

Interview with Prof. Andrzej Szczeklik

A White Piano



Zbigniew Lagocki

Music and medicine – Prof. Andrzej Szczeklik by the white piano

Academia: You write beautiful books which talk about medicine as an inseparable part of learning, science, and culture. There is a piano in the hospital. You're a humanist, researcher, renowned doctor.

Andrzej Szczeklik: When I finished high school, I was interested in many things. I was thinking of studying Polish language and literature; I also passed a diploma in piano from a middle music school and got into what

is now the Academy of Music. On the other hand I was drawn towards chemistry. In the end I went for medicine; I suspect the decision was influenced by my home life. My father was a doctor, a professor of medicine. Although no one pressurized me, my home must have been saturated with an air of the profession. My first years at university were awful; I couldn't imagine anything more boring. It was the last time when feldshers [field surgeons] were included in the course, so there were 500 or 600 people in my year. For the first 3 years, it meant huge crowds and learning everything by memorizing it. I hated it. But things got more interesting after a while, and by the time I finished, I wouldn't have swapped medicine for anything.

And do you still play the piano?

Oh yes, it's always been very important. When Communism collapsed and our hospital started earning a bit of money conducting research for industry, I thought, "I must buy a piano for the Department immediately." I phoned the director of the music school where I studied and said, "Sir, I'm looking for an instrument, but I can't get a Bechstein or a Steinway. Maybe you've got something to recommend that I can afford?" And he says, "I've got a decent piano, but there's one problem – it's white..." "So it'll be perfect for a hospital!" – I replied. Now we hold concerts for the patients every 2-4 weeks. Occasionally we get famous guest performers, but they're usually performed by students from the music school. Sometimes I get my friends, actors from the Pivnica pod Baranami club. It provides a soundtrack in the hospital; the patients like it, because it makes a change from staring at a TV all day.

Music and medicine. Who were the people that influenced you most?

I owe a lot to many people I met throughout my professional career. When I came back from the States, where I spent two years doing post-graduate training, there was no work in Kraków, so I moved to Wrocław. As a young doctor, I was often on duty at night. I spent my free afternoons and evenings with the renowned chemist, Professor Marian Orłowski, who moved to the States in 1968 and was extremely successful there. He had a gift – he was able to create chemical compounds that were difficult to obtain at the time. In any case we were studying new, unknown things. Orłowski and I worked in underground laboratories, where we were frequently visited by rats. Although I was nervous at first, I made friends with one of them. I named him Rodrigo. He visited us regularly and observed our work. Orłowski synthesized small molecules, which he used to study enzymes. Today's buzzword is genetics, but in those days it was enzymology. Together with my father, Orłowski introduced an enzyme called gamma – glutamyl transpeptidase (GGTP). He made the substrate – a compound used for identifying the enzyme. Together they devised an original assay and used it in their patient studies; they published their results in one of the top American journals. GGTP remains one of the most sensitive and widely used liver function tests in the world. Some of the compounds Orłowski synthesized with my assistance turned out to react with blood and affect clotting mechanisms. This drew my attention to atherosclerosis.

So you worked with patients by day and at a lab by night?

I also went to the library in the evenings. One time, when I was the last one there, I picked up a pharmacology journal on my way out. There was an article on embryonic development disorders. I've always read a lot, but this really didn't fit into my interests. Still, I glanced at the piece. The librarian was hovering

over me, waiting to close, but I was entranced by the article's style. I thought it was amazing that someone could write like that. The author's name meant nothing to me at the time, but I quickly noted it all the same. A few months later I received an invitation to Kraków to take over the clinical Department there. I was 32 and had finished my DSc degree (habilitation) two years earlier. The hospital we're in now was then a picture of abject misery and despair. I was given a small mezzanine floor, which had a single dilapidated shower for male and female staff. There was no money for anything – not for test tubes, not

been extremely lucky in terms of people I've met.

Do tell!

To start with I had two or three assistants, but more young people quickly started gathering round me. Nearly 50 got a PhD, 17 obtained DSc degrees (habilitations), some are professors. I dare say that most of them are very good doctors, and some are extremely talented researchers, such as Marek Sanak, professor of genetics. He now heads a large department and has outstanding achievements on

