Posudek na bakalářskou práci

☒ školitelský posudek ☐ oponentský posudek	**Jméno posuzovatele:** Marek Cebecauer
	Datum: 30. 5. 2017

Autor: Erna Šlivnjak

Název práce:
Impact of protein transmembrane domains on membrane organisation

☒ Práce je literární rešerší ve smyslu zveřejněných požadavků (pravidel).
☐ Práce obsahuje navíc i vlastní výsledky.

Cíle práce (předmět rešerše, pracovní hypotéza…)
The aim of this work was literature recherche on the relation between proteins and lipids and to provide a comprehensive overview on the role of transmembrane domains of integral proteins in cellular membranes. It was important to describe the subjects of this topic - membrane proteins and lipids, their interrelations in lipid bilayers and available models of membrane organisation with a special focus on integral proteins.

Struktura (členění) práce:

Jsou použité literární zdroje dostatečné a jsou v práci správně citovány? Převážně ano.
Použil(a) autor(ka) v rešerši relevantní údaje z literárních zdrojů? Ano.

Pokud práce obsahuje (nadstandardně) i vlastní výsledky, jsou tyto výsledky adekvátním způsobem získány, zhodnoceny a diskutovány? N.a.

Formální úroveň práce (obrazová dokumentace, grafika, text, jazyková úroveň):
Dobrá

Splnění cílů práce a celkové hodnocení:
The student, Erna Slivnjak, expressed her interest in this rather challenging topic and found numerous articles investigating behaviour of integral proteins in lipid membranes. The focus was on cell membranes but a large part of the works comes from the field of membrane biophysics and used proteins or peptides (derived from proteins) integrated in model membrane systems. This underlines the interdisciplinary character of the project for which this recherche was meant. Erna handled this diverse set of articles rather well but required frequent help in order to keep the text focused and understandable for non-expert readers. Especially biophysical articles often loose the contact with the reality of cellular membranes and search for the answers in physical details hardly applicable for highly complex biological systems.

In literature, proteins and their transmembrane domains are prevalently considered as rather smooth and immobile obstacles present in a bulk of lipids. Correctly, in her recherche Erna highlights the diversity of cell membrane components, their mobility and complex shape. These factors play in concert and influence the organisation and function of cellular membranes. Some aspects of protein-lipid inter-relations are well described in her work, others were omitted. As mentioned above, the topic of her thesis is difficult and Erna was unable to offer a fully comprehensive view. But this is probably due to the fact that this Bachelor's thesis is her first more serious scientific text.
Moreover, I would like to mention a skill which is not well visible from her thesis. Erna is very strong in scientific dispute. Her fresh view on some articles I read in past helped me to interpret discussed results from a different perspective. I found such discussions very fruitful.
In summary, Erna presents a good thesis which can form basis for a more advanced work in the years to come (e.g. Master/PhD. Thesis). I believe she deserves positive stimulus for her future career.

Otázky a připomínky oponenta:

Návrh hodnocení školitele nebo oponenta (bude zveřejněn)
☐ výborně ☒ velmi dobře ☐ dobře ☐ nevyhověl(a)

Podpis školitele/oponenta: