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ALDO PINCHERA, MD, PHD

Interview conducted by
Michael Chappelle
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INTRODUCTION

Aldo Pinchera, MD, is Professor Emeritus of Endocrinology at the University of Pisa. Thyroid autoimmunity has been an area of continuous interest, and he has made important contributions on the role of thyroid-stimulating and thyroid-blocking antibodies and the importance of persistent thyroid antigen stimulation for the maintenance of the autoimmune response. He has contributed to the development of novel diagnostic and treatment protocols for amiodarone-induced thyroid dysfunction, hyperthyroidism, and Graves' orbitopathy. His research achievements in thyroid cancer include the relevance of serum thyroglobulin as a marker of differentiated thyroid carcinoma, the diagnostic and therapeutic use of recombinant human TSH, and the assessment of clinical and molecular aspects of post-Chernobyl thyroid cancer.

BIOGRAPHICAL SKETCH

Dr. Pinchera was born in Naples, Italy, in 1934, and subsequently trained in medicine at the University of Rome. As recipient of a fellowship from the Centre National de la Recherche Scientifique, Paris, he pursued research into thyroid hormone metabolism in the laboratory of Serge Lissitzky at the University of Marseille. He was then awarded a United States Public Health Service Scholarship to work in the thyroid unit led by John Stanbury at the Massachusetts General Hospital, Boston and started his studies on the thyroid-stimulating antibody, then known as long-acting thyroid stimulator (LATS), an area in which he conducted pioneering investigations. Dr. Pinchera moved to the University of Pisa in 1970, becoming Director of the Postgraduate School of Endocrinology in 1981 and Chairman of the Institute of Endocrinology in 1984. He served as Dean for Student Education at the medical school for several years up to 1995. Dr. Pinchera established a large group of investigators, principally devoted to research in the thyroid and related fields. Serving as an advisor to the World Health Organization and the European Union, he assessed the untoward health effects of the Chernobyl accident, and he was one of the first to bring to the attention of the scientific community the great increase in papillary thyroid carcinoma, which was occurring in the Belarus and Ukraine childhood population exposed to radiation. Among his most important accomplishments, Dr. Pinchera counts the establishment of a strong and devoted research group in Pisa, which included a number of fellows who later established their own independent research groups in several Italian universities: Gianfranco Fenzi in Naples, Enio Martino in Cagliari and then in Pisa, Luigi Bartalena in Varese, Luca Chiovato in Pavia, Furio Pacini in Siena, Stefano Mariotti in Cagliari, and Maurizio Gasperi in Campobasso, Paolo Vitti and Claudio Marcocci who took over the responsibility of the Pisan Center. Internationally, Dr. Pinchera is the author or co-author of 629 scientific articles; the editor or co-editor of nine international volumes; the author or co-author of twenty-nine chapters in volumes; and has been the founder and editor-in-chief of the *Journal of Endocrinological Investigation* and member of the editorial board of several international endocrine journals. Dr. Pinchera is honorary member and former president of the European Thyroid Association. Among his numerous international honors and awards, he has received the Paul Starr Award of the American Thyroid Association; the Samuel F. Haines Lectureship of the Mayo Clinic; the Henning Award of the European Thyroid Association; the Pitt-Rivers Award of the London Thyroid Club; the Shizume Honorary Lecturer Award of the Asia and Oceania Thyroid Association; the Order of Merit from the Republic of Senegal; Doctor Honoris Causa from the University of Medicine and Pharmacy, Iasi, Romania; and the Boris Catz Award of Cedars-Sinai Medical Center, Los Angeles.

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I. FAMILY BACKGROUND AND EARLY YEARS

Chappelle: Dr. Pinchera, would you please tell me a little bit about your family background starting with your grandparents?

