Experimental and Theoretical Study of the Pore-forming Protein, Equinatoxin II

ALEKSANDER ZIDANŠEK Sincrotrone Trieste, AREA Science Park Padriciano 99, Trieste, Italy, and J. Stefan Institute, Ljubljana, Slovenia

> F. ZANINI Sincrotrone Trieste, Italy

P. MAČEK and G. ANDERLUH University of Ljubljana, Ljubljana, Slovenia

I. MOZETIČ CAMTP, University of Maribor, Slovenia

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Equinatoxin II is a cytolytic polypeptide from the sea anemone Actinia equina L. which forms pores in natural and artificial membranes. Structure of equinatoxin is important because the mechanism of its pore formation is not yet completely understood. The understanding of this mechanism might have important theoretical and pharmacological implications. Different experimental possibilities to determine the structure of equinatoxin are discussed. Some insight into the secondary structure can be obtained by ma-

chine learning from examples. For the exact tertiary structure determination at atomic resolution by X-ray diffraction the protein should be labelled with a heavy atom. Equinatoxin crystallization is studied by Dr Athanassiadis from ICGEB in Trieste with whom we collaborate on the X-ray determination of the equinatoxin crystal structure.