The recently published volume *Brain Leitmotifs – The Structure and Activity Patterns of Neuronal Networks*, authored by neuroscientists Prof. Dr. Roger Traub and Prof. Dr. Andreas Draguhn, presents a unique approach to understanding the connections between brain and mind. The authors explore how the study of cells and networks might give insight into the issues of cognition and mental illness and make strong use of the ideas of central pattern generators and alternatives to them.

This book tackles the question of why the brain is so difficult to fully understand. In neuroscience, data are acquired and analyzed with astonishing techniques and accumulate rapidly. Nevertheless, try to explain how a person can think or why there is such a condition as schizophrenia, and it appears that we really know little. To approach these difficulties, the authors first present a number of case studies in which the operation of a neural circuit is worked out in some detail and, at the same time, the functional significance of the operation is also understood. These examples are complicated in their biologic specifics but are conceptually straightforward. The examples are hoped to provoke an appreciation for what neuroscience can accomplish. The authors then develop some thoughts on how these issues can be addressed – instead of considering cognition in general, taking instead a subset of cognition that does lend itself to formal description.

Roger Traub, Principal Research Scientist at the IBM T.J. Watson Research Center in New York, and **Andreas Draguhn**, Professor and Chair of Neurophysiology at the Medical Faculty of Heidelberg University, first met in 1997 in the department of Prof. John G.R. Jefferys at the University of Birmingham, UK. Since their first encounter, they have forged close academic links. In 2007, Roger Traub was awarded the Humboldt Prize by the German Alexander von Humboldt Foundation and in the following years he spent several research stays Heidelberg University and the German Cancer Research Center (DKFZ). The joint studies of the two neuroscientists has led (among other things) to novel findings on the mechanisms of very fast neuronal oscillations.

Roger Traub, Andreas Draguhn, *Brain Leitmotifs – The Structure and Activity Patterns of Neuronal Networks*, Springer Nature Switzerland, Cham, 2024, 272 pages.

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