Pinchera: My grandfather was a lawyer and had been the mayor of a small city for about twenty years, Cassino, which is halfway between Rome and Naples, but at that time it was more related to Naples. It was a southern city. The other grandfather, from my mother's side, was in the Marines; he was a captain and was traveling all around the world. So my family has been mostly of a Neapolitan area. As a matter of fact, I was born in Naples, but the family was divided by being part in Cassino--which at that time, as I say, was more in the Neapolitan area rather than the Roman area--and Naples. The atmosphere in the family was very much Neapolitan, but soon after my birth we moved to Rome, and so I had been spending all my childhood and my university training in Rome, always with the idea that Naples was the real place where we should be and stay, but the education has been in Rome. We were five, and the reason why I finally decided to get into medical school is that in our southern type of family, each brother had to choose a different profession than his other brothers. So my first brother was supposed to be a lawyer, and then the second, an engineer--as was my father. And then what was left? I had to be a physician, which indeed I did become one. There were two sisters, and one decided to be an architect, which to my father wasn't really the thing that he would make his first choice because engineers like people that are straightforward, and architects are a little bit [too much like] artists. The other sister has been a teacher, a foreign language teacher. So this was the background, and all of us have been very active in our professions in one place or another.

Chappelle: What type of education did you have?

Pinchera: The thing that really was considered by my father and my mother important was to have a broad education, which means that we were all trained in humanities and we had to learn foreign languages. So as children we had to learn German, French, and English. So all the children had an education in this sense. They also made an effort to make me love a sport. I was trained as a fencer, but no success. I was also supposed to be musically minded, but I spent years in learning piano, but no success. But that's it. I like music. I like it, but I can't play. Since we were sixteen years old, every summer we went to a summer school somewhere--in France or in Germany or in England. This again was to reinforce the knowledge of the foreign languages. I think I liked it very much. I was more trained in humanities than in science, up to the moment when I entered the medical school.

II. UNIVERSITY OF ROME, SCHOOL OF MEDICINE (1955-1958)

Chappelle: Why did you choose the University of Rome for your medical school?

Pinchera: In Italy, there is practically the habit to go to the university, which is in the city where you live. It is much less common, when compared with the States, that one chooses the university, which is not where one lives. So for me, it was actually normal to go to the University of Rome, which after all is a very good university. So the choice was not difficult.

Chappelle: What type of physician were you planning on becoming when you first entered medical school?

Pinchera: I must say I didn't have a very clear idea. What I knew is that I would not become a surgeon. That's for sure. I think a clinician--this was the thing--and that with a scientific interest. I started when I first registered in the medical school. I had been working as a volunteer student in a very basic science atmosphere and laboratory, but it was too basic. And at some point my mentor there said, "Look you are fine; frogs are nice for you, and so on, *but* you probably would like more human beings." So I moved from this laboratory to a clinical lab.

Chappelle: Who was your mentor?

Pinchera: The mentor I had in Rome in the University was a person called Cataldo Cassano, Professor Cassano. He was an eminent clinician, an endocrinologist by choice, but a general internist. He was a person that really felt it was important to have experience outside Italy. This was in the fifties, and it was not so usual to have some of the young associates going around the world. So when I said, "What about going to the States? He replied, "Do it!" Which nowadays cannot be regarded as something peculiar, but in this time--in the mid-fifties or late-fifties--it was something. I mean to go abroad, spend time, and then come back.

Chappelle: What drew you to clinical endocrinology, was it Professor Cassano?

Pinchera: Oh, yes. Professor Cassano was one of the founders of the Italian Society of Endocrinology. And in this internal medicine environment, most of the interest was in endocrinology. And the thyroid was part of this interest, and there was a second mentor, the name is Lidio Baschieri, and he was very much interested in iodine metabolism. So I got involved in the thyroid with, I would say, a large interest, but not too much focused on research. Then the strong feeling for thyroid research came from an experience I had in France in the laboratory of Serge Lissitzky. He has been one of those who really founded thyroid research in France. He was working in one of the two groups that discovered triiodothyronine (T₃) in the thyroid. The other group, led by

Rosalind Pitt-Rivers and Jack Gross first found T_3 in the blood and then did most of the work for its characterization. In the laboratory in Marseille, where Serge Lissitzky was, the atmosphere was fantastic: night and day working on chromatography, making by ourselves pipettes and other glass instruments.

Marriage and children

After my return from Marseille and before going to the States I got married to Maria Longari, who is known at home and indeed in the entire thyroid scientific community as Chicchi. She was from Milan. She was trained as interpreter and has been translating books and scientific matters from English to Italian and editing journals, but over all has been a constant companion in all my activities. We had two wonderful children, Valeria and Michele, who live in Pisa with their own families. None of them elected to study medicine, but both of them are working in academic and scientific areas: Valeria is a professor of economic history and Michele is a space engineer.

