

**ARMED FORCES INSTITUTE OF PATHOLOGY  
ORAL HISTORY PROGRAM**

SUBJECT: Dr. Kamal G. Ishak

INTERVIEWER: Charles Stuart Kennedy

DATE: 1994

[Note: This transcript was not edited by Dr. Ishak]

*Q: Dr. Ishak, could you give me a bit about your background. When and where you were born and a bit about your family background, please.*

**DR. ISHAK:** I was born in 1928, actually in the Sudan, which is a country south of Egypt. At that time, my father was working for the joint Anglo-Egyptian government.

*Q: It was the Anglo-Egyptian Sudan.*

**DR. ISHAK:** It was called the Anglo-Egyptian Sudan, yes. And then, at the age of three, we moved to Lebanon, where I lived until I was about nine years old. And then, from then on, I went to Egypt. Since that time until I was about 30 years old, I was in Egypt, where I went to school and also went to medical school.

*Q: You were in Cairo. Did you go to Cairo University?*

**DR. ISHAK:** I went to Cairo University, yes.

*Q: What directed you towards medicine?*

**DR. ISHAK:** Well, you see, when we went to school, we were channeled into two major areas: one was science and the other was other endeavors. And I was always interested in science, so I went to science. When I graduated from high school, I wasn't quite sure where I was going to go. But I was accepted in medical school, and that was the end of that.

*Q: You went to Cairo University for medical training, too, is that right?*

**DR. ISHAK:** Yes, just for internship. And then I went to the U.S. Naval Medical Research Institute in Cairo.

*Q: What directed you towards pathology at that time?*

**DR. ISHAK:** When I went to the U.S. Naval Medical Institute...

*Q: It's called NAMU...*

**DR. ISHAK:** NAMU III. I was there on a Fulbright scholarship. They offered me a position in the pathology department, which I accepted. I had no intention of staying in that field forever, but I got so interested that I decided to make that my specialty area.

*Q: Could you talk a bit about NAMU III as you saw it, because NAMU III is a very famous organization. Through all the vicissitudes of American-Egyptian relations, it sort of stayed. It's a very honored organization.*

**DR. ISHAK:** I know, it has done a lot of research in tropical diseases over the years--schistosomiasis, all kinds of other tropical diseases. The collaboration between the U.S. medical team there and the Egyptian doctors who were on the staff was excellent.

*Q: When you were there, this was really for your internship, is this right?*

**DR. ISHAK:** No, it wasn't quite that. It was a scholarship, a Fulbright scholarship, and I did it in the Department of Pathology. But it was not really a part of official training, it was more to do research. And I did research on schistosomiasis and brucellosis, which was another disease that I studied.

*Q: Were these diseases, brucellosis and schistosomiasis, endemic to that region, throughout Africa, or more to the Nile?*

**DR. ISHAK:** Schistosomiasis is particularly troublesome in North Africa, particularly in Egypt, the Sudan. It's a big problem, public health and economic problem, because the farmers get it from wading in the canals and getting infected, through the intermediary snails.

*Q: You were there from when to when? I have you graduating from Cairo University in 1951.*

**DR. ISHAK:** Yes, but in between that and going to the NAMU III, I spent several years doing internship and residency training in another hospital in Cairo.

*Q: Were you there during the Suez Crisis of '56-57?*

**DR. ISHAK:** Yes.

*Q: Did this cause any problems for people working for the Americans at the time or not?*

**DR. ISHAK:** At that particular time, it did not. There was some disruption in getting to work and so on. We had some bombings and so on, but it didn't last very long.

*Q: While you were there, how was the study of schistosomiasis coming along? Were they making much progress?*

**DR. ISHAK:** Well, we were not involved in treatment of the disease. We were just mainly involved in the epidemiology and the pathology of the disease and the clinical effects and so on. Subsequently, though, they did do work in the treatment of the disease. In the area of pathology, they were interested in the effects on the bladder and the kidneys and so on, and also in the effects on the intestines and liver. It involves multiple organ systems.

