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**EDITORIAL**

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**ULF SVANTE VON EULER: DISTINGUISHED SWEDISH  
PHYSIOLOGIST WHO ENCOURAGED AND SUPPORTED  
THE SCIENTISTS IN A SMALL COUNTRY**

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For his discoveries, Ulf Svante von Euler-Chelpin (1905-1983) received the 1970 Nobel Prize for Physiology and Medicine for his study of nerve impulse transmission. Later, Professor von Euler was a Member, and then in 1965, was appointed Chairman of the Board of Nobel Foundation.

Ulf Svante was a son of 1929 Nobel Laureate Hans von Euler-Chelpin and Astrid Cleve, a botanist and a university professor. U. S. von Euler was educated in his country (Medical School, Karolinska Institute, Stockholm), where he was assistant professor of pharmacology (1930-1933), physiology (1933-1939), professor of physiology (1939-1971), and professor emeritus (1971). From 1931 to 1947, he made several study-tours in top laboratories where he worked and built-up many international contacts, in the U.K. (H.H. Dale, 1930 and 1937; de B. Daly, 1931; A.V. Hill, 1934), Germany (G. Embden, 1931), Holland (C. Heymans, 1932), and Argentina (E. Braun-Menendez and B.A. Houssay, 1946-1947).

Euler's outstanding achievement was his identification of noradrenaline (norepinephrine), the key neurotransmitter in the sympathetic nervous system. He also discovered substance P (while, in 1931, studying with physiologist Sir Henry Hallett Dale), and a substance in the prostate glands of sheep and humans, which he called prostaglandin. Over the years Euler studied the mechanisms for storing and releasing norepinephrine, especially when an experimental subject was placed under different emotional or stress-induced conditions.

Extensive international cooperation and experiences provided him not only to realize his own scientific evolution and possibilities, but also to become a type of person that is ready to share his knowledge and enthusiasm for research with the scientists all over the world, including those that work in the small and not very rich countries.

When in the 1970s the author of this article came with his family to live in Tuzla at the newly opened medical school, in the town of about 120,000 inhabitants, he got the idea of providing an additional inspiration for work to students and researchers in this school. Visiting professors and scientists from the former Yugoslavia and from abroad appeared to be the only solution for such inspiration. Thus, in one year alone, 40 to 50 professors from Belgrade, Zagreb, Sarajevo, Szeged, Matsumoto, Dallas, London, Chicago, and other cities came to teach and give seminars to our graduate and undergraduate students. Professor von Euler visited us in 1982, and this visit provided a special stimulus for researchers at our newly established medical school.

However, we should also mention his two previous visits to the former Yugoslavia: Sarajevo (1961) and Belgrade (1968).

In Sarajevo, von Euler participated at the First Symposium on Sub-

stance P, organized by Professor Pavao Stern, head of the Department of Pharmacology and Toxicology at the University of Sarajevo. Unfortunately, the Second Symposium on Substance P was held without Professor Stern (Fig. 1).<sup>1</sup> At the Shizuoka international symposium on substance P, Professor Masanori Otsuka, writes: "The First International Substance P Symposium was held in Sarajevo in Bosnia and Herzegovina under auspices of Prof. P. Stern in 1961. The number of participants listed in the Proceedings was 25. At the photo you can see Profs. Gaddum, Pernow and Lembeck, but Prof. Von Euler is missing. I once asked Prof. Von Euler why he was not in the picture, and he replied: 'I took it' "<sup>2</sup>

#### Ulf Svante von Euler on Pavao Stern

Many valuable contributions were made by Professor Pavao Stern in Sarajevo. He presided over the First International Symposium on SP in Sarajevo in June 1961, and he would have been an honored guest of the symposium on which this volume is based. His death, only a short time before the present symposium, was a great loss for all of us who had learned to like and respect Pavao Stern for his dedication to science and for his fine personal qualities.

Historical Notes, in *Substance P*, edited by U.S. von Euler and B. Pernow, Raven Press, New York, 1977.

