

## IN CONVERSATION WITH

# George Tavartkiladze

For decades, **Professor Tavartkiladze** has been the personification of Russian audiology and its best known ambassador on the international stage. Hailing from the republic of Georgia, he has led countless seminal initiatives within Russia to advance the science and practice of hearing care. His work has also influenced the World Health Assembly to consider an action plan for deafness prevention.



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George with his mother in 1951.

### Tell us a bit about your childhood.

I was born and spent my childhood in Georgia - a country of ancient culture, known for its fantastic nature, music, hospitality, food and wine. As a child, I drew well and planned to become an artist. At such a young age, our desires change rapidly and my next passion was physics. In 1966, I finished the secondary school with a golden medal.

### What was your pathway to medical school? Did you have a scholarship? Was your family in medicine? What inspired you to do it?

The decision to become a doctor was not spontaneous. Despite the fact that my parents were not medical doctors, the major role in my decision was played by my mother's brother, who was a surgeon. I remember my first visit to the operating room in his institute where I witnessed a lung resection; a lot of emotions...

At this time, medical education in Moscow was the finest so I went to Moscow, sat exams at the Second Moscow State Medical Institute and began my medical education.

### Who impressed you most during your medical school years?

During first years at the Institute I was fascinated by molecular biology and genetics but, for the fourth course, decided to continue my training in otorhinolaryngology. I left the Institute in 1973 with a red diploma and had Burdenko and Lenin stipends. From 1973 to 1975 I was a resident at the same Institute. During these years, my interests were defined and I decided to continue my professional career in audiological medicine and hearing science. The important influence on this decision was academician, Simon

Khechinashvili; famous physiologist and audiologist.

### Why did you decide to pursue audiological medicine which, even today, is not a popular choice?

During my training in otorhinolaryngology, otology became my favourite. And since I have always admired physics and theoretical disciplines, my decision to continue my professional career in audiology was absolutely natural.

### What did your training involve?

From 1975 to 1977 I was working in Tbilisi State Medical Institute for Postgraduate Training, under the supervision of Prof Khechinashvili, and had a unique chance to be trained in the electrophysiology of hearing. In our country we had, and have until now, two dissertations: the first after you become a candidate of sciences and the second after you become a doctor of sciences. In December 1977 I wrote my first thesis at the Moscow ENT Research Institute.

In 1982 I was trained at the Laboratoire d'Audiologie Expérimentale, Bordeaux, France, headed by Jean-Marie Aran. The main topic of my investigations was frequency selectivity of the cochlea in



George Tavartkiladze (second from the left) with Robert Harrison (third from the left) and the team of Laboratoire d'Audiologie Expérimentale, Bordeaux, France, 1982.

experimental animals and in patients with hearing loss. I was working with Robert Harrison who destroyed my French (only joking) but really improved my English. I also had a unique chance to visit Prof Michel Portman on a weekly basis and discuss various topics, including otorhinolaryngology, audiology, art and life. It was a fantastic experience!

### Who was your role model in those formative years?

Again, with many thanks, I'd like to mention Prof Simon Khechinashvili and Prof Michel Portman - their influence on my professional vision and professional career was invaluable.

### In what institutions have you served? Why did you select them? Why did you move from one to another?

In 1978 I started my work in Moscow ENT Research Institute, the only research institute in the field of otorhinolaryngology in the city at this time. I started my work as scientist, then a senior scientist and, from 1983 to 1988, was Head of the Laboratory for Clinical Audiology.

In 1988 I wrote my doctoral dissertation. During these years, all my efforts were directed towards explaining the medical and social importance of the ear pathology and hearing loss for the society, to the Ministry and the Government. In November 1988, in accordance with the order of the Government of the USSR and following decree of the Ministry of Health of the USSR, the All-Union Research Centre for Audiology and Hearing Rehabilitation was established as a leading institute for basic and applied research in the field of audiology and hearing rehabilitation, coordinating activities of the audiological services in the country. I was appointed Director of this Institute. The centre also had a branch in Tbilisi, Georgia.

It was a fascinating time. It was necessary to invite researchers, medical doctors, speech therapists, and train young specialists. And we did it. The main research priorities of the Centre were: electrophysiology of hearing and otoacoustic emissions - and later - OHC electromotility and investigation of OAE generation mechanisms.



George Tavartkiladze (front row, third from left) - President of the Collegium Oto-Rhino-Laryngologicum Amicitiae Sacrum with former CORLAS Presidents, CORLAS Congress, 2006, Moscow.

### Is there any appointment in Russian audiological medicine you have not held?

In 1996, by the decree of the Russian Ministry of Health, audiology was included in the list of medical professions with a background education in otorhinolaryngology. This, of course, increased the interest of specialists and protected their professional careers.

In 2001 the Russian Society of Audiology was established and I was elected as its President.

It was at this time that the net of audiological centres was developed (we now have 276 centres) and the issue of postgraduate training became of primary importance. In 2003 we established a course and, in 2005, the Chair of Clinical Audiology in the Russian State Medical Academy for Postgraduate Training.

### What do you see as your real strengths? What are your best attributes?

Optimism, stubbornness in the best sense of the word, and the aspiration to create a new. I was, and am, a real fighter, fighting for the future development of my Institute and audiology.

### What do you see as your most significant achievements?

I'd like to divide my answer in to two parts. Speaking about scientific achievements, I have to mention our research projects in electrophysiology of hearing; investigation of the otoacoustic emission generation mechanisms; investigation of otoacoustic emission ipsilateral suppression; electromotility of the outer hair cells and

especially their bending motions; and development and introduction of the electrically evoked AEP registration. From the clinical and organisational point-of-view, it is necessary to note the development of the universal hearing screening programme; introduction and development of the multichannel cochlear implant programme; and development of the net of regional audiological centres.