*Q: In 1957, you went to the United States. How did that come about?*

**DR. ISHAK:** When I was in NAMU III, I worked with an Army pathologist, whose name was Paul LeGolwin, who subsequently came to the States and worked at the AFIP for several years. He was instrumental in finding me a residency in the United States, in San Antonio. It was through him that I was able to come to the States.

*Q: That's when you went to the Baptist Memorial Hospital, and then later to Baylor University Medical Center.*

**DR. ISHAK:** Right.

*Q: What were you doing in those hospitals?*

**DR. ISHAK:** Since I was a foreign student, they didn't recognize my previous training in Egypt, so I had to go through residency training again, which in pathology is four years. So I went to these two. In San Antonio, I did anatomic pathology, and in Baylor, I did mostly clinical pathology. So I was boarded in both fields.

*Q: I take it, by this time, pathology had grabbed you.*

**DR. ISHAK:** Yes, yes.

*Q: What was the interest in pathology?*

**DR. ISHAK:** Well, I was very interested in that field. I had not yet subspecialized. You know, pathology is a specialty, but then the subspecialties involve different organ systems. For example, I'll do liver, but there are people who specialize in brain pathology, and others in pulmonary pathology, and so on. So I was just getting the broad education in the field of pathology before I specialized.

*Q: After you finished your four years training or so, then where did you go?*

**DR. ISHAK:** I came straight to the AFIP.

*Q: How were you recruited?*

**DR. ISHAK:** Well, the same person who got me the trainings...

*Q: This was...*

**DR. ISHAK:** LeGolwin, yes. He's now retired. He also arranged to get me a position at the AFIP in the department that at that time was called Pediatric and Hepatic Pathology.

*Q: Who was in charge of it then?*

**DR. ISHAK:** When I arrived at the AFIP, there was a man by the name of Hans Smetana who was just about to retire from that position. So for the first year and a half, we had no chairperson. Somebody was acting chair, replacing him.

*Q: Smetana's name has come up in a number of these interviews as being a very interesting person. How did you find him?*

**DR. ISHAK:** Well, I didn't know him too long, because there was only about a month overlap between his departure and my arriving there. But he was a very interesting man, because he had taught in Peking University when he was in his early years, and then he was from Austria originally.

*Q: He was a relative of the composer Smetana.*

**DR. ISHAK:** Yes, Smetana of *The Moldau* and so on. And he also played the piano himself; he was a very good pianist, classical music. So he was a very interesting man.

*Q: When you came in, you basically concentrated on the liver. You came to the AFIP in 1963. What was the major concern with the liver at that time?*

**DR. ISHAK:** At that time, there were the same problems, more or less, that we have now.

Hepatitis, although at that time, there were only two types of hepatitis known. One was so-called serum hepatitis, which later became hepatitis B, and the other was infectious hepatitis, which is now known to be hepatitis A. Subsequently, of course, we now have five types of hepatitis that have been discovered. So this field has always been in the forefront of liver disease. The other area that was of interest to me was reactions to drugs that involve the liver. And third, was the area of tumors of the liver, both benign and malignant, which I had special interest in.

*Q: Was the AFIP involved in the breaking down of the various types of hepatitis into the five categories?*

**DR. ISHAK:** No, these discoveries are really basic biologic studies that were discovered by people in virology and so on. So we were not involved in actually discovering the viruses, but certainly in the pathology related to each of these different types of virus.

*Q: Has there been a change over the years in how you go about studying things at the AFIP? Is the equipment better, or different? Are approaches different? Have you seen changes?*

**DR. ISHAK:** The changes are not that great. We still study biopsy specimens to make a diagnosis of the disease, and also whether it is acute or chronic. Particularly, biopsies are made in the chronic stages. In the acute stage, very few people biopsy patients now, because a diagnosis can be made on serologic tests and so on. But the long-term effects, chronic hepatitis and also some of these that are associated with carcinoma, those have to be looked at by a pathologist.

The new techniques used have to do with special immunostains. I don't know if you've heard about immunohistopathology or histochemistry, where you have antibodies to a specific virus or antigen, and you look for that in the liver. So we have those now available to look for hepatitis B, and probably very soon for hepatitis C. In addition, we can take those tissues that are taken out and do what's known as a polymerase chain reaction, which is a very sensitive technique for detecting antigens, including viral antigens. So those are new techniques that are slowly being used, although they're not essential for diagnosis.