**Figure 1.** Words of Ulf Svante von Euler on Pavao Stern.<sup>1</sup>



**Figure 2.** Participants of the First Symposium on Substance P, Sarajevo, 1961. This meeting brought together some of the most influential physiologists and pharmacologists of our times, such as von Euler (standing third from the right), Pernow, Gaddum, Voght, Stern, Lissák, Varagic, and Lembeck. (The photo taken by H. Gaddum is reproduced from *The Destiny of Germans in St. Ivan and other writings, Prospect, Biographical Publishing Co., 2002.*)

The author of this article was lucky to find another photo (Fig. 2) with Von Euler and the participants taken by Gaddum, among the things that were to be discarded from the office of Professor Stern after his death, and it was later published in the book Ulf Svante von Euler.<sup>3</sup> Unfortunately, the original photo was probably destroyed during the recent war in Bosnia.



**Figure 3.** Ulf Svante von Euler in the Gallery of Yugoslav Portrait, Tuzla, 1982. (Photo: R. Igić)

Quite often we perceive how small the world is. During his lecture, dedicated to the adrenergic neurotransmission, Professor von Euler showed 5–6 slides with the results obtained by Dr. K.U. Malik, my colleague from graduate studies in Sarajevo.

- Do you know Dr. Malik personally, I asked the Professor after the lecture.

- Of course, we know each other quite well. In 1968 or 1969 in his laboratory at the Medical College, University of Ottawa, in Canada, I followed the experiments by which Dr. Malik refuted the hypothesis put forward by Burn and Rand that acetylcholine was the only neurotransmitter. Later on, I was invited by Professor Malik to give a lecture in Milwaukee, Wisconsin. There, I had long talks with him and with Professor John McGiff, the Head of the Department of Pharmacology.

Professor Malik, who at present works in Memphis, Tennessee, was the first lecturer from the USA at our medical school, and his pupils – now Professors S. Chiba and S. Lanier – were also our guests. Six young researchers from Tuzla, Sarajevo, and Banja Luka spent two to three years in Memphis for further education and research in Dr. Malik's laboratory.

(A fragment from *The Destiny*.)

**Figure 4.** Short segment from *The Destiny* on K.U. Malik and U.S. von Euler.

On the other occasion, in June 1968, Professor von Euler participated at the Symposium on Neurochemical Transmission and Biogenic Amines in Belgrade, organized by Drs. Varagic, Bogdanovic, Beleslin, Krstic, and Kazic.



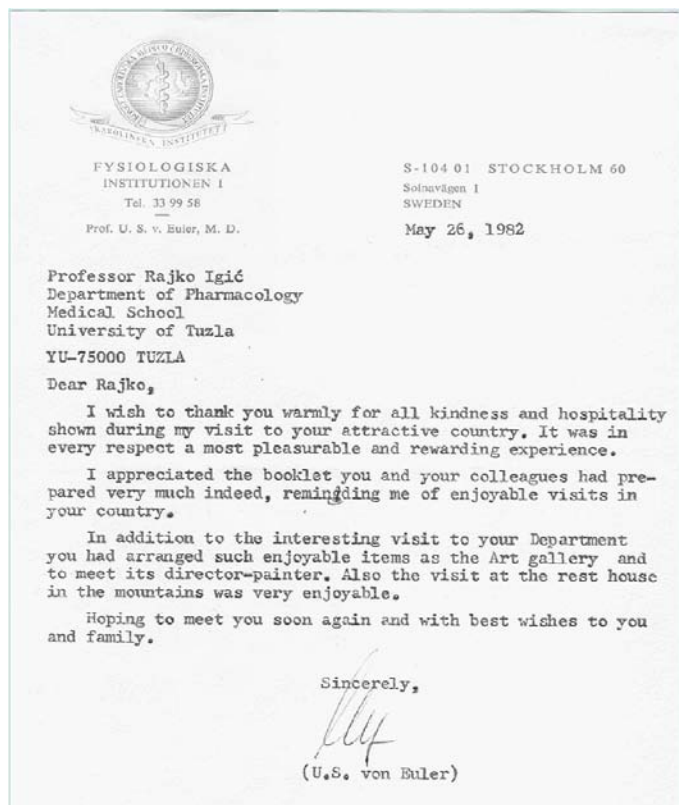


Figure 5. Von Euler's Letter from May 26th, 1982.