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specialists are like individual instrumentalists. They do the playing,
but the conductor knows what to expect from all the instruments

for a laboratory. I decided that I must find some somehow. The university announced a contest. I spent a few nights writing a research plan and got the first installment of money. And it turned out that the committee judging the contest was chaired by the author whose name I wrote down. He was called Ryszard Gryglewski, and we quickly became good friends. We went to the UK together to see the future Nobel Prize laureate Sir John Vane. Gryglewski worked with him for a good few years. Sir John was a unique man and he had a profound influence on me. He had an excellent team. People say that you need special talent for mathematics and music, and that's also true for scientific research. I've met a few incredibly talented people in my life, people who had a twinkle in their eye and a gift for research, but Gryglewski was the best. He achieved some truly great things, and I was lucky enough to assist him several times. For many years we met in the evenings, discussed research and our results, drew storyboards with prostacyclin in the starring role, sketched diagrams for future experiments, talked about our patients. It was incredibly inspiring! Really, I've

the global scale. There are also excellent clinicians, including Prof. Jacek Musiał and Prof. Ewa Niżankowska-Mogilnicka, who both started off as my students. And of course my family was a big help to me, too. I also really value the friendship of Prof. Andrzej Białas, Dr. Jakub Kwiatkowski from Świeradów, and many others.

Then there was politics...

It was the 1980s. For 9 years I worked professionally and scientifically (when I wasn't barred by Gen. Jaruzelski's WRON – the Military Council of National Salvation), but nothing was more important than the Solidarity movement. It was a large, strong organization at the university – a few professors, and masses of young people. Later, once Poland regained full independence in 1989, I didn't take part in political life. I was asked to stand for the Senate, or even as a minister, but it wasn't for me. However, after the first free elections to the Medical Academy in 1990, I was elected its rector. My friend Prof. Andrzej Pelczar, the outstanding mathematician who sadly died about a year ago, was elected as

Interview with Prof. Andrzej Szczekliki

rector of the Jagiellonian University. We knew each other from our time at the Solidarity underground. We met just after the election and decided that we wanted to achieve something that seemed impossible: to re-introduce medicine to the Jagiellonian University, where it had been a faculty for centuries until it was segregated Soviet-style into a separate Medical Academy in 1951. We weren't

Pelczar tells me that there was no formal agreement from my Medical Faculty, a formality I had completely overlooked. So I called an urgent meeting of the Faculty Board – 150 medical professors. We were holding a debate and I could see that things might be looking bleak once we reached the voting stage. The discussion was shrouded with fear that we'll become subordinate, we won't have

separation from clinical psychology, psychiatry, or neurology? After all they are all interconnected. The same goes for organic chemistry (university) and biochemistry (medicine). I see medicine in a much broader context. I've been trained in internal medicine. Internists could be compared to conductors of symphony orchestras, while specialists are more like individual instrumentalists. The conductor doesn't spend his days playing violin or bassoon, pulling a bow across the thick strings of a double bass or blowing into a tuba. And yet he knows all those instruments well; he knows what to expect of them and how to tune them into a sound known as harmony. On the patient level, he must tune patient interviews (anamnesis) with imaging and biochemical tests. Today such thinking has developed into the field of translational medicine. The problem was that on one hand there was fast-developing basic research, on the other clinical studies, and a vast chasm in between. They had to be brought together eventually.



With Prof. Ryszard Gryglewski (left), shortly after the introduction of prostacyclin into therapeutic regimes (1981)

the only people in Poland thinking about that sort of thing at the time, but we were the only one who managed it.

It must have been very difficult.

Three years of hard work. We had to travel to Warsaw most weeks, because we needed approval from three ministries: science, health and finance. But it paid off in the end; the entire Medical Academy was incorporated into the University, and the celebrations in Kraków were attended by rectors of all Polish universities. I passed on the white ermine furs to Andrzej Pelczar and became Vice-Rector of the Jagiellonian University. Still, the process dragged on and on and wasn't easy. It took a further few years for the teams to fully merge. Human problems, human fears. For example, almost everything was sorted out (we were just waiting for the parliamentary decision), and suddenly

a say, and everything will be decided by "those University people." I realized that my speech must be like that of Napoleon addressing his soldiers, telling them that each one is carrying a marshal's baton in his backpack. I reminded my distinguished colleagues of how many great medics had held the position of rector at the Jagiellonian. I quoted Józef Dietl and others, and finally everyone realized that the university is actually ours, too, that we can all influence it. In the end the vote was almost unanimous.

You were clearly convinced that that's where medicine belonged.

Courses like physics or philosophy studied by future medics are fields that develop at universities; that's also where researchers conduct their work. On the other hand, why should university students of psychology be educated in

You talk about a systematic approach to knowledge and medicine. You can study something bit by bit, but it won't tell you anything about the big picture...

