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Faculty of Science

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## Supervisor's evaluation

**Student:** Alexander V. Dulebo

**Study programme:** Biophysics

**Affiliation:** University of South Bohemia in České Budějovice

**PhD thesis:** Mechanisms involved in sodium uptake activation by the Tumor Necrosis Factor-derived TIP peptide

I have first known Alexander as a young MSc. student coming to Nové Hradý in the summer 2005. He seemed of a good nature and humility possessing a genuine intellectual curiosity. It did not take too much of an effort to get him energized for the challenging tasks we have been working on in my lab. Although I've been hoping he would remain faithful to the photosynthesis research, Alex soon initiated his work on a project that aimed at a discovery of a mechanism that activates resolution of pulmonary edema by action of a small cyclic peptide. Looking back over the six years I have been working with Alexander I see gradual and patient progress towards excellence. As a prominent member of our team, Alex has been instrumental in helping institute new methods and approaches. His responsibilities have included experiment design, independent conducting of elaborate measurements using biophysical and biochemical methods and use of analytical chromatographic methods. He has gained major expertise in the field of atomic force microscopy, becoming a real expert mastering standard imaging modes, implementing higher harmonics in live cells imaging and pioneering the use of dynamic force spectroscopy in live cell interactions with therapeutic peptides. To this end, Alexander became highly qualified in computer programming, particularly in MATLAB and mastering numerous methods of computational biochemistry such as simulation of molecular dynamics, steered molecular dynamics and molecular docking. During his time with us his contribution has had an amazing impact on the advancement of our research projects resulting in a number of peer reviewed papers in highly ranking journals with Alexander as main contributing author. Some of the key results were achieved thanks to the Alex's work at our collaborating institutions in Linz and Krems. To this end I am confident that Alexander as a motivated young man of numerous talents and considerable self discipline will succeed in anything he chooses to once has left for his new adventures.

David Kaftan

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