Anne Nyholm Holdensen

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Non-scientific Interests: Science in all aspects, computers, my family and friends, and nature

Just like Alexander Fleming's discovery of penicillium, my choice of a research area was a coincidence. After earning my B.Sc. from the Faculty of Science at Aarhus University, my program supervisor did not have space for me as a master student, as he took another position. So, he recommended something a bit "out of the box" by suggesting that I consider several groups at the Faculty of Health Sciences at Aarhus University. After thorough research and interviews with several professors, the choice was clear: In Drs. Andersen and Vilsens' laboratory, I found my true element in the research of Ca-ATPase and NaK-ATPase. Using methods in molecular biology research, we are able to introduce new mutations to the ATPase. Upon expression and harvest, our mutated (and wild type) protein is exposed to an arsenal of assays in which the chemistry is carefully adjusted for examining areas of interest. Finally, the data is correlated to various mathematical equations. Using some of the many different fields within the great world of research, it becomes possible to understand the effects of some of the smallest building blocks of human physiology.

In this project, in which we have changed the length of the A-M3 linker in the Ca-ATPase, coincidence has also been an active player. We started with the design of inserts of up to 11 residues. However, by PCR error, inserts of 16-, 26-, and 41-residues were made. This project has been great and comprehensive, and the compilation of the article has given rise to may considerations and approaches. The details of our efforts can be read in this article.

Read Anne Holdensen's article entitled: The Length of the A-M3 Linker Is a Crucial Determinant of the Rate of the CA^{2+} Transport Cycle of Sarcoplasmic Reticulum CA^{2+}-ATPase

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