

# Stephen TS Lam

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## Personal Details

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| Name                    | Stephen TS Lam    |
| Dates                   | Born March 1953   |
| Place of Birth          | Hong Kong         |
| Main work places        | Hong Kong         |
| Principal field of work | Clinical Genetics |

## Short biography

Born and educated in Hong Kong, Stephen Lam trained in Paediatrics and entered medical genetics after research experience at the Paediatric Research Unit, Guys Hospital, London. He has been responsible for the development of the Hong Kong Medical Genetics Service and is President of the East Asian Federation of Human Genetics Societies.

## Interview

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| Interviewer                 | Peter Harper |
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| Edited transcript available | See Below    |

## INTERVIEW WITH STEPHEN TS LAM, 14/10/2011

**I = Interviewer (Peter Harper)**

**L = Stephen TS Lam**

**I It's Thursday, 14th October 2011 and I'm talking with Dr Stephen Lam at the International Human Genetics Congress in Montreal. Stephen, can I start at the beginning and ask when were you born, and where?**

L I was born in Hong Kong in 1953, March so that makes me 58 now.

**I And have you lived all your life in Hong Kong?**

L Yes, most, I spent a couple of years in England and by and large the rest of the time was in Hong Kong.

**I Did you come from a family that was scientific or medical, or had any kind of background like that?**

L No, not really. My parents were immigrants from mainland China. My father came with a background, initially as somebody working in the media. During the war, when he was enrolled to be one of those people learning how to decipher the boss code. So he was following the whole sort of wartime story: every night in the evening he would start deciphering the boss code and with all the news coming from up north when they were fighting, when the two parties of the Chinese were fighting. And then by and large he had little faith in what was happening so he fled to Hong Kong. My mother came from a family which was basically non-medical and non-healthcare with my grandfather being an educational inspector. He died young which meant that my grandmother had to leave the country to work in Singapore. So I'm partially Singaporean as well. I mean, my mother's side is Singaporean. But then they all ended up in Hong Kong, my parents, as immigrants fleeing the country at the time when the war was really bad. So that's the sort of background for most people coming to Hong Kong where, you know, they were frightened by the sort of war between the two parties and they didn't know exactly what's happening. Most people did not have faith in communism, and that's my parents' sort of inclination too.

So in a way that's the reason why, when we had the 1997 sort of changeover my parents again left Hong Kong and now they're in Toronto. [laughter] They are happy in Toronto. Yeah. So that's my background.

**I Was there any special reason that took you into medicine?**

L Well, I think I was born with very bad health, really. I had major, I had measles when I was an infant and that left me physically rather poor. I didn't run well; I didn't jump well, you know. And so when I was about 10, 11 I thought, well, perhaps I should do something about my body. So I started to do exercise and so on, but that helped in my health physique and general health in a big way. That actually led initially to my belief that perhaps healthcare is my vocation; that I should do something to help people improving their health as well. And what actually spurred me on was my own GP who, on one occasion when I suffered a very bad flu, she helped me a lot and then subsequently she said, "Well, Stephen, what are you going to do in future?" I was about, must be 14 at that time. And I looked at her and said, "Well, I would be interested to be a doctor; a medical doctor." And I was much inspired by her. Her touch, her empathy, and her generous sort of humanistic approach. So I think those were the driving forces.

**I As a matter of interest, was that a Chinese doctor or a British doctor.**

L Oh, she was trained as a British, I mean, so called Western doctor. So she's a Chinese. She originated from mainland China, came to Hong Kong probably for the same reason as my parents.

**I So which medical school did you go to, or was there only the one medical school at that time?**

L At that time, yeah, it was the only medical school and that's the University of Hong Kong. And that's the same hospital, or rather the same university, or that actually was the, well, I wouldn't say the same university but you see, 100 years ago, more than 100 years ago, in Hong Kong there was only one medical school. And the University of Hong Kong hadn't started. And that medical school was the one that actually turned out one of our most eminent graduates who actually became subsequently the so-called 'Father of New China' and that is Dr Xun, Xun Yet San. And the medical school subsequently was turned into the University of Hong Kong. So despite of the fact that we're now celebrating our 100 years of University, actually some people say we should date it back to the start when the medical school was started.