John Stanbury's thyroid unit at the Massachusetts General Hospital

In 1962 I got a Fulbright travel fellowship and a research fellowship from NIH and came to the States in Boston at the Massachusetts General Hospital. The Mass Gen Hospital was and has been for me the perfect place to bind research and clinical activities. The thyroid unit was located in the Bullfinch building in the basement and was something that you couldn't even imagine how it could be more active. It was really a melting pot. A number of people were coming there from all over the world. There were fellows from South America, Europe, Japan and India: among others, Geraldo Medeiros-Neto from Brazil, Eduardo Pretell from Peru, Jacques Dumont and Christian Beckers from Belgium, Reginal Hall from England, Kanji Torizuka from Japan and Paul Walfish from Canada. A number of American scientists were working there: Leslie DeGroot, John Dunn, Mary Jane Spiro and so on. Vulimiri Ramalingaswami, an eminent scientist from India, was also there. There was a leader, a mentor that all of us regarded as our scientific father and inspirator and that was John Stanbury. He used to say: "if you want to do it, do it and do it by yourself." And we had to do it. And there was competition in doing it. The entire atmosphere was very stimulating and favored exchange of ideas focused on thyroid research. Thyroid research has been very much linked to social applications. Iodine deficiency has been one of the major topics. Since that time--the early sixties--as an application of research in this field, millions and millions of people have been benefiting from iodine prophylaxis for the prevention of the iodine deficiency disorders, including impairment of the brain development. This makes you realize that what you do as a researcher has a *translation* into a clinical and human benefit. Another achievement related to the thyroid research is its application to the early diagnosis of congenital hypothyroidism--such early diagnosis makes it possible to prevent damage to the brain during development. So that people who have this congenital disorder, the lack of thyroid function, then may grow as a normal person. Again, this is part of the social health application.

Chappelle: Social medicine?

Pinchera: Social medicine. This is in keeping with what most of us are pursuing, improve the knowledge in terms of pathogenesis, cause of the disease, diagnostic procedures, and treatment.

Chappelle: Can I ask you what research you were doing in Boston at the Mass General?

Pinchera: At the MGH when I came in, I had about twenty different projects in my mind. And John Stanbury, after a certain while, he said, "Look, first you stay there, remain seated, and think what you really want to do." Then after a certain time he said, "Did you think?" I said, "Yes I did, I now have about eight or ten projects." He said, "Look, you select one; that's the thing." So *you* have to do it. Then I said, "I want to study the mechanism and the pathogenesis of hyperthyroidism, and so I have to study the problem of TSH and TSH stimulation in that disease." He said, "I'm not so sure that it is TSH, but if you want to do that, why don't you just get into the problem of the long-acting thyroid stimulator?" Which was a new thing at that time. And I said, "Okay." Stanbury also said, "But if you really want to pursue this you should learn the bioassay, which is unavailable here. The guy who does it is in Montreal." This was 1962. I came to Boston by ship, and to take a plane was a big event. John said, "Tomorrow there is a plane to Montreal. You go there." And my wife, who accompanied me, said, "Okay, let's go." So we went to Montreal. And there I learned the assay in the lab of a marvelous guy, Max McKenzie. So we came back to Boston and then Stanbury said, "Now you're on your own. You learnt it; do it." [laughs] And so this was the beginning of a long adventure--of a love affair--with Graves' disease, and Graves' ophthalmopathy, and that has been continuing for years.

III. UNIVERSITY OF PISA (1970-present)

Chappelle: What were the circumstances of your being recruited to Pisa in 1970?

Pinchera: Well, the way that our academic system goes, particularly at that time, was that one would move from one university to another to have a facilitation of the career. So I was an assistant professor when I was in Rome at the University La Sapienza. Then my second mentor, Lidio Baschieri, got the chair in Pisa, and I was going to be promoted to associate professor. So I moved to Pisa. I really didn't think that I would remain in Pisa for a very long period of time, but this was exactly what happened. Because I did go there in 1970, and since then I have been always in Pisa for decades, I must say. I have spent in Pisa a larger part of my life than in any other place, more than forty years now. So I became a Pisan. And the Pisan university and the Pisan city recognized both my longevity and accomplishments, and I have been given an award, which says, "You may be Pisan by birth, but you may also *become* a Pisan." In Italian it is, "Pisani si diventa." So I became a Pisan. But I still remain a Neapolitan anyhow. [laughs]

Chappelle: What were your initial responsibilities at Pisa?

