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Prof. dr. hab. Joanna Kruszewska
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Motion for distinction of the Doctoral Dissertation

In view of the high scientific quality of the research, the coherence and originality of the conducted studies, the excellent publication record forming the basis of the dissertation, and, above all, the significant practical potential of the obtained results, I recommend that Ms. Kavya Kondaka's doctoral dissertation be awarded a distinction.

The research presented in the dissertation addresses an important and timely biomedical problem—the urgent need for new antifungal therapies in the face of increasing antifungal resistance and the limited number of available therapeutic options. The candidate has identified and comprehensively characterized fungal DNA topoisomerase II as a promising molecular target for antifungal drug development and has successfully translated fundamental structural and biochemical findings into the rational design and evaluation of novel inhibitory compounds.

The dissertation combines structural biology, enzymology, medicinal chemistry, microbiology, and molecular pharmacology into a coherent interdisciplinary research program that provides practical guidance for the development of selective antifungal agents. Importantly, the candidate has demonstrated that structural differences between fungal and human Topoisomerase II can be exploited to achieve selective inhibition and has identified compounds with activity against fluconazole-resistant *Candida* strains, thereby addressing one of the most significant challenges in contemporary antifungal therapy.

The results presented in this dissertation substantially advance our understanding of fungal Topoisomerase II as a therapeutic target and establish a strong foundation for future preclinical development of a new class of antifungal drugs. Owing to its originality, scientific merit, and clear translational potential, the dissertation fulfills the criteria for distinction and, in my opinion, fully deserves to be awarded.

Kind regards,

Prof. Joanna Kruszewska PhD, DSc

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