*Q: When you first arrived, did you find you were somewhat swamped by referrals to you from all over? What was the situation in your particular department?*

**DR. ISHAK:** Initially, of course, when I went there, I was a total unknown. Nobody had heard of me. I'd published a few papers, but... But, gradually, as you are there year after year, you build a sort of clientele, if you will. People begin to recognize your abilities in diagnosis, and then more and more cases are referred to you, particularly those that come from foreign countries. So you get a reputation for that.

The other, of course, way that people send material to the AFIP is because it is the AFIP, rather than an individual person. They say, "Well, somebody there knows something about this, so we'll send it there."

But, in general, if you've been there long enough, people will actually send cases specifically directed to you for diagnosis.

*Q: Was this something you could handle?*

**DR. ISHAK:** We've never had an overwhelming volume of cases, so we're always able

to study cases at leisure and do research projects and so on. We've had a good balance between the number of people in the department and the number of cases. Some departments are just overwhelmed with cases and have little time to do anything else.

*Q: While you were there, Col. Morrissey came as the director, and left somewhat sooner, and one of his complaints was that each department was sort of a little dukedom of its own.*

**DR. ISHAK:** Yes.

*Q: Some were responding rather quickly to referrals, and others were taking a great deal of time. There wasn't any standardization.*

**DR. ISHAK:** That was a problem until a few years ago, with the delay in consultations. But I think that's been adequately corrected now. Whatever delays there are today are not related to individual persons sitting on a case or something. But because of the complexity of the cases, it requires a lot of work, immunopathology and so on. But there's no question that the cases that are referred here are really complex, complicated cases.

*Q: You didn't find, then, that people were referring cases to you just as a matter of almost convenience, saying, "Well, let's just send one off to the AFIP, to see what they say."*

**DR. ISHAK:** Not in our case. In our department, most of the cases that have been sent in from civilian sources have been more or less interesting cases where people really wanted an opinion. Then we also got, of course, cases that were sent from military and Veterans Administration hospitals that were for different purposes--quality assurance and so on.

*Q: You went there in '63, and we were beginning to get involved in a major way in Vietnam, Did Vietnam pose any particular problems in your area, as opposed to just the normal service, say, in Texas or somewhere like that?*

**DR. ISHAK:** Not particularly. There was an increase in the number of hepatitis cases, but it didn't particularly affect us, because they had teams that were sent there from Walter Reed, WRAIR and so on, that were specially there to treat those cases.

*Q: When you first arrived, the director of the AFIP was Col. Joe M. Blumberg. Could you talk a little about him. He's seems to be one of the major figures in the AFIP.*

**DR. ISHAK:** Yes, in my estimation, he was one of the more effective directors. But you have to balance that against the fact that the Institute at that time was not very large and

not very complicated, as it is today. He was able to effectively control everything and was a good administrator. Right now, it's a little bit diffused, the administration, and there are many more people that are affected, many more departments. So it's a much more difficult task to run the Institute now than it was in his day. Nevertheless, he was a very effective director.

*Q: Did you have much contact with him? Was he down in the various departments?*

**DR. ISHAK:** He did have some personal contact with different departments, but not on a day-to-day basis, of course.

*Q: What happened in your department, Hepatic and Gastrointestinal Pathology. Was that what it was called when you first came?*

**DR. ISHAK:** No, the department of Hepatic Pathology was separate. And then there was also the Department of Gastrointestinal and Skin Pathology, Dermatopathology. The two were combined, for some odd reason, way back.

*Q: When you arrived, it was what?*

**DR. ISHAK:** It was the Department of Gastrointestinal and Dermatopathology together. Then they separated Skin, so Gastrointestinal Pathology was separated from Skin. When I first arrived at the AFIP, I was chairman of the Department of Hepatic and Pediatric Pathology. But those also split up, fortunately, because there's really no relation between them.

