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Bror Rexed (1914–2002)



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Bror Rexed was a visionary Swedish neuroscientist, who for many years studied the anatomy of the spinal cord. Internationally, he is best known today for his description of the cell systems in the spinal cord, now known as Rexed's lamination. He also dedicated himself to many activities for the World Health Organization (WHO).

He was born in 1914 in Gunnarsskog-Värmland (middle Sweden). In 1945, at the age of 31, he completed his dissertation at the University of Uppsala on the "post-natal development of the peripheral nervous system" [4]. He continued to work in the Histology Department of that same university and in 1953 he was appointed Professor of Anatomy there. During these years, he was part of an innovative interdisciplinary team dedicated to the use of proton beams in neurosurgery [3].

Bror Rexed is perhaps best known for his studies on the lamination of the grey matter of the spinal cord [5, 6]. For many years innumerable and often conflicting terms were used to describe cell groups in the spinal cord. Some were based on cell size and appearance (e.g., substantia gelatinosa), others according to their location in the grey matter (e.g., motor nuclei of the anterior horn) [2]. On the basis of differences in neuronal cytoarchitecture he identified ten laminae in the cat spinal cord. The laminae

constitute regions with characteristic properties, but in their boundaries there are zones of transition, where changes may occur, gradually or abruptly. According to Rexed's scheme, the gray matter of the spinal cord consists of ten layers (laminae), represented by Roman numerals. Similar to Brodmann's areas, they are defined by their neuronal cytoarchitecture rather than by their location, but also the location remains reasonably consistent. Laminae I through VI are located in the posterior horn. Lamina VII corresponds with the zona intermedia, although it may extend into the anterior horn. Laminae VIII and IX are located in the anterior horn, while lamina X is the grey matter surrounding the central canal [2]. Although Rexed first described this spinal cord lamination in the cat, the similarity of this structure in other higher mammals was confirmed and used by other investigators [2, 8, 9].

Apart from his research activities Rexed entertained a good relationship with Prime Minister Tage Erlander (1901–1985), who was the longest (from 1946 to 1969) serving Prime Minister of Sweden, in fact of any western democracy [10]. Erlander was chairman of the National Research Committee and Rexed served as secretary in the Medical Research Council from 1951 to 1962 and in the Research Committee

Received: 29 January 2008
Received in revised form: 30 January 2008
Accepted: 5 March 2008
Published online: 7 July 2008

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from 1962 to 1967. These management responsibilities provided Rexed with insight and influence in the research politics of Sweden [10]. Subsequently, when in 1968 he became general director of the National Department of Health and Welfare (Socialstyrelsen), he became famous in Sweden for his “du-reformen”, in that he encouraged his co-workers to address himself and each other with the informal “Du” instead of the formal “Ni” [10].

On the international scene, he was involved in various capacities with the World Health Organization (WHO) from the late 1940s to the 1980s, and in 1979 he was awarded the Léon Bernard Foundation Prize by the WHO for his outstanding service in social medicine [1]. From 1979 to 1982, he was Director of the

United Nations Fund for Drug Abuse Control, and from 1982 to 1987 he was a member of the International Narcotics Control Board [7].

Bror Rexed died in Stockholm on 21 August 2002. He will be remembered by an eponym to neuroscience terminology and by his outstanding services to social medicine.

■ **Acknowledgements** We thank Hanna Julie Hoel and Nuray Acar for their translation of “reference 10” from Swedish.

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