
Ho Family Chair in Autoimmune Diseases: Dr. Earl Silverman

Were there any educators who played a significant role in your journey to become a rheumatologist?

When I was a resident, which was over 30 years ago, I was looking to do a subspecialty and I found that pediatric rheumatology was the most interesting because of the wide variety of patients, the intellectual stimulation, the interest in immunology, which 35 years ago was just beginning. To me, it was a very good interaction of interesting patients and care, challenging as well as intellectually stimulating.

At that time, there were almost no pediatric rheumatologists in the world, in fact. When I decided to do it, there was somebody who did it here, his name was Dr. Mark Greenberg, but he did it along with five other things. There was no division here. I then went to Stanford University and trained with Dr. John J. Miller III, who was one of the first pediatric rheumatologists in the world. Dr. Greenberg was a pediatrician, and actually pediatric oncology/hematology was what he mainly did and still does. They were role models; I respected them. I found the whole field fascinating, particularly, I think, because of the emerging field of immunology, which was of interest to me. One of the major reasons why rheumatology interested me was that you have to know everything about pediatrics; there is no focus on a single organ. You need to understand the whole body, how it interacts, and so that is what kept me interested in it.

Initially, my fellowship was supported by The Arthritis Society (TAS) of Canada; at that point in the early eighties TAS was very supportive of education and pediatric rheumatology. They were really looking to help educate academic rheumatologists and develop scientists. They realized there was a need in Canada for pediatric rheumatology.

It was a very interesting time at that point because I could clinically focus on both rheumatology and



immunology. My interest, clinically, was rheumatology, and scientifically was immunology. At the time, many hospitals had a combined rheumatology/immunology division, which made it difficult for some people to separate the two. However, the two subspecialties have very different needs, so we would sometimes be at opposition almost to each other. At this time the Division Head [of The Hospital for Sick Children] was an immunologist who supported clinical immunology but needed

the patient volume found in rheumatology, so it was an interesting time.

Over time it became obvious that immunology and rheumatology were two distinct fields; luckily, the Department Head saw the same thing and we became our own division in 1986. This is when the division really grew; we could focus really on rheumatology and hiring people only to do rheumatology and not immunology or allergy. As a result, we blossomed into what is now one of the leading pediatric rheumatology divisions in the world, initially lead by Dr. Ron Laxer. He was the Head who really had the vision of how an independent division of rheumatology could become a leader in pediatric rheumatology. What I learned from Dr. Laxer was, what is good for the group is good for all of us. That has become our motto.

What have been the highlights of your academic career?

When I was a fellow, I described a syndrome that has now been recognized as being an important cause of significant morbidity and even mortality in patients with autoimmune disease. It has got another name now, macrophage activation syndrome, but I feel proud of having recognized it early.

I think I was one of the first pediatric rheumatologists in the world to get an endowed Chair, in recognition of my research. I feel very special, I feel very lucky to be put

in that position. Then a couple of years ago I won the distinguished investigator award from the Canadian Rheumatology Association (CRA). The fact that it is a peer-group recognition, and being one of the few pediatric rheumatologists to ever have received it, again I feel a great sense of accomplishment. In 2007, I received a teaching award from the hospital and then in 2008 I received what is called the Hope award from the Lupus Association, from the patient group. I have always felt that there are three things to do as an academic physician and that is clinical care, research, and teaching. So I feel very lucky to be honoured for the three things that are important in academic medicine.

What have been the most profound changes you have observed in rheumatology over the course of your career?

Things have changed very, very dramatically really from when there was very little we could do to help patients from a medication point of view, beyond physiotherapy, to now having very powerful medicines that can really make significant differences in people's lives, particularly in children with juvenile arthritis. There has been tremendous progress in being able to control the disease. That has dramatically changed my practice. The introduction of a simple drug like methotrexate (MTX) was a really dramatic change and now the era of biologic therapy has made life even better. The future looks even brighter.

Drugs are now being tested in children, and trials are being run in children, and that has been a very dramatic change. Without testing drugs in children, we do not know their safety, or how effective they are, because children are not just small adults. So it is very important to do drug trials in children of new medications because we cannot just assume they work.

Are you working on anything you think your colleagues across the country should know more about?

One of the things I am proud of that we are doing now is we are looking at how one of the problems with lupus is that sometimes adults will have early atherosclerosis and heart attacks; what we are looking at is assessing how children do, to see if there are any risk factors we can identify and try to treat prior to it developing.

Another thing we are looking at in childhood lupus is really, we know that during the time when we follow them, the prognosis changes dramatically. One of the things that we are very interested in, and there is very little known about, is how they do when they are 20, 30 and 40 years old. The problem with studying most pediatric diseases is that patients morph into the adult world with many different caregivers. It is therefore very difficult to find out what happens into adulthood. We are looking at long-term outcomes.

The last thing we are doing, that I am very proud of too, is we are looking at the problems in children born to mothers with lupus. There is something called neonatal lupus, where the child itself does not have lupus but the antibodies go from the mother to the fetus. Some of these children will develop heart problems, what is called heart block, where they have problems with the conducting system (*i.e.*, problems with their heart beat). We have been world leaders in trying to improve that outcome. We have been looking at how these children do over time as a result of having these antibodies, and whether they are too at risk of developing lupus.

What advice would you give to rheumatologists who are interested in taking on an educational role or improving their teaching skills?

What have I learned is to listen to people you are teaching, to change how you teach and what you say depending on the audience. I have really found that personally I support all new ways of teaching but nothing beats one-on-one teaching and one-on-one communication. This is particularly true in subspecialties, nothing can be better than one-on-one teaching and listening and learning and taking the time to go over things and educate.

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