This is especially important in clinical medicine. Fragmentation of science, the reductionism practiced especially in the natural sciences – physics, biology, chemistry, medicine – has brought incredible progress; there's no denying that. On the other hand it means things get lost in the whole. The whole is greater than the sum of its parts. The human body isn't like a cake cut into wedges. Of course we need to consult specialists, but a holistic approach is equally important if not even more so. I think this approach has a real future, also from an economic point of view. Medicine is taking astonishing strides forward and it can extend human life by decades, but it is also increasingly expensive. Even countries wealthier than ours struggle to meet demand and their healthcare systems cannot cope. It seems to me that one solution should be investing in doctors who are able to make decisions without having

carried out all the expensive tests available. In the US this is made more difficult by defensive medicine.

What does this mean?

Let's assume you come to see me for something relatively simple. I could try to help, give simple advice, but I'm worried: what if she tries to sue me? And so I carry out lots of tests to have plenty of evidence that I did everything right. I read recently that one in four people in the US has a computer tomography carried out each year. That's just incredible! Let me give you an example from our own hospital. The clinic's cleaning lady had a pain somewhere. I suggested that she should check into the hospital for a couple of days so we could see what's what. After two days I went to examine her, and she was all in a huff. I asked what was wrong. My assistant said everything's OK, but she cut in, outraged: "Professor! It's my third day here, and no one's taken an ultrasound of my stomach!" Each of her neighbors in her tenement block had had an ultrasound, but she didn't get one! I think if we were to start fixing our system of medicine, then - apart from the reforms that every minister promises

nula, not in a test tube in a lab. And you need talent for medicine, you need to strive to reach unattainable perfection. There's no doubt that about half of all diagnoses are made when talking to the patient - but you do need to know how to talk. In many cases, the patient interview allows the doctor to make a diagnosis straight away, but equally importantly it helps build the relationship between doctor and patient, and without it there's no medicine.

So what's been your most important meeting with a patient?

There have been so many, I could easily fill a whole issue of *Academia*. I'd sound like the kind of doctor who gets home at night and says, "Honey, I had a really interesting case today," and his wife's thinking "Oh no, not this again," because she gets it every day. Now that I've warned you, I'll tell you about last winter and spring, when Poland had a swine flu epidemic. The disease doesn't affect the entire population, but it's terrible, because it often causes acute respiratory failure. It attacks young people, including pregnant women. We had twenty of the most severely sick from the entire

section, and then she was brought to us straight from the maternity ward. She was with us for 3 months. When you've experienced it all with her and seen this young woman - having gone through all possible complications and been unconscious for several weeks - get back on her feet, and after a few months turn up for a follow-up appointment carrying her baby, that's a moment of true happiness. Such examples show that clinical medicine is all about teamwork - among paramedics, doctors, nurses. I can't find words of appreciation for the doctors and nurses who work with me in intensive care. It's a great team, and we're able to achieve great things together.

Interview by
Patrycja Dołowy
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The whole is greater than the sum of its parts. The human body isn't like a cake cut into wedges.

and fails to implement - we should strive to support general medicine, and in particular to better appreciate the role of internists within the healthcare system. You need to be well prepared and decisive, but you should also have the courage to make decisions. For example, rural doctors who frequently refer their patients to specialists many miles away, where they spend months on a waiting list...

Medicine is a meeting of a doctor and patient - those are your words...

That's where the essence of medicine lies. Not in an X-ray, not in a lung can-

natopolska voivodeship. Patients with acute respiratory failure whom we put straight on a respirator. In five cases we used extracorporeal membrane oxygenation (ECMO). It's a very tough procedure: a cannula inserted into the heart drains the blood into a machine that oxygenates it and pumps it back into the heart. Essentially, the ECMO replaces the lungs when they aren't working. We started using the procedure ten years ago, but there wasn't any money at the time. This time we used it in 5 patients, and all survived. They included a 23-year-old pregnant woman, just before giving birth. She needed a Caesarean

Prof. Andrzej Szczeklik - medical doctor, professor at the Department of Medicine Jagiellonian University in Kraków, writer and philosopher. Author of the widely commonly accepted theory of pathogenesis of aspirin - sensitive asthma and new methods of studying blood clotting in atherosclerosis. He defined the effects of prostacyclin on the human body, and introduced it into therapy. Author of the books *Catharsis - On the Art of Medicine* (2003) and *Kore - On Patients, Diseases and Searching for the Soul of Medicine* (2007), translated into many languages. Member of the Polish Academy of Sciences, the Polish Academy of Arts and Sciences (PAU), the Pontifical Academy of Sciences, and other scientific institutions. Holder of honorary doctorates from several medical universities, honorary member of the Royal College of Physicians in London, and winner of many awards, including the Prize of the Foundation of Polish Science (known as the Polish Nobel).