EDITORIAL

PALADE WAS FOR CELL BIOLOGY WHAT EINSTEIN WAS FOR PHYSICS

The quote in the title belongs to Gunther Blobel (b. 1936) Nobel laureate for Medicine for 1999, disciple of Professor George Emil Palade. I took it from an article published by Alina Boghiceanu (in "Viața Medicală" October 4, 2012) representing an interview with Prof. Dr. Radu Serb Palade - University of Medicine and Pharmacy Bucharest, direct grandson of George Emil Palade.

Incidentally, I met Gunther Blobel, now professor emeritus at the Rockefeller University - NY, who showed me the lab and meeting room in the old building where his master worked. And showed me the place he occupied during the meetings, spoke about the Professor, his way of being, in words I will never forget.

Important is the initiative of the weekly "Viața Medicală" in which under the name George Emil Palade Centenary 1912-2012 were published several articles and information on commemorative events dedicated to celebrating a century since the birth of the only Romanian Nobel laureate. Of the articles, of particular interest was the interview with Prof. C. D. Zeletin, writer, member of the Academy of Medical Sciences and Romanian Writer Physicians Society, entitled "If I breathed around Pasteur I would not have been more impressed" (signed by Alina Boghiceanu in "Viața Medicală" of September 21. 2012). Prof. Dr. C D. Zeletin, knowing directly "live" the life of the great scholar given their family ties, recently wrote a book dedicated to Palade with the talent and accuracy that characterize him. I have not yet read this volume containing undoubtedly unpublished data.

Next, I will dwell on some data, hopefully of interest to readers.

George Emil Palade (November 19, 1912 - October 8, 2008) was born in Iași, Romania. His family lived on Sărărie Street, and at age 7 he became a student at "Mihail Kogălniceanu" school on 28, Lascăr Catargi Street, currently a historical monument. On school wall, near the entrance, there is a memorial plaque, from which I quote only the beginning: "In this school, between 1919 and 1922, GEORGE EMIL PALADE began his road to science". The text is longer, but its bombastic style proves it was written by someone lacking writing skills. Although at age 10 he left Iași, George Emil Palade was deeply attached to his hometown, often confessing this attraction. And, over two decades ago, when he became the first Doctor Honoris Causa of the "Grigore T. Popa" University of Medicine and Pharmacy Iași, those who had the chance to witness this event heard the Professor saying he loved Iași. But first of all I was charmed by his personality and impressive physical presence. After the ceremony held in the auditorium that now bears his name ended, many of us accompanied him to the Rockefeller auditorium of the Institute of Anatomy. A memory like an unforgettable celebration remembers me that everything was filmed and, if the images are stored in an archive, the projection of those images in the same auditorium
would be of great interest.

I chose to present a selection of information taken directly from Professor George Emil Palade’s biographies and an interview granted in 2002.

His education continued through a baccalaureate at the “Al. Hașdeu” high school in Buzau. Then, in 1930, he entered the School of Medicine of the University of Bucharest. “Early in my student years I developed a strong interest in basic biomedical sciences by listening to, and speaking with, Francisc Rainer and André Boivin, professors of Anatomy and Biochemistry, respectively. As a result, I started working in the Anatomy laboratory while still in medical school.

For six years he went through hospital training, mostly in internal medicine, but also did the work for his doctorate thesis, under guidance of Professor Fr. Rainer, in microscopic anatomy on a rather unusual topic: the nephron of a cetacean (*Delphinus delphis*) in an attempt to understand its structure in terms of the functional adaptation of a mammal to marine life. He graduated in 1940 and, after a short period as assistant in internal medicine, he returned to the department of anatomy, because in the clinic he felt rather uneasy”

During World War II he served in the medical corps of the Romanian army and after the war - encouraged by Grigore T. Popa, successor of Fr. Rainer - went to the United States for further studies.