**I Yes. When you went into medical school did you have any clear idea about what kind of medicine you wanted to practice when you qualified?**

L No, not really. I had a sort of faint idea that probably I would go to be a surgeon. I was, you know, interested in using my hands, and actually that was the reason why I subsequently, when I graduated, I took up 2 internships: one was general surgery and the other was paediatrics. For general surgery the reason was that I wanted to try whether I could have the necessary physique to lead on a subsequent career as a surgeon. One of the reasons was that, at that time my general, you know, physical fitness was already up to a certain point where I wasn't exactly a sportsman, but it's totally different from when I was young. But one of the problems was that I had flat feet. I still have flat feet, of course, but at that time flat feet actually had a sort of limitation on myself and I couldn't stand for more than 3 hours. So I was trying my best to see whether, after going through 6 months of internship, whether I could actually manage it. So finally when the consultant of my unit came and asked me, "Well, Stephen, would you like to come back and join us as a trainee?" I decided for a while. But subsequently finding that I couldn't actually stand for a long time, I forfeited.

For paediatrics again, it was something rather, you know, in a way, accidental which turned out to be my career subsequently because in my university days paediatrics wasn't a major, you know, subject. People, we actually had very good teachers in other subjects, and paediatrics was going through a very difficult time in getting people. And so I would say that my undergraduate paediatric training or education was totally, you know, a blank page. So I said to myself, "What should I do if I'm not a surgeon? I would like to be perhaps a psychiatrist and perhaps a paediatric psychiatrist." For all my years I have had a slight inclination to thinking and to enjoy philosophical, and then also religious sort of subjects, so perhaps psychiatry is something that I will aim at. And I tend to perhaps think that paediatric psychiatry may be closer perhaps, closer to my temperament. But then of course before I could do paediatric psychiatry I should have some training in paediatrics. So with that sort of, you know, background, I took up paediatrics. And once I took it up I loved it so much and it became my vocation, and subsequently I got training in general paediatrics, went to the UK to do my MRCP examination. And even before I went to do my exams, my mentor in paediatrics, Dr Alice Chow, who had an interest in genetics, she said, "Well, we are now planning something in the Department of Medical and Health Services, and we are thinking of setting up a Clinical Genetic Service in Hong Kong. Would you be interested?"

And that's the time when I was in general paediatrics training and I thought over and I discussed with my wife to be, at that time. It's a subject which was not in the general stream,

you know. We're talking about more than 30 years ago, and probably it's going to be a fairly academic subject. So we deliberated on that and my wife to be, at that time, agreed that, because I had to take a long leave from Hong Kong to get training in UK. We couldn't have that training in Hong Kong, so I had to have her agreement. So we finally decided. It was not only my decision, it was also, it's a joint decision. We decided that, okay, I'm going to spend a long time in UK trying to get the training in clinical genetics, and that's what happened. Of course, prior to that the reason why we, in Hong Kong, consider clinical genetics an important subject was that late in the 70s people in the University of Hong Kong had already considered, you know, setting up a Department of Medical Genetics in the University. What happened was, one of the retired professors from Glasgow, Professor Hutchison, was in Hong Kong for 3 years after he's retired. And he spent 3 years as the Professor of Paediatrics in Hong Kong. And he initiated a review of the necessity of having a Department of Medical Genetics within the Faculty of Medicine in University of Hong Kong.

He invited Professor Ferguson-Smith to come and write up a report and it was a very good report. I still have a copy of that with me. And, you know, deliberating how to set up a Department of Medical Genetics. Well, for some reason, it didn't materialise. I learned subsequently from the Dean of Medical Faculty, Sir David Todd, who is now in Cambridge. Yeah mostly, he's a Chinese, David Todd, and most of the time he's still in Cambridge but then he comes over occasionally back to Hong Kong. I learned from David that, at that time, they didn't have the money to start that new department. But of course the need was there so a lot of patients actually came to the paediatrics units in various hospitals for diagnosis and counselling. So, I was already in the Department for Medical and Health Services which was a government sort of department, and we thought that, even if the University was not setting up something, we still have to cater for the patients' needs. So we invited Professor Paul Polani from Guys Hospital London to come and review the whole situation. He also wrote up a report which was delivered to the Department of Medical and Health Services in 1980 and that report actually was totally adopted by the government in Hong Kong, which started off the whole process.