Pinchera: I was an associate professor, and in our system this means that I would run practically all the things related to research and so on, and be very busy in the clinical area, too. A side aspect would be, to some extent, teaching. The teaching at that time was mainly given by the chair. But then things changed. After a certain while, I became a full professor and then made all my career there: that's chief of the unit, and then chief of the Department of Endocrinology and Metabolism, and then a dean for the teaching activities. I had a number of other commitments at the national level by being the vice president of the national council of all university professors--not only medicine, but also history and whatever else. This is because of my interest in the reform of the university teaching and activities with a special attention in the new assessment of the postgraduate teaching in the medical school for medical specialties. In Pisa, I had the chance to reproduce to some extent the thyroid unit of the Massachusetts General Hospital. The effort that we have been able to do in Pisa was to give an emphasis to translational research: a lot of laboratory work, and a lot of clinical work applying the results of diagnostic and pathogenetic studies to the clinical tools for diagnostic and therapeutic procedures. And I think that this has been a very nice approach to the activities that we have been able to do, thanks to the large number of young and brilliant people who were recruited. Probably the thing that I am more proud of than anything is to have raised a number of very, very good pupils. In the group that we have been raising in Pisa, there are now eight full professors, all over Italy. They are in Naples; they are in Pavia, in Siena, in Varese, in Sardinia. They created their own groups--all interested in thyroid *and* in something more, because you have to do something more, too. The important thing is that when I will finally retire completely, there will be eight new schools going on. All of this has been very successful; these former pupils have been publishing and are now publishing interesting studies. It is very recently that our interests shifted to some extent from the thyroid to obesity and parathyroid. A friend of mine used to say that the parathyroid is important because it is close to the thyroid. In the endocrine department there is now a group working on parathyroid and calcium metabolism headed by Claudio Marcocci, and another group working on obesity and related problems headed by Ferruccio Santini. The major interest of the Pisan group and its satellites in other universities remains thyroid research. The leaders include very fine scientists: Gianfranco Fenzi, Enio Martino, Furio Pacini, Rossella Elisei, Paolo Vitti, Luca Chiovato, Stefano Mariotti, Luigi Bartalena. They are something like my sons and daughters. Now, because of age, I am an emeritus. You know with emeritus status you could choose to do many things. One of the things is doing nothing. I pretend to be still useful, and so I have my own activity going on. I remain in the department, advising--if I can--and doing whatever I can do.

Thyroid autoimmunity

Chappelle: Could I ask you a little bit about the research that you've done through the years? Could we start with thyroid autoimmunity?

Pinchera: Oh, yes. My interest in thyroid autoimmunity was strongly reinforced when it was clearly established that Graves' disease is an autoimmune disorder. As a matter of fact many of the major thyroid disorders are due to an autoimmune pathogenesis. They include Graves' disease, Hashimoto's thyroiditis and primary hypothyroidism from thyroid atrophy. What is now common knowledge derives from discoveries made in a single year, in a golden year: 1956. This was when Deborah Doniach and Ivan Roitt identified autoimmune thyroiditis in humans, Ernest Witebsky and Noel Rose produced experimental autoimmune thyroiditis in the animals and Duncan Adams and Herbert Purves discovered the long-acting thyroid stimulator, later identified as the antibody causing hyperthyroidism. This concept was repeated again and again around the world in an itinerant seminar in which I was participating several years ago together with Leslie DeGroot, Sidney Ingbar, Gerard Burrow, Robert Volpè, Geraldo Medeiros-Neto, John Nicoloff, and Shigenobu Nagataki. Graves' ophthalmopathy as one of the major complications of Graves' disease is also related to an autoimmune process. When I was a fellow, before coming here to the States, I spent one month in Barcelona learning how to produce exophthalmos in the gold fish. At that time, nobody really thought that the eye protrusion could come from an autoimmune reaction, but it was known that you could reproduce it in the gold fish by injecting a pituitary extract containing the so-called exophthalmos producing substance. Since then, there has been an evolution in my interest, and so Graves' ophthalmopathy has been one of the things that I've been studying.

