

THE CHARISMATIC TEACHER AT SZEGED: ALBERT SZENT-GYÖRGYI*

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(Received June 14, 1987)

My good fortune brought me in contact with Albert Szent-Györgyi at the beginning of 1932 and my life became closely associated with his laboratory for fifteen years. The list of successful scientists who spent a number of years there at time, who became well-known biochemists on their own is very impressive. Some are already lost, like Kalman Laki, Mihaly Grendas, Jeno Ernst, Bela Gozsy, Laszlo Vargha, others are still with us, like Ilona Banga, Sandor Szalay, Joseph Svirbely, W.F.H.M. Mommaerts, Tamas Erdos, Laszlo Lorand, John Gergely.

The Editor of this Journal asked my contribution to this memorial issue and I thought best to recall the impression of the youngster I was coming under the influence of a great man. There are only a few who can today recall the events of 55 years ago. I was 18 at the time, having started medical studies at Szeged University, with the intention of becoming a practitioner, to do honest work as was tradition in our family. I did not know much about the world or about science, even less about chemistry. This was all mostly obscured by a strict education at the high school level. I was encouraged to believe not do doubt things.

**In memoriam Albert Szent-Györgyi*

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Then all of a sudden a whirlwind has swept me off my feet: the personality of Albert Szent-Györgyi convinced me to understand and adopt different values towards the world, towards science, towards research. I believe most of the younger generation joining his laboratory experienced the same, which I am trying to describe.

The first impact was the way he gave his lectures. At the lectures I heard in Physics, Anatomy, Histology superior but mostly dull people were giving us data to learn, told us laws we had to be able to memorize. Then came the chemistry class and Albert Szent-Györgyi came in telling us in simple words what the problems are, what are the presently known principles, what is the beauty e.g. in stoichiometric reactions, why the concept of pH is helping us to understand the phenomena of life. Everything became clear and easy to understand, every new idea seemed to be further developed. We were given to understand that it is not the detail, but the basic idea which had to be grasped. We realized the deep effort and enthusiasm which the search for knowledge and understanding was radiating from our teacher. At the time in the early thirties, there were no textbooks from which one could learn the subject to pass at the examination. And the first examination turned out to be a dialogue on what we heard from Albert during the semester.

It was a bit of a surprise and a shock when Szent-Györgyi asked me whether I would like to work in his laboratory. The surprise was understandable, the shock was due to the fact I never thought of changing my chosen course, never thought of doing chemistry. However, after a few days I became convinced

that to work in the laboratory led by such a great scientist would be for my benefit. After about two years Szent-Györgyi proposed to me that I should rather leave my medical studies and learn instead some chemistry if I want to stay in biochemical research. I did not hesitate and did so. My family was somewhat skeptical, because in the early thirties in Hungary a physician was able to make a good living but nobody ever heard about a man having a Ph. D. in chemistry ever making a career. But I took a chance and my decision is due to another characteristic of Albert Szent-Györgyi.

What did I see, working in his laboratory? First of all an intensity of life and work. The Prof (as Albert was called) never lost a chance of discussing experiments, new ideas, music, politics, art and sports. And he had the natural gift of being able to talk and discuss problems with a young unexperienced man like myself, as if we were on an equal footing.

Moreover, already at this early time I realized that he definitely liked to be contradicted in a discussion. It was, I realized later, his greatest asset that thinking intensively on a problem, he wanted to hear what one can say against the idea. This phantastically enjoyable spiritual atmosphere seemed to me worth any sacrifice. The whole atmosphere emanated from him, and I took his advice.

From an apprentice I proceeded to become a scientific associate and produced papers in which I was able to add something to an idea which Albert suggested. He was generous in giving credit to his associates. The laboratory worked mostly on the basis of a team-work. At the end of the year Albert

asked everybody to write up what they did. Then he took these papers, rewrote them in a more understandable way. He himself wrote a summary of all these papers and described what he observed and worked out with his own hands. Then he added under the name of one or two of his coworkers the details, not putting his name on it. It was a happy family.

A last remark of mine refers to a characteristic of Prof, evident from what I wrote about the publications. It was obvious for anybody who knew him that there was a very strong drive in him: to understand more about the essence of life. He often came into the laboratory excited with a new idea, saying: now I think I understand life. He easily attracted students who worked with him, he was always full with many different ideas and was able to supply any of his new students with a promising idea. Yet he never wanted to exploit any of his students, there was no selfishness in his doings. He helped many of us to obtain fellowships abroad. And - after a few years - he did not mind, if we, his students tried to strike out pursuing a research line chosen by ourselves and broke away from his group.

Thus Drs Banga, Laki, Vargha, Szalay and myself were later working in different fields, with different styles and outlook. But basically what we achieved has come about based on what we learned from the late Albert Szent-Györgyi, the Prof.

Thus in the late thirties several fairly independent lines of research were pursued by some of us. Then Prof became enthusiastic about a new idea. He saw the paper of Engelhardt and Lyubimova in "Nature" and realized the importance of the interaction between myosin and ATP. After a few preliminary observations leading to the discovery of myosin A and myosin B

he suggested a teamwork, joining our forces again on a central problem. For all of us who participated in the "Studies from the Institute of Medical Chemistry, University of Szeged" during the threatening ongoing of World War II, it was a glorious time of enjoying the spirit of discovery. Prof, the Nobel prize laureate who led this newly recreated group, was the same charismatic leader during these wartime years, as he was when I first met him. Plenty new ideas were discussed, and his attitude remained the same as before: questions have to be asked from Nature, new ideas should be discussed. We felt the joy of intellectual achievement and this has given us enough moral strength, so that (with luck) we survived the last year of the war sweeping over our country, scattering colleagues. When peace came we were reaching different new posts, but all of us tried to carry on the spirit of our teacher.

In the fall of this year a symposium will celebrate the 50th anniversary of Albert Szent-Györgyi having been awarded the Nobel-prize and the medical University at Szeged will be named after him. He will be remembered in many ways.