grandkids. As for work, I plan to stay until I feel that it is enough. I love to meet and work with people from all over the world.

World AIDS Day Proclamation



Dr. Linda Frank (pictured center) with Chief County Executive, Rich Fitzgerald and the Pittsburgh AIDS Commission on December 2, 2013 in Downtown Pittsburgh.