Environment and genetics in iodine deficiency and thyroid cancer

If one looks for hyperthyroidism outside the autoimmune spectrum, then realizes that a frequent type of hyperthyroidism is not related to autoimmunity. This is toxic nodular goiter. If you live in an iodine deficient area, all Italy was largely iodine deficient years ago, you would appreciate that a very frequent form of hyperthyroidism is indeed due to toxic nodular goiter. This is not the case in the States as in other iodine sufficient areas where the other form of hyperthyroidism is much more frequent.

Chappelle: You published a pioneering study in that area.

Pinchera: Well, this was, you know, something that came out at the correct time.

Chappelle: What was the impact of that study?

Pinchera: One of the things it says is that whatever happens in one area is the result of an interplay between environment and genetics. There are other areas of interest that I think should probably be mentioned, and certainly one of them is thyroid cancer. It is usually said that thyroid cancer is a rare disease; it's much less rare than one can think of. The positive aspect of thyroid cancer is that in most cases we have the tools for treatment, but this is not always the case. Among other specific points to be considered, early diagnosis of medullary thyroid cancer should be mentioned. If treated in the early phase this type of cancer is much more amenable to a real cure. From this point of view I think that some of the studies we have been doing give to the physician the possibility to act at the correct time, thanks to early diagnosis.

Chappelle: What tools are you talking about for early diagnosis?

Pinchera: There is a marker of this type of tumor, which is calcitonin, and serum calcitonin increases when the tumor is present. This gives you the possibility to detect the presence of the medullary thyroid carcinoma as distinct from other types of thyroid cancer by measuring serum calcitonin *before* you have the histological assessment. This practically implies that you have to measure calcitonin in a large number of patients that do *not* have medullary thyroid carcinoma. We feel that the number of positive cases that you can identify among the patients with thyroid nodules of undetermined nature justifies the procedure in terms of treatment results, because it is only when the patient is treated in the early phase that you really have the chance to eradicate the disease. This is a controversial issue, I must say. We believe that the cost/benefit ratio is in favor of performing the screening for calcitonin in a well-identified patient population.

Chappelle: When you say we, do you mean the Pisa group?

Pinchera: Yes. Well, this issue started with the Pisa group. Now it is the Pisa and Siena group because, as I said, one component of our group moved to Siena. But then this was confirmed in France and in Germany and elsewhere in Italy. I don't think that there is a controversy over whether there is something that you can do. The controversy is *when and how much*. The issue is how much you should restrict the population that you are submitting to this screening test. This is the controversy. Probably some other tools will be found in the near future, but for the time being I do not think there is anything better.

Post-Chernobyl childhood thyroid cancer

- Chappelle: Would you talk a little bit about thyroid cancer in children and your efforts with the World Health Organization?
- Pinchera: Those who have an interest in thyroid cancer at large, also have to deal with childhood thyroid cancer, which is rare. But this type of interest exploded at the time of the Chernobyl accident. And the reason is that--as everybody now knows--following the Chernobyl accident, the radiation-induced thyroid cancer in children has been the major health problem related to this nuclear power accident. Dillwyn Williams in the UK and myself have been--as presidents of the European Thyroid Association--immediately involved in the study of this problem. In 1991, the first rumors of an increase, *large* increase, of childhood thyroid cancer were spreading, but nobody in the scientific world believed that it could be possible because of previous experience with other radiation-induced cancers. We felt that thyroid cancer should be developing several years later--ten to twenty years after the accident. This was too precocious. So there was some kind of uncertainty. We had a meeting in Munich with many people, and the prevalent opinion was--"It cannot be." But two representatives from Belarus were present and showed their data. After their report, the first doubts came out. So the WHO proposed: "Why don't we go and see whether this is true or not?" Three of us--Keith Baverstock, the WHO representative, Dillwyn Williams, and myself--went there in a mission, and in one single day, I could see more children with thyroid cancer than I had seen for several years in my clinic. And Williams, who is a pathologist, saw as many histological preparations--he had never seen before. So we decided to give this message publicly.
- Chappelle: Through the WHO?
- Pinchera: What we did was to send a letter to *Nature* because we felt that the issue was of major importance. In an accompanying report the Minister of Health of Belarus, a very lovely person, Vassily Kazakov and other Belarus officers reported available data on the unexpected increase of thyroid cancer in children. In our letter as WHO independent observers, we confirmed the observation and attributed the phenomenon to the large amount of radioiodine released from the reactor. And since then, the results have been observed and documented by a number of other missions, and there is no doubt that there has been this problem. Then we devoted our attention to the pathogenetic factor, which could be the cause of the development of thyroid cancer in these children and we have been looking at the genetic aspects. It was identified in the rearrangement of the RET oncogene the so-called RET/PTC (papillary thyroid carcinoma) which is a specific type of rearrangement of the RET oncogene. Since then, a number of other studies have seen that this type of mutation could