And we were asked to be trained in UK because there was nobody in Hong Kong prepared to do that. So a couple of us had the opportunity to be invited and also sent by the Hong Kong government on full scholarship to, it was a training, so it was a sort of on job training. And I took the opportunity to not only learn clinical genetics in that department but also to work on a research project which ended up in the form of a thesis for my MD, which was very good because in the end it helped me to appreciate the importance of science and also research as part, an integral part of medical genetics.

**I Remind me what the topic of your thesis was?**

L Yes, it was entitled, "A Biochemical Study of X chromosome inactivation." So I was in Philip Benson's and Tony Fensom's laboratory at that time learning inborn errors of metabolism. And I was interested to study enzymes, and then Paul, Professor Paul Polani, one morning came in and said, "Well, Stephen, are you interested to look at X chromosome inactivation?" And I said, "Well, yes". I'd done quite a lot of cytogenetics at that time already. But you know, just looking at cytogenetics wasn't sufficient so the model that we used was to look at steroid sulphatase which was very interesting because at that time the gene dosage of steroid sulphatase shows a remarkable variation. So by the very fact that the pseudo-autosomal segment of course explains everything. But at that time we were thinking about, what about looking at experimental animals and models, so we went on to look at the scurfy mutant of the mice, and different mice models. We got mice from Mary Lyon and so on, and also the Jackson laboratory to look at the mice and to study the steroid sulphatase. And then we looked, from Dr Wells at Guys Hospital we got X-linked ichthyosis patients. So it was very interesting. I spent a couple of

years working on that. Without any idea that, you know, in the end it could lead to a doctoral thesis, But this was interesting.

**I Did you use Guys Hospital as your base for the entire time you were training in UK, or did you spend some time in Glasgow and other places?**

L No. I used Guys basically. But of course I spent a couple of weeks in other hospitals. When it came to observing, for example, new-born screening, I went to Lewisham Hospital. I spent some time in Great Ormond Street looking at some of the, you know, at that time Professor Cedric Carter was there; Marcus Pembrey was there. And I spent a couple of weeks, or a month or so, in Great Ormond Street looking at some of the patients: epidermolysis bullosa and you know. So basically in London at that time I had ample opportunity to meet with various people in the dysmorphology group. But I didn't spend time in Glasgow, no. Most of the time I was in London, yes.

**I What year was it then that you went back to Hong Kong?**

L It was in 1983 that I went back and then at that time the Service that we call the Clinical Genetic Service now was already started under Dr Alice Chow. And one of my colleagues, who was also trained in Guys Hospital, a bit earlier than myself, went back to Hong Kong already and he was mainly in cytogenetics and clinical genetics. So the idea was I would be in clinical genetics and biochemical genetics, and the two of us would be complementary. But then he decided to leave the Service and went into general private paediatric practice, very soon after I came back, and so the subsequent years I was basically working quite alone, you know, trying to help Dr Alice Chow, who was a general paediatrician, to run the clinics and the cytogenetic laboratory. And in the 80s we tried to arouse the interest of the general paediatricians and obstetricians/gynaecologists. And we actually had rotating seminars in all the major hospitals, so I was sort of principal speaker every time trying to set up topics and discuss, and then there was, get patients for us to see immediately after the seminars. So it was quite exciting because so many people were there. But then we actually succeeded in arousing a general interest in genetics as a speciality and then we helped to educate quite a number of colleagues in paediatrics, obstetrics and gynaecology. Now having said that, for the Prenatal Diagnosis Service, it was also set up in the same year that our service was started, in the early 80s, but then it was totally under the obstetricians who initially didn't have much training in medical genetics, but they also managed to gain all opportunities to send their staff to the UK for further training. So we would say that we were, the two services actually developed more or less at the same pace.

**I Over the years now, has your Service grown to have a more full range of consultant staff, or are you still really quite small in terms -**