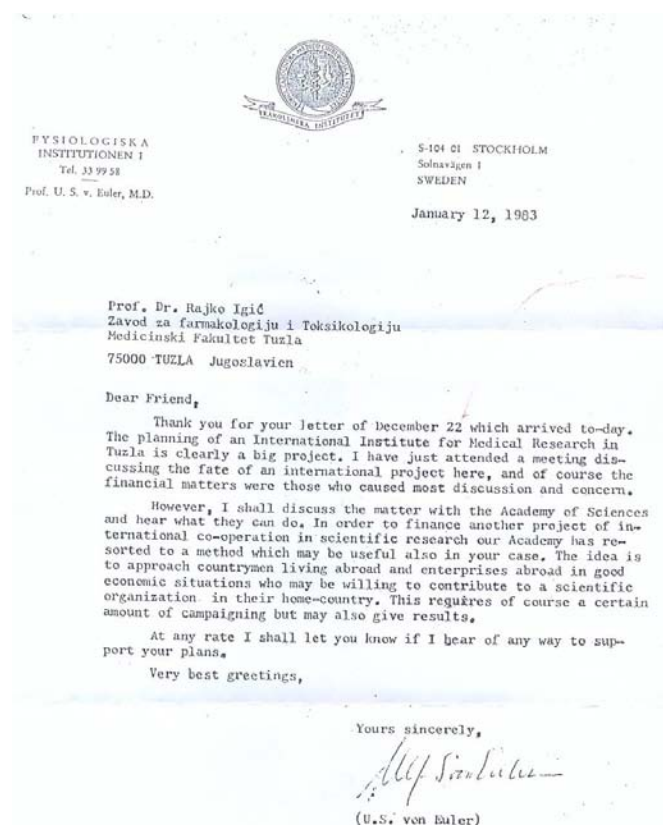


Figure 6. Von Euler's Letter from January 12, 1983.

On the very day when this symposium was held, student demonstrations had taken place. In fact, that was the wave of protests that spread all over the Europe. Students at the Veterinary School, where the symposium

was taking place, put up a barricade around the building, admitting only the participants of the symposium. Professor von Euler entered the building together with Dr. Varagic, me, and my colleagues from Sarajevo, Drs. Potkonjak and Jelacic.

To mark von Euler's visit in Tuzla, I prepared a booklet "Lecturers at the Graduate School: Ulf Svante von Euler".<sup>3</sup> This publication, written by my colleagues and me, provides some information about his biography, his research, and his major publications, and Professor von Euler prepared his CV. The book is printed in English and Serbo-Croatian. Many details on this visit, and a few photographs, such as one from his visit to the art gallery (Fig. 3 and Fig. 4) are published in the book "The Destiny of Germans in St. Ivan and Other Writings" (Prospect, Biographical Publishing Co., 2002).

Later on, Professor von Euler kindly supported our plan to build an international institute for biomedical research in Tuzla (Fig. 5 and Fig. 6). This institute would provide a place for work for the scientists from Yugoslavia, and various developed and developing countries. Unfortunately, his death and our local circumstances prevented realization of this idea that now, after the war in former Yugoslavia, almost sounds as the plan grandiose.

The war in former Yugoslavia has significantly damaged scientific production in Bosnia and Herzegovina, and Serbia.<sup>4</sup> It also diminished the scientific growth in Croatia and Montenegro. The Balkan region, so frequently engulfed in wars, is not considered a fertile ground for scientific research. War destroys, like a cancer, the normal functions of a society, and significantly damages scientific output.<sup>3</sup> Despite odds, quite a few properly educated, curious, wise, and brave minds from this area have been able to make significant scientific contributions.<sup>5-7</sup> As Eugene Garfield used to say (Current Contents, No. 16, pp.3-7. April 18, 1988), "science belongs to one intellectual community," and all scientists need to communicate freely with all members of scientific community. Hopefully, we may soon expect that the devastated economy, damaged communications, and hardship of everyday life during the war and postwar years will recover. Then, scientific research with the help of international scientists like of Ulf S. von Euler, Ervin G. Erdos (USA), Kafait U. Malik (USA), Shigetoshi Chiba (Japan), Stephen M. Lanier (USA), Gojko Muacevic (Germany), Maria Tenny (Hungary), Laszlo Szekeres (Hungary), Michael C. Cox (UK) and others, may initiate a rapid publication growth from these damaged countries.

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