*Q: Looking at these various gatherings and splittings of things, because in one way, we're looking at the administrative history of the AFIP, were these because of personalities, because a certain man or woman doctor was particularly interested in both fields? Or was it just somebody lumping them together? How did these things coalesce and then split apart?*

**DR. ISHAK:** Well, they actually coalesced and then split apart and then coalesced again. The present groupings are more based on the close relationship between different departments. For example, the liver, Hepatic, and Gastrointestinal were fused together into one department in 1990. And the reason for that is that these are basically part of the same system. The gastrointestinal tract and liver are closely related, and in most departments in medicine, the gastroenterologist is the one who treats the gastrointestinal diseases, but also treats the liver diseases. So this is a natural way to combine the two. And that was why they combined the two, under my directorship.

*Q: But when you arrived, how long did this one, what was it, Pediatrics...*

**DR. ISHAK:** Pediatric and Hepatic.

*Q: Sort of an odd combination.*

**DR. ISHAK:** Yes, I think the main reason for that was that Smetana was interested in both areas, so he sort of combined the two.

*Q: How long did that last?*

**DR. ISHAK:** I'm not sure when the split occurred. It must have been 1967, '68, something like that.

*Q: But you've always remained in the Hepatic.*

**DR. ISHAK:** Yes.

*Q: How when did electron microscopes come into play?*

**DR. ISHAK:** Well, they've been around for a long time. After the Second World War, I think they became available.

*Q: Has there been any change in the ability of the AFIP to get the equipment that it needs, particularly in your field?*

**DR. ISHAK:** Not really. We don't use much in the way of equipment. We don't have a lab of our own. We generally rely on the other labs. Right across the hall from my department, there's a big molecular biology department that does all of the specialized techniques that are used now in pathology and medicine. And then there are areas which have electron microscopy. It has a scanning electron microscope. The main labs do all our basic histochemistry, so we don't have our own lab, basically. Now some departments have their own labs. Special needs. For example, Eye Pathology has a special lab, bone people have a special lab, and so on.

*Q: During the Vietnam War, obviously, there was a great demand for doctors, and there was a draft on and all this. Did you find that your department and also the AFIP was benefiting by the fact that most young doctors had to serve some time, under the Berry Plan or what have you, in the military?*

**DR. ISHAK:** Yes, I think we had enough doctors at that time, possibly because of the draft and, as you say, the Berry Plan and so on.

*Q: Were you doing quite a bit of training?*

**DR. ISHAK:** We do a lot of training in our department. Mostly we train gastroenterology fellows from different military hospitals, the main medical centers that have training programs, which include Brooke, and William Bowmont, in El Paso, and Wilford Hall, Norfolk, and so on. So the big, major centers that have training programs in gastroenterology send their fellows over for training. Usually, they are there for four to six weeks.

*Q: Have you found that a certain portion of your time is on research, a certain portion is on training?*

**DR. ISHAK:** Yes, that's basically what we do, consultation part of the time, teaching, which includes anybody who is a newcomer in the department on training, and all the gastroenterology fellows. And we also, of course, look at cases together in the department. Every day, we have a microscopic session. And once a week, we have a Thursday session, which is a very big conference to which we invite physicians from major centers to come and attend. And that's a special day of the week. From the NIH, the veterans' hospitals, and so on.

*Q: In your field, the liver, during the 31 years you've been here, have you seen the focus shifting as far as where major research was done? Was it more in the AFIP at one time, but now some universities are picking it up? Is it diffuse? How was it and is it now?*

**DR. ISHAK:** Well, it hasn't changed that much. But there is nothing that we do at AFIP that's not being done elsewhere. Everybody has the ability and know-how to do most things that we're doing here. Our advantage is that we have large numbers of cases in particular areas that we are able to draw on from the archives that nobody else has. That's one advantage, I think.

*Q: This advantage of a large number of cases means that one of your prime activities is the publication of research, doesn't it?*

**DR. ISHAK:** Yes, it does. That's right.

*Q: What type of publications have you been involved in?*

**DR. ISHAK:** Well, as I mentioned, we have an interest in tumors of the liver, benign and malignant, both involving children and adults. We've published quite a few papers on chronic hepatitis, in collaboration with other centers, the veterans' hospital, the National Institutes of Health. We've also published papers on drug reactions involving a large series of cases that affect the liver. These have been the major areas. We also have written a lot of chapters in various textbooks on liver, including chapters on metabolic diseases, developmental diseases. Basically, I've published in almost every area of liver disease that exists.

