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To Whom It May Concern:

Zhanna Kozyreva's PhD thesis entitled

Fluorescent photoconvertible polymer microcapsules for cell labeling and tracking

The thesis is dedicated to the development of polymer microcapsules for cell labelling and tracking. The overall structure of the dissertation is well-organized, and the quality of the thesis is sufficiently high.

The content of this thesis is relevant to its title, and is devoted to describing two approaches to capsule synthesis, and cell labelling and tracking experiments. The research methods used were appropriate for achieving the goals of this study. The scientific results obtained from this study exhibit international-level significance, particularly in terms of enhancing cell labelling efficiency and long-term tracking. Articles related to this thesis were published in highly reputable journals in the top quartile (Q1).

Several points deserve being addressed further:

Why were thermally treated microcapsules chosen for cell experiments?
What are the advantages and disadvantages of both types of capsules prepared with thermal and non-thermal approaches?

In the literature review, the candidate may elaborate further on the disadvantages of fluorescent proteins and dyes. Why is there a need for an alternative labelling approach?

Prof. Alexander Korsunsky