Once in the U.S., G. E. Palade worked for a few months in the Biology Laboratory of Professor Robert Chambers, from New York University. He was dissatisfied with what he was working, and in the summer of 1946 he attended at the Rockefeller Institute (later renamed University) at a conference held by Albert Claude (b. 1899 - d 1983) on the study by electron microscopy of cultured cells. G. E. Palade asked the lecturer some questions proving not only interest but also the solid scientific research training he got in Romania. Therefore, in the fall of 1946 he was invited to work at the Rockefeller Institute in the laboratory of A. Claude, who initiated a new line of research in cell biology: obtaining cell organelles by ultracentrifugation. Soon after, Palade contributed to the development of techniques that will literally revolutionize electron microscopy. For the sake of brevity I will compress more data otherwise known. I quote G. E. Palade: “This "Rockefeller group” had a rather short existence (...) and in 1951 only Robert Porter I remained”. Both have triggered a historic moment, the first journal of cell biology „Journal of Biophysical and Biochemical Cytology”. Sorry for not mentioning many big names of researchers at Rockefeller and other U.S. and European research centers. In 1966, George Emil Palade received the Albert Lasker Basic Medical Research Award "for his extraordinary series of original and fundamental contributions to the electron microscopy of biological materials”. The jury of the "American Nobel Prize", including renowned scientists (most Nobel laureates) praised G.E. Palade for his "extraordinary" contributions. The confirmation of their appreciation will came in 1974, when G. E. Palade, Albert Claude and Christian de Duve knew supreme consecration: Nobel Prize in Physiology or Medicine, for „their discoveries concerning structural and functional organization of the cell”. The three winners, by their “cellular universe mapping” revealed a new image of the cell, the fundamental unit of life. Their scientific work is a milestone in the development of
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modern biology and medicine. The two Belgians went back to their native country long before 1974: Albert Claude in 1949, maintaining dual nationality and status of professor at Rockefeller (until 1972), and also Brussels University; he became director of Jules Bordet Institute continuing research on cell ultra structure. Christian de Duve returned to Belgium in 1947 at the University of Louvain and in 1970 founded the International Institute of Biology and Molecular Pathology at Louvain Medical School.

George Emil Ballads remained in the United States. Professor in 1956, he gained through work, talent and genius immense notoriety. One of the founders of cell biology, of the "Journal of Cell Biology", and the American Society of Cell Biology, he became the undisputed leader of the evolution of knowledge by deciphering the many processes at the cell level. Palade’s laboratory was a center of attraction for many aspiring researchers, but after 27 years, in 1973, the professor left the Rockefeller Institute, largely because of the new president, Frederick Seitz, a specialist in solid state physics, who had an obsession: research in small groups is effective! Palade accepted the offer of the Yale University, polarizing a strong research group, among which the Simionescus. Here he founded the Yale Center for Molecular Medicine. After 1974 he led research on the Golgi complex, vectorial transport and membrane biogenesis. Beginning with 1990 Palade was appointed dean for scientific affairs in the School of Medicine of the University of San Diego, CA.

I will end with a fragment from a 2002 interview with Professor George Emil Palade:

R: Professor Palade, if you were to look back at the over six decades of scientific endeavor that are covered by your career, what lessons would you like to share with young scientists?

George Emil Palade (GEP): Select problems of broad significance. Problems that should open new perspectives and new ways for the phenomena you are analyzing. You should have a long-term perspective, rather than following dead-end developments.

R: How does one choose problems that are significant?

GEP: This is by far the most important decision a scientist can face. You should choose a problem on the basis that it offers solutions that lead to other problems, rather than to dead-ends.

R: How do you deal with such critical problems?

GEP: What counts is finding solutions to important problems rather than applying technology. Count on the opportunity to use converging technologies based on different starting principles in the analysis of the function of the different structures that are discovered and characterized.

R: Should you find yourself in the position to lead the effort for scientific reform in Romania today, what would you do?

GEP: I would open the doors to encourage as many cooperative interactions and studies as possible, with countries that have better science and better standards.

Professor Valeriu Rusu, M.D., Ph.D.
Editor-in-chief