L We are still quite small. Being a government unit we have constantly have the major restriction. So basically what happens is my post is a consultant clinical geneticist, and I've got 2 sort of associate consultant level colleagues who have been with me for 12, 20 years, you know, ranging from 12 to 20 years. And I have another three registrar level medical staff who have been with me, again, 13, 14 years already. So they are quite experienced in a full range of clinical genetic, you know, sub disciplines. Basically we have referrals from all the major hospitals in Hong Kong: about 60% in the paediatric category and the remaining 40% in reproductive or adult category. So we have a full range of clinics, or rather materials in the clinics, in either dysmorphology, inborn errors of metabolism, skeletal dysplasia, developmental disorders, and reproductive genetics in terms of infertility and, you know, short stature coming in for assessment of their sex chromosomes and so on. And then we have more and more neurogenetics and adult genetics. For neurogenetics we see quite a number of Huntington's [s.l. chorea 27:02], for example; myotonia dystrophica, Spinocerebellar ataxia, the whole range of, you know, motor neuron disease. And for cancer genetics, we are not seeing as

many as we should. We do have retinoblastoma, that's one of our clinics. And we used to work on the chromosomes for different types of cancers, but then we stopped doing that for quite a while; there's a historical reason because back in the 1990s there was a major change in the healthcare system in Hong Kong, where the original Department of Medical and Health Services was split into two components: one is called the Hospital Authority which is a statutory body taking care of all the 38 or 40 public hospitals in Hong Kong. And then the other department, which is mainly for public health and statutory functions, is called the Department of Health. And for some reason Clinical Genetics Service was considered to be part of the preventive component, so we were asked to be moved over to the Department of Health. So that's the reason why we have not actually been having the benefit of expansion, unlike some of the units in hospitals where they can actually move along with the advancement. So my unit has been, in a way, limited for that reason. But then we tried our best to use the resources, say for the cytogenetic laboratory that we set up in the 80s, we actually transformed that into a combination of cytogenetics and molecular genetics laboratory. Now we are doing more than a hundred different genetic testing, single gene defects, in the molecular component of our lab. There's the first cytogenetic and molecular genetic laboratory fully accredited under the Hong Kong accreditation system. The Hong Kong Accreditation Service actually has sort of international linkage with Denati [?] in Australia, the UK Accreditation Service and also the CAP in United States. So it is quite a universal sort of system and we are quite happy that we tried to set up the system of accreditation in Hong Kong and became the first laboratory to be accredited.

**I Can I ask, did this process of development, was it affected by the political reunification with China, or did things just carry on more or less unaffected by that?**

L The politics didn't come in at all. It was totally, you see back in the 80s when we were under the same, or public services were under the same umbrella as the Department of Medical and Health Services, there came a time when the system was so big, with a civil service force of 38,000 persons. It's becoming a big bureaucracy. And the service provided to the public was less than optimum and we had a lot of outcries from the public, and so the government decided to revamp the whole thing. And they consulted an Australian consultancy firm to look at the managerial aspect of the whole department, and they came up with a conclusion that we have to change. And the change was that all the public hospitals would be brought under a statutory body called the Hospital Authority and the whole civil service structure would be dissolved and allowing for a small component to remain in the government, under a new department called Department of Health. And both of these entities would still have to answer to the Bureau of Health, to the central government, but basically the hospital authority would have perhaps more flexibility in running business, whereas Department of Health is still very much regulated by central policies.

**I But the political change with reunification hasn't really affected things?**

L No. As far as I understand, there's nothing political about it. You know, it's internal political sort of thing [laughs] but not across the border politics; no.

**I Can I ask about wider developments in Hong Kong, because on the university side you've had eminent scientists come back in at senior level. I suppose I'm thinking of Lap Chee Tsui and Y W Kan. Now has this had any impact on medical genetics as opposed to genetics research?**

L Now Y W was a graduate in the University of Hong Kong and he went to North America quite early on after graduation. But then his close association with Hong Kong, he still comes back to advise and to collaborate with scientists, and occasionally we had a couple of lectures from him. But basically I don't think he has strong linkage, you know, in an official manner, but then he's been collaborating with researchers and so on. But then the influence would have probably been limited by the absence of, for example, a tenured post or whatever. So that's Y

W. But then, for Lap Chee, Lap Chee actually, he was graduated from the Chinese University of Hong Kong and went to North America. And then he came back to take up an administrative post as the vice-chancellor of the University of Hong Kong. I had the opportunity to discuss with him quite a lot in the early days when he came back. Again, I posed the same question that I posed to David Todd and I asked Lap Chee, "Why don't you set up a Department of Medical Genetics in Hong Kong?" And he smiled and he said he would consider. But by and large I think the University of Hong Kong has a lot of eminent scientists, very good clinician scientists, but then I don't know why they do not join force under some sort of umbrella. Lap Chee actually initiated and is still conducting the Human Genome Research Centre, I think, in Hong Kong but from what I learned it's basically supporting the other universities in that it has a core facility which they are actually renting out. We use that facility quite a lot too. I mean we can purchase bits and pieces of services from their Centre on a sort of pay basis, but I'm not quite sure how that Centre actually stands in terms of you genome research at this moment. Now for Chinese University of Hong Kong there are also some very good scientists, people like Denis Lo, who is doing really good experiments on non-invasive diagnosis, and others too. But again it's, I'm not quite sure whether there's a strong objective.