Today we have more than 250 centres in all regions of the Russian Federation, equipped with high-level specialists and all the necessary equipment for diagnostics of hearing loss and rehabilitation of patients with hearing loss and deafness.

### You have many publications. Which publication are you most proud - the one that has made most impact and that best illustrates your scientific contribution?

I am particularly proud of *Ipsilateral suppression effects on transient evoked OAE* in 1994 in which OAE suppression by ipsilateral masking was described for the first time [1].

I'd like to also mention the *Handbook on Clinical Audiology*. This Handbook is in Russian and is used for the postgraduate training of audiologists.

### The WHO motion of hearing loss prevention – is this important and what role did it (or Russia) play?

Since 2000, I have represented the Russian Federation in the WHO Expert Advisory Board of the WHO Program for prevention of deafness and hearing loss. Additionally, in 2004 I was elected as President-Elect of the International Society of Audiology and, from 2006 to 2008, served as the President. In 2012 during the XXXI World Congress of Audiology, I was elected as Secretary General of the ISA. I continued the work started by the former Secretary General, Hans Verschuure, and then by George Mencher. Finally, at its 136th Session in January 2015, the WHO Executive Board

**“I was, and am, a real fighter, fighting for the future development of my Institute and audiology.”**

decided to admit the International Society of Audiology into official relations with the WHO. It was a very important step and we started together with Technical Officer of the WHO, Dr Shelly Chadha, and the Secretariat to work on the new Resolution on Hearing (last Resolution was adopted in 1995). In 2015, at the 68th World Health Assembly in Geneva, on the request of the Russian Federation, the development of a new Resolution was supported; and in 2016, at the 139th Session, the WHO Executive Board decided to present the draft of the Resolution to be adopted by the 70th World Health Assembly in May 2017. We hope that the result will be successful.

### How does audiological medicine in Russia differ from what you see in the Western Europe or the United States?

Audiology in Russia is a medical profession with the background education in otorhinolaryngology, as in France and Spain, which differs from audiology in the USA, England, Germany and other European countries. Additionally, we are running non-medical training programmes for acousticians.

### What particular challenges are presented when delivering high-quality audiological care to a vast country like Russia?

First of all, I'd like to mention the infrastructure consisting of: the net of professional centres; working programme for the universal audiological screening at the national level; and the developed programme for rehabilitation of patients with hearing loss and deafness, including implantable technologies, hearing aid fitting, and surgical rehabilitation of hearing loss. The most important is financing of the majority of the programmes from the Federal Budget and the Obligatory Medical Insurance System, plus development of the private sector in the field.

Recently, hearing aids became available free of charge for children (until the age of 18) and pensioners. Following international gold standards, the individual rehabilitation including the hearing aids, is prescribed as a rule before six months of age. The coverage of the first stage of universal audiological screening is close to 96-98% but, despite the existing audiological centres with all necessary diagnostic and rehabilitation facilities including the equipment and trained personnel, the second stage of the screening is about 55-60%. This is the same situation in the majority of countries.

Of course there are a lot of things that we need to improve and develop...

## “Every ambitious man aspires to reach the top and reach new peaks throughout his life.”

### What one change would you like to see take place in Russia that would have the most impact on improving hearing care?

I am sure that not only Russia, but all countries, should follow the WHO recommendations in *Planning & monitoring of national strategies* (2015) which include the set up of the National Committee representing all ministries responsible for the ear and hearing care.

### What changes do you foresee in Russian audiology in the next decade?

Trend to basic science, especially molecular genetics, microbiology, nanotechnologies. To develop these new technologies, we have the opportunity to collaborate with different academic institutions and the companies producing microelectronics, nanomaterials, software and hardware for audiological purposes.

### How does medicine and politics interplay in Russian audiology?

All the most important achievements, including the introduction of the universal audiological screening and cochlear implantation with the upgrade of speech processors, are due to the financing from the Federal Budget and the Obligatory Medical Insurance System. It was not immediate success: during the last 15 years, and in close contact with the professional society, we were working with the Ministry of Health and the Russian Government, and today we have achieved positive results. But this work has to be continued.

### You have travelled extensively in audiology (you have international celebrity status in the field). What has that taught you?

Travelling with lectures and participating in the congresses and symposiums, I had a unique opportunity to meet the leaders in the field, and many of them became good friends. It was, and is, an excellent opportunity to share new results and discuss new ideas. It was also possible to send my young colleagues to be trained in the best clinics and research labs.

### What do you know now that you wish you knew when you started out on your career?

That knowledge has no limits and should be developed throughout life.

### What advice would you give to a young doctor contemplating a career in audiological medicine today?

Training in audiology is available mainly in the research institutes and at the Russian Medical Academy for Postgraduate Training. My advice to young doctors and researchers would be: if you are planning to be a practitioner but are also interested in hearing science, come to our centre where we will provide you with the opportunity to learn more.

### Away from the world of audiology, where / how do you find your relaxation?

Family, sports, music, art, and my dog!

During my time as a student, I was playing basketball and played drums in a jazz band. As well as jazz, I enjoy pop and classical music. Talking of art - impressionists are my favourite.

### Finally, have you plans to retire and how would you like to be remembered?

Today, I am not thinking about retirement but I understand that one day it will happen. I will continue to teach and will use my additional time for the national and international activities.

Every ambitious man aspires to reach the top and reach new peaks throughout his life.

#### References

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