be induced by radiation, particularly in children where the thyroid is much more sensitive to radiation. This is of major relevance because it implies that when such an event happens you have to protect mostly the children and the pregnant mother because of her potential child in utero--fetal thyroid will take up radioiodine after the third month of pregnancy.

Chappelle: How can you protect them?

Pinchera: We have first to consider that general measures for protection from radiation exposure which include sheltering, evacuation and avoidance of contaminated food. WHO established a group of experts in order to see whether you could specifically protect the thyroid, since the thyroid is specifically exposed to these types of accidents because of the release of radioiodine, which is taken up by the thyroid. So the goal is to block the thyroid. This was known, but the WHO had to establish the timing of the intake of the large amounts of potassium iodide or iodate needed to block the thyroid uptake. There are guidelines that have been, not annually, but periodically revisited. The committee of experts involved several scientists from Europe and, of course, the United States. And this was another occasion to see very good friends from the States coming and participating in the discussion, such as Jack Robbins, David Becker, and so on. This procedure for protection of the thyroid from radiation is now called "iodine thyroid blocking" (ITB), instead of "iodine prophylaxis" for protection from iodine deficiency, which is usually carried out by adding minute amounts of iodine to the salt. In the face of the concern raised by the Fukushima accident, we have to point out an important issue that came out from the Chernobyl studies. What we did see is that if you compare areas in Belarus and Ukraine and Russia that were iodine *sufficient* with those that were at that time iodine *deficient*, then you could see that there was a major difference in the prevalence of radiation induced thyroid cancer. In iodine *deficient* areas, there was three times the number of cancer seen with respect to the iodine sufficient areas. So this is a *major* point that has to be used to promote correction of iodine deficiency since it would turn out to be very helpful in the case of another accident of that type of order or magnitude. One of the things that I probably would like to stress is that only a few patients of the six thousand subjects who developed thyroid cancer following the Chernobyl accident died because of the disease--only fifteen, seventeen, no more than that. One of the reasons is that it is a type of cancer that has a lot of metastatic disease and so on, but it is amenable to treatment. And when we compared the outcome of the treatment in Italian and French children who developed spontaneous thyroid cancer in their childhood with Belarus, we found no difference, in the sense that this type of radiation induced thyroid cancer is susceptible to treatment--the same type of treatment that you use in the sporadic type--and paradoxically benefits by the use of radioiodine because this destroys the metastases.

More on iodine deficiency

- Chappelle: You mentioned iodine deficiency and how people suffered more--or that there were more cases of radiation induced thyroid cancers in those who were deficient in iodine. When did you first become involved with the problem with iodine deficiency?
- Pinchera: Being in Italy, it's difficult not to be involved in iodine deficiency because large areas of Italian regions were--and many are still--iodine deficient. I will tell you a story. In the early sixties, we were at the Mass General thyroid unit--and there was also a thyroidologist from Innsbruck, Austria, George Riccabona. We were challenged with patients seen at the thyroid clinic. At the beginning of our experience in the States, at the first glance we would interpret any new case of thyroid goiter as non-toxic goiter, even when it would turn out later to be Hashimoto's disease. This is because in the past in our countries--Austria and Italy--goitrous Hashimoto's disease was relatively rare among the very large number of patients who had goiter, frequently big goiters. Now that iodine deficiency is slowing down, we do not see any more very big goiters and Hashimoto thyroiditis becomes more evident. So iodine deficiency is a necessary part of the problems you have to face if you are a thyroidologist in Italy. I started soon after my thesis. As a matter of fact, I did have my medical degree thesis related to this type of problem.
- Chappelle: What would you say your major accomplishments in this area would be?
- Pinchera: If I were younger I would say this and that achievement. Nowadays, I would say that probably my major accomplishment is to have built up a group of people that continue to study and work very successfully. I am proud of the activity of this group that attracted a number of eminent American and European thyroidologists who elected to spend their sabbatical leaves in my department in Pisa. They included Les DeGroot, Sam Refetoff, Lew Braverman and Connie Pittman from the States, Juan Bernal from Spain, Wieland Meng from Germany and Pierre Carayon from France.
- Chappelle: Were these sabbaticals occurring while you were regional coordinator for the West Central Europe and International Council on Control of Iodine Deficiency Disorders (ICCIDD)?
- Pinchera: As a matter of fact, I am still ICCIDD regional coordinator for West Central Europe. This is my specific commitment to the social medicine aspects. The ICCIDD was founded several years ago in 1985 by John Stanbury, Basil Hetzel, and others. We first met in Katmandu, Nepal, in 1986. The location of the ICCIDD meetings is important. We met in the