**I So would it be fair to say that your unit really is the only medical genetics unit and department in Hong Kong?**

L Yes. We have all the referrals of so called difficult genetic cases. [laughs]

**I And how many million people are you serving then?**

L It's 7 million.

**I 7 million? That is a lot, really, for one service without so many staff.**

L Yes, so that's the reason why for a long time we have been drawing the attention of the Health Bureau to problems that we are facing in terms of shortage of staff, in terms of also the lack of, you know, input from various academic units. For I think it's our belief that medical genetics should really be closely linked with academic institutions and even to be led by academic institutions, but it didn't happen that way in Hong Kong. So we are actually, well for recently, the Hospital Authority also had started to look into the issue because of the kind of development that we are seeing. We really have to have more input. So Hospital Authority has set up a committee last year, and this year invited Dr Ron Zimmern from Cambridge together with Frances Flinter and Dr Whittaker. Frances is from Guys and Whittaker from Cambridge. They came and looked at all the services to advise the Hospital Authority as to whether and how to, you know, improve services provided to the various public hospitals. And of course we were very happy that they also came and looked at our setup and they gave a report. In mid September Ron came and gave a briefing so we're still studying the report and see how we'll respond.

**I Things move slowly.**

L Yes it does.

**I Can I ask about wider links with mainland China and other Chinese communities? Before reunification, did you have any links with places like Shanghai or Beijing? I mean, were there collaborations and connections or were you quite isolated from them before the reunification?**

L Well, I would say that in terms of professional contacts, we have had a lot of interflow of exchanges. And say back in the late 80s we saw the need of some form of linkage and so one of the reasons why I initiated the Hong Kong Society of Medical Genetics, besides our own internal education and collaboration, was to have an exchange and also to host seminars and conferences, to exchange ideas and to have chances of collaboration with scientists and

clinicians from mainland China. So that sort of linkage has been there from the 80s, 90s, to present. And so for a long time we have grown up very good friendships and collaborative experience with Beijing, Shanghai, Guangzhou and other places. Officially what happened before and after the unification was that there are still a lot of legal and territorial barriers which actually it's not conducive to free sort of collaboration. Now I can cite, for example, one is the medical system, the healthcare systems differ a lot. So medical education is also different and clinicians from mainland China cannot practice in Hong Kong unless they pass an examination which is supposed to be very tough. Actually all clinicians from elsewhere, even if their basic degree has been recognised, have to go through an examination before the Medical Council in Hong Kong can accept them as practicing physicians in Hong Kong. And the exam is tough, as far as I know. So we don't see that many mainland clinicians coming to Hong Kong to work, after the examination. Likewise there's little incentive for Hong Kong physicians to go to mainland and practice there. So as far as that is concerned, there's little formal, sort of interchange.

**I Who would your main link have been with in Beijing? Would it have been with Dr Wilson Lo, I suppose?**

L It used to be in 80s. In early 80s it was Wilson Lo but then he was retiring, you know, already, at that time. So Beijing at that time was, yeah, I would say there were quite a few persons in 80s besides Wilson who subsequently took over the role in prenatal diagnosis is Professor Xun Yin Hu, Dr Xun Yin Hu, who was in her 70s at that time, and she's still very active. And she actually brought in a lot of new prenatal diagnosis concepts to Beijing. Wilson's team, under Hon Xan Xu, who actually I met in this conference, he's still active... was doing quite a lot of work on different things like setting up molecular diagnostics in the 80s, and also his colleague Yun Li Phan was working on inborn errors of metabolism at that time. But by and large subsequently we saw quite a lot of new centres developing in Beijing. One in the University of Beijing under Professor Wu Si Ru, a paediatric neurologist, started to look into setting up, you know, different tests for neurological cases. So she has quite some, a big team coming on this occasion to this congress.