*Q: When you say reaction to drugs, I assume this means both medication and...*

**DR. ISHAK:** Nonprescription.

*Q: The whole gamut. Has there been a problem in the use of prescriptions for treating other things, and all of a sudden they end up causing changes in the liver that shouldn't be happening?*

**DR. ISHAK:** Reactions to drugs are very complex, and they're pretty rare. The reason we are able to collect these cases is (a) because we're AFIP, and (b) because we've collaborated with the Food and Drug Administration, which has, by its very nature, accumulated some of these cases, so that we're fortunate in that respect. But, in general, most of these reactions are not very common. The drugs are not put on the market until they've been extensively tested. Once in a while, a drug squeaks through and eventually is found to be toxic to the liver and is withdrawn. But, for the most part, the animal experiments are carried out, and then limited clinical trials will weed out the drugs that can damage the liver.

*Q: Do you and the AFIP have any relation to new drugs that are coming on the market, in the initial testing?*

**DR. ISHAK:** No, we're not involved in that.

*Q: Again, is the liver involved at all in the explosion of the use of narcotics? I'm thinking of cocaine, heroin, and all that. Which has happened, really, from the time since you came. It's not your fault, but... Many more people are ingesting, in one way or another, this type of narcotic. Has that had any effect on the liver?*

**DR. ISHAK:** Well, the most serious effects, as far as we are concerned, are the transmission of the hepatitis viruses, and also, of course, the AIDS virus. AIDS affects the liver, but not as severely as it does other organs. But the effects we see related to drug reactions, particularly in the intravenous abuse...

*Q: We're talking about people putting needles and exchanging needles, so the blood gets...*

**DR. ISHAK:** Those are hepatitis, the transmission of hepatitis B, but also hepatitis C. Both diseases lead to acute as well as chronic disease.

*Q: Let's say when you arrived in '63, and we're now 1994, if somebody gets a serious hepatitis case, what could be done for them then, and what can be done for them now?*

**DR. ISHAK:** When I first came to the AFIP, there was no treatment for hepatitis. But now they have some drugs that can be used to treat chronic hepatitis. One of them is Interferon, which is available now and is used to treat chronic hepatitis, particularly C, but has also been use for B and other types of hepatitis.

*Q: Say, when Interferon comes on, would you be looking at it, too, to see how it works? Or is that not your...*

**DR. ISHAK:** No, no, we've done extensive work in this area. We've worked with three drug companies, Shearing, and Hoffmann-LaRoche. There are two studies with Shearing. These are drug companies that have tested the drugs. And what they did was to send us biopsies of patients before treatment and after treatment, six months, to see the effects of the drug on the histology. So we've done a lot of work in that area, for which we got paid, also, of course, by the drug companies.

*Q: This goes into the coffers of the AFIP?*

**DR. ISHAK:** Well, it goes specifically to our coffer. The AFIP gets its cut, because the money is handled through the American Registry of Pathology, so they get their twenty percent or whatever. But the rest of the money goes into what we call a registry. You've heard of the registry concept. And there it's available for use. Since I'm the registrar, I can use it for training or buying equipment or books or whatever you want.

*Q: What is the registry concept?*

**DR. ISHAK:** The registry concept was to bridge the gap between civilian and military medicine. Because otherwise, any money that was accumulated or earned through endeavors of the staff or the AFIP as a whole could not be used. It all went into Uncle Sam's coffers and was never heard from again. So this way, the money that we were able to earn, from teaching or royalties, honoraria, research grants and so on, we were able to put back in that registry and use for our mission, education and research. So that was basically why it was created. It was also a focus of collecting cases of a specific type involving a specific organ system or a specific disease or whatever. There's one registry for leprosy, for example, just one disease, where cases could be collected. And then the idea was that people could come to the Institute and study those diseases that were collected in the registry.

