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OPINION OF THE SUPERVISOR

Jeslin Cheruvathoor Jenny is currently a second-year PhD student at the Doctoral School at Gdansk University of Technology. She is also a member of the research group that realise the scientific project financed by the National Science Centre (program Opus) entitled "Propolis and polyphenols derived from this product as potential antifungal agents". The project is realized in cooperation with dr hab. Piotr Kuś (Department of Pharmacognosy and Herbal Medicines, Faculty of Pharmacy, Wrocław Medical University, Poland) and also two abroad partners: Professor Patrick Van Dijck (Laboratory of Molecular Cell Biology, Catholic University of Leuven, Belgium) and research group of Professor David Williams (School of Dentistry, Cardiff University, UK). Jeslin is a specialist in organic synthesis and also chemistry of natural products. Her PhD project is focused on preparing alternative formulations of propolis and also the synthesis of derivatives of propolis compounds that are responsible for the antifungal activity of this product. During the first year of her studies, Jeslin made great progress in the realization of her PhD project. She has already obtained and investigated the physicochemical and biological properties of propolis extracts produced with natural deep eutectic solvents (NADES). Some of the extracts exhibit promising antimicrobial activity (both antifungal and antibacterial) and can be considered as an alternative to "classical" propolis extracts that are produced with 70 % (v/v) ethanol. Based on these results Jeslin has prepared a manuscript for publication that will be submitted (within the next 2-3 weeks) to the Journal of Ethnopharmacology (Elsevier, IF=5,4). Moreover, Jeslin has synthesized several derivatives of chrysin—a flavonoid that belongs to the active ingredients of propolis. Currently, she is preparing derivatives of another active compound - pinocembrin. The synthetic part of Jeslin's project is realized in cooperation with Dr Andrzej Skwarecki from the Department of Pharmaceutical Technology and Biochemistry, who will be a co-supervisor of her PhD thesis. In February 2023 Jeslin Cheruvathoor Jenny completed a short (10 days) research internship in the research group of Professor Vassya Bankova (Chemistry of Natural Products Laboratory, Institute of Organic Chemistry with Centre of Phytochemistry, Bulgarian Academy of Sciences, Sofia, Bulgaria). Professor Bankova belongs to world leaders in the area of investigation of chemical and biological properties of propolis. She has also presented a poster at the Young Scientists Meeting in Paris, organised by the Phytochemical Society of Europe in June 2023.

In my opinion, Jeslin Cheruvathoor Jenny is an enthusiastic highly motivated and hardworking PhD student. She is a highly skilled researcher with expertise in organic synthesis. Moreover, Jeslin has a friendly disposition that is highly appreciated by her colleagues in the laboratory. She fluently speaks English. In my opinion, she is a very promising young researcher and I highly recommend her for the Francium program.

Piotr Szweda