**I May I ask, is Wilson Lo still alive?**

L I think so. Last time, it must have been a year or two before that I asked some of his colleagues and they said, "Well, he still comes in occasionally but not for the professional, just for the ceremonial thing." But I haven't heard about it, but perhaps when I meet Hon Xan Xu I can ask him again.

**I How about Shanghai because this was very active at the time I visited, which is last, it must be 15 years ago. And what's the situation there?**

L Yes, yes. Shanghai has, well, basically 15 years ago it was like Professor Zeng Yi Tao was in the, what do they call it? I can't remember exact name for his institute, but then at that time he had his laboratory in this hospital where the initial, you know, microvascular surgery for the hand and so on, were done. He subsequently moved to Phuton, into a very gigantic farmland where he raised sheep and whatever animal; he's working quite extensively on stem cells, and also cloning. So he showed me perhaps 7 years ago, I think, the cattle that he cloned and yeah, so he's still very active. And his daughter Zeng Li Pha got her MD PhD here and United States.

And she, well she's very active. I think she's here at this congress as well. So, in her early 30s now, she's a really good scientist and somebody who has probably, in time, she will be one of our key scientists in China too. So in Shanghai we have the this group, and the other group is the one originally started in the Second Medical School of Shanghai, now under the University of Chowtun, or Chowtun Tao Tse. And at that time Dr Chun Chu, who is now the chief of the Health Bureau in mainland China, was leading, I would have to say about 10 years ago, he was leading a team working on human genome project. And so at that time we called that the



Southern Genome Centre in China, as against the Beijing, which is the Northern Genome Centre. The Northern Genome Centre has now evolved into the Beijing Genome Institute under Yang Huanming. Yeah, he's got an English name called Henry. So coming back to Chun Chu: Chun Chu has a very strong academic background. I think he was, his parents were also professors in medicine or whatever, and he has been groomed to lead a very, you know, good clinical as well as scientific career. And now his academic work is mainly continued by his wife, who is still heading I think the clinics as well as the laboratory. Chun Chu himself is now working in Beijing and running the whole country's healthcare, which is a tough job. So I haven't heard much about the second, or the Southern Genome Centre anymore, but then, and coming back to the Beijing Northern Genome Centre, which started about 10 years ago with Yang Huanming and Huantien. The two of them, Huanming was actually in Wilson Lo's laboratory, some 20-30 years ago but then subsequently he started his own thing and now the Beijing Genome Institute has gone all the way from Beijing to Jejiang and then subsequently to Xian Jun, and now come to Hong Kong. Since October last year they have started a branch in Hong Kong. It's a 10 storey building and they are putting in more than hundred sequencers. And I think Hong Kong is good for, you know, that sort of interchange of ideas, technology and services because the, you know, financing is easy, taxation is simple, there's little legal restriction in samples coming in and out, unlike in mainland. So I think that's the main incentive why the BGI comes to Hong Kong. And we're happy because, you know, when I visited the Sun Jun group of BGI, they have 3,000 employees; all are Phuton Wa speaking; 23-24 years of age; some without completing their university education, but then putting up papers in Nature and Science already. It's a whole concept of education which I find interesting. And now since they are in Hong Kong, they have helped us to employ at least 60 of our graduates from Science Faculty who, without that sort of enterprise probably would go into insurance or pharmaceutical or other business instead of science.

**I That's interesting.**

L So that's happening. And also under the Chinese University of Hong Kong a new institute is being set up, called the Institute of Transomics, you know, under Chinese University of Hong Kong and BGI as well. The two are now joining hands to further education and research in the University, so things are happening.

**I Going back for a moment to Shanghai: at the time I made my first visit there, I met a very interesting medical geneticist whose name I think was Dr Hu Da Ning. He did a very extensive study of inherited deafness. Do you know, is he still working in Shanghai or -**

L Hu Da Ning. I'm not sure whether... is it a he or she?

**I He.**

L Yeah, that was back in the 80s.

**I It was.**

L Yes, yes. Subsequently the Shanghai Medical School started the new-born screening project for hearing defect, and Professor Xun went on subsequently to be the vice chancellor of that University, the Jau Tung Da Xe and then moved onto to be the vice, what do they call it? The second, vice president or whatever, of the Shanghai Municipal. So he's now today a politician. [laughter] So people, you know, move into different areas. I'm not sure about Dr Da, no.