places where iodine deficiency disorders are of major importance, and the Himalaya region is one of such areas. The role of my office is to acquire and exchange information and promote iodine prophylaxis in Europe. There are thirty-five to forty national representatives in the ICCIDD West Central Europe region and they all push with their coalitions the iodine prophylaxis in their own countries. We recently published in the *Lancet* that Europe is still iodine deficient to some extent, which may be unbelievable, but it is correct.

Chappelle: Are there studies on areas around Fukushima to see if they are iodine deficient?

Pinchera: I doubt that there could be an area in Japan that is iodine deficient. Over there the problem might be that there is an iodine excess to some extent. I understand that Shigenobu Nagataki, who is a Japanese thyroid scientist of major importance, is very active with his former pupil Shunichi Yamashita in facing the problem related to the Fukushima accident. Japan might consider the distribution of iodine pills for iodine thyroid blocking to protect the people from radiation but, on the other hand, the diet of Japanese people is rich in iodine.

Chappelle: So you think that the seaweed and the iodine they get in their natural diet would offer them some protection?

Pinchera: Yes, I do. Conversely there is no doubt there would be a major problem if they were living in iodine deficient areas such as those prevalent in many parts of Europe. I understand that a fallout amount of radioactivity outside Japan and even in Tokyo is limited.

IV. The Endocrine Society

Chappelle: I'd like to ask you a little bit about the Endocrine Society. What's been the nature of your relationship with the Endocrine Society over the years?

Pinchera: The first thyroid association I joined is the American Thyroid Association, and I don't think that I skipped more than one or two meetings in all these years. The American Thyroid Association collects the people that also go to the Endocrine meeting. I don't think that any year has passed since the late-sixties without [my] being here, either for the Endocrine Society or the American Thyroid Association, or both--money permitting. Over the years there has been a growing interest in forming our "own associations" in Europe. In 1965 many of the fellows who had been in the States for training, going back to Europe asked themselves: "Why should we always meet there?"--at that time we used to go to Atlantic City for this sort of meetings--"Let's have our own association." So we formed the European Thyroid Association in Rome. Each of the European countries has its own Endocrine Society. A few years ago it was decided to establish the European Endocrine Society. In spite of this, I like

to come to the meetings of the American Endocrine Society as frequently as possible. Nowadays it becomes a little bit difficult to participate in every meeting, because we have too many international and national conventions. So when you are an old guy you have to choose. In any case, whenever I come to the Endocrine meetings or Thyroid Association meetings, I find a large number of friends. So dinners are always busy.

Chappelle: Thank you.

[End of Interview]

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Interview History—Aldo Pinchera, MD, PhD

Dr. Pinchera was interviewed by Michael Chappelle on June 5, 2011, during the Endocrine Society's Annual Meeting held at the Boston Convention and Exhibition Center in Boston, Massachusetts. The interview took place in a conference room at the Westin Hotel and lasted sixty-one minutes. The transcript was audit-edited by Mr. Chappelle and reviewed by Dr. Pinchera prior to its accession by the Oral History of Endocrinology Collection. The videotape and transcript are in the public domain, by agreement with the oral author. *The original recording, consisting of two (2) 45-minute mini DV cam tapes, is in the Library holdings and is available under the regulations governing the use of permanent noncurrent records.* Records relating to the interview are located in the offices of the Clark Sawin Library's Oral History of Endocrinology Project.