*Q: How about the use of the computer for sorting data? That's really quite a recent manifestation. How has that worked?*

**DR. ISHAK:** It's been part of the culture in our county, and everything has now progressed to computerization. So it's helpful in data retrieval, but at the moment, not all the data from cases is available on computer. But, gradually, they're working back, I

think, and information from all the cases will be available, so that people can go online and get the data, rather than look at a piece of paper.

*Q: Are you seeing any changes in liver diseases that come from sort of the very broad term I use, environment? We're talking pesticides, we're talking about smoke, just living in the world today. Are you seeing a change now?*

**DR. ISHAK:** The liver is not particularly vulnerable to a lot of environmental diseases. There was a lot of concern about dioxin, for example, the Agent Orange, as it could affect the liver. But so far, it's not panned out. There has not been any long-term effect. A few cases of cancer, maybe related or not.

There were some sporadic cases that were associated with vinyl chloride, the substance that's a plastic from which we get a lot of plastic materials, basic material. That was found to cause a certain type of sarcoma, a vascular tumor of the liver. But it was only found in a few people who were very closely exposed to the substance, working with polymer. And since the conditions were changed in the factories, we haven't seen any cases. So there are a few cases like that.

There was one time they were injecting a radioactive substance for x-ray visualization. It was called thoratrask. And that was found to cause cancer some fourteen, twenty years later. But that is not used any more. Early fifties, and they discontinued it. So cases come and go, but there are not epidemics of cases.

*Q: The liver is a fairly stable organ.*

**DR. ISHAK:** Yes, unlike the lung, where you have a lot of exposure to asbestos and all kinds of things you can breathe that can cause acute and chronic changes.

*Q: Of course, we're running through the AIDS epidemic at this stage. Are you involved in looking at this?*

**DR. ISHAK:** We have an interest in looking at the changes in the liver that are seen in AIDS. Many of them are infections, which are disseminated infections that affect many organ systems. There isn't anything peculiar to the liver that AIDS causes. But the virus can reside in certain cells in the liver.

*Q: Do you have many contacts with foreign organizations, either in training or sharing of data or consultation?*

**DR. ISHAK:** We have a lot of involvement. We get people training from different countries. Right now, I have one clinician who is from Nigeria, and I have for three months somebody from Hong Kong who's training with us. So they come at different times for training. We also have a lot of contact with liver pathologists in different countries. And we have an annual meeting of a small group of liver pathologists from

around the world, where we meet in different countries every year. So that's one contact. We started recently some research with a group in Mains, Germany, involving certain disease. So there is some collaboration on that level. Also, in organizations. There are international groups of people who are interested in the liver. And there's an international association for the study of liver disease, of which I'm a member. So we have contact in that sense.

*Q: I know we have to cut this off, but a question I like to ask at the end, what do you think, doctor, makes a good pathologist? Some people are better in one thing than another.*

**DR. ISHAK:** That's a very interesting question. First of all, some people go into pathology because they're really interested in pathology. Hopefully, a majority do. There are a few people who go in there because at some times it's a very lucrative branch of medicine. People who are in pathology in private practice are making millions of dollars. Right now, it's changed quite a bit. There are people who are interested in service work, and all they want to do is make diagnoses and run a lab and so on. And others who are academically oriented, and these are the people who end up in the major universities and places like the AFIP. And their aim is partly to teach, but also to do research in addition to the consultation part. So there are different motivations for people in this area.

*Q: Would you recommend somebody go into the field of pathology today?*

**DR. ISHAK:** Well, I would, if they have the basic interest. But if they're in there just for the money, I wouldn't advise them to do it. They could go into radiology and make much money there, or become lawyers. That would be even better.

*Q: Just one last question. Because you did mention lawyers, have you found, in your field, that you're getting referrals that you have the feeling are designed to prevent malpractice suits, rather than a real interest?*

**DR. ISHAK:** Well, there's a basic policy that says we can't accept cases in which we know there's some litigation going on or going to come about. If we don't know that, obviously, then we get somehow involved. And once in a while, we have to give a deposition on a certain case. But in our area, it's not very common.

*Q: Well, doctor, I promised I'd let you out of here at ten o'clock, and it's ten o'clock.*

**DR. ISHAK:** Well, thank you very much.

*Q: Okay, thank you.*