**I Thinking particularly of Medical Genetics, are there any other units in mainland China that stand out as being very special?**

L Well there are many people that are working on different things, different areas. Even in Shanghai I know of two persons: one working in Fudan Da Xe, on population genetics, by the name of Jin Li, doing very good work on population stratifications, different genes, genetic

studies on different ethnic groups in China. And he's got very good data on that. They are very strong on population. And then in Cho Tun Da Xe in Shanghai, Professor Hur Lin is working on various projects including identification of genes and so on. So in Shanghai these few groups are still strong. In Fudan Da Xe, Cho Tun Da Xe and also in Zeng Yi Tao's group. In Beijing, Wilson's group has not been as outstanding as it used to be, and other groups are now coming up. But by and large I think it's not as eminent as some of the centres that we see in North America or UK.

**I Is there regular contact between your Hong Kong Medical Genetics Society and the mainland Medical Genetics Society?**

L Yes, we have a lot of contact. Every year we have, I think there must be one or two conferences, where we would be either inviting colleagues from mainland, or we are invited to join their seminars. And then I think it's a good opportunity for people to know one another, so we cross the border quite a lot actually. Perhaps under the Hong Kong Society of Medical Genetics we have invited most of the ones that I have mentioned and vice versa we have been invited to speak in their conferences.

**I Since this new Federation of Human Genetics Societies began, how has that evolved in terms of the Asian Federation?**

L The International Federation of Human Genetics Societies has 7 full members, including the American Society of Human Genetics, Australasian, European. And then one specific society known as the East Asian Union of Human Genetics Societies, which comprises of Japan, Korea and China. So the 3 societies under these 3 countries who are represented by in this particular East Asian Union. The Asia Pacific Society of Human Genetics, of which I'm still the president until the end of next year, was started 6 years ago only. We actually had a tradition of a small group of, you know, people in medical genetics in the Asia Pacific rim, hosting conferences and seminars every year or two years. And that started in early 1990s. So for a long time our group has, you know, been active in trying to promote genetics in places like Hong Kong, Taiwan, Thailand, Singapore, The Philippines, Malaysia, Vietnam, Indonesia, and India. So we have, also of course, people from the States also come to our conferences, once we subsequently named ourselves as the Asian Pacific. So we are not excluding anybody, because the make up of the Asian Pacific Society of Human Genetics is by individual membership; it's not by country. So of the 7 full members, there is still one called African, African Medical Genetics Society, I think, or the African... I can't remember exactly the name, but it's a conglomerate of different societies in Africa. So supposedly the International Federation, the main task is to, or the main activity is to organise the international congress every 5 years, but the objective is more than that. There are 4 different objectives, including promoting genetics in the whole world, and then as advocates for patients and so on. So I think probably in the past the International Federation has not really been, you know, developed to the stage where we can actually serve all those objectives. So I'm looking forward to the coming few years in my coming role as the president to work towards those objectives, and to be able to not only safeguard the interests of the members... besides the full members we have more than 60 associate members of different societies, regional or you know, sort of national societies. For example, Finland, for example, has put in an application, and others have occasionally put in applications. National societies are the associate members, whereas the full member would have to be a regional/area society. So I think the mission of my service would be to look into the possibility of more international linkage, to make sure that the underdeveloped areas of the world in medical genetics would have a fair share of opportunities for development, and I hope that, you know, this kind of benefits which medical genetics has provided to so many populations in the world, can also be diffused to the relatively underdeveloped parts of the world. Well, thinking about China, China is not one single development. You can think about the 10%, no 20% of the well to do areas along the sea coast as fairly well developed. But once you get beyond that, it's another world.

So how to actually disseminate medical genetics from the well to do areas, even of a single country, to the very deprived areas. It's a major task. We are seeing so many malformed babies; we are seeing so many mishaps, unfortunate events, simply because of the lack of, for example, supplementation; nutritional supplementations. And that sort of thing, while people can say, "This belongs to the public health" but I don't see that we should actually just say, "Well, this belongs to the public health and is none of the business of genetics." Of course, it's the growing discipline of public health genetics. Why not use all the tools and knowledge that we have in order to promote health of different populations? So I think the International Federation should also look into this aspect and help and promote medical genetics.

**I Well, thank you Stephen, very much. I'll stop things there and I'm very grateful to you for sparing your time.**

L Yes, I'm very happy to share my thoughts and experience, and hopefully it will be useful to your project.

**I Thank you.**

L Thank you.