



CHARLES UNIVERSITY
Faculty of Pharmacy
in Hradec Králové

Supervisor's Evaluation of the dissertation thesis

Candidate: **Mgr. Chiazor Ugo Ogadah**
Title: **Development of liquisolid systems for colon targeting**
Study program: **Pharmaceutical Technology**

Mgr. Chiazor Ugo Ogadah has shown interest in the field of pharmaceutical technology since her master's studies at the Faculty of Pharmacy in Hradec Králové, where she chose "Testing of adhesive properties of plasticized polyesters using a rotational rheometer" as the topic of her diploma thesis (supervisor: Dr. Šnejdrová). After successfully completing her master's study program, she began doctoral studies in Pharmaceutical Technology in 2018 under the supervision of assoc. prof. Šklubalová with consultation from Dr. Vraníková. Following the successful habilitation of her consultant, there was a change in supervisor (assoc. prof. Vraníková) and consultant (assoc. prof. Šklubalová) in 2022.

During her doctoral studies, Chiazor focused on the highly relevant topic of drug targeting to the colon. She chose cyclosporin A as a model drug, which exhibits poor solubility in water. Poorly soluble drugs present a significant challenge in technology, particularly when specific parts of the gastrointestinal tract are targeted. Given the numerous methods available to enhance drug release (or increase dissolution rate) of poorly soluble active pharmaceutical ingredients, she opted to prepare liquisolid systems for targeted delivery to the colon, a method rarely used for systematic drug targeting to the colon. To validate the effectiveness of her chosen method, she decided to compare its efficacy with another well-known method, preparation of co-milled formulations. The scientific significance of this project is evidenced by the fact that her research was also supported by the Grant Agency of Charles University (GAUK no. 70119/2019 *Development of colon-targeted liquid-solid systems for the local therapy of inflammatory bowel diseases*).

During her studies, Mgr. Ogadah completed a six-month international internship supported by the Rector's Mobility Fund program (Grant number: FM/c/2021-1-028) at the Department of Pharmacy, University of Copenhagen, under the guidance of world-renowned expert in

pharmaceutical technology, prof. Thomas Rades. This collaboration resulted in a first-author publication in the impactful journal *International Journal of Pharmaceutics* (IF₂₀₂₂ 5.8). Through collaboration with other members of the *Dosage Forms and Drug Delivery Systems Research Group*, she also co-authored a publication published in the journal *Advanced Powder Technology* (IF₂₀₂₂ 5.2). She regularly presented her findings at national (*Improving Drug Solubility: Recent Advances in Pharmaceutical Technology*, Hradec Králové; *Postgraduate and Postdoc Conference*, Hradec Králové) and international conferences (*13th Central European Symposium on Pharmaceutical Technology*, Poland; *3rd Symposium of Young Researchers on Pharmaceutical Technology, Biotechnology and Regulatory Science*, Hungary).

During her studies, Mgr. Ogadah fulfilled all study obligations, passed required partial exams, and successfully completed doctoral state exam (February 9, 2021). At the turn of 2021-2022, she completed the aforementioned six-month international internship at the University of Copenhagen. Chiazor also served as a consultant for four successfully defended master's theses. Throughout her doctoral studies, Chiazor worked diligently and meticulously, demonstrating the ability for independent scientific work. The results of her work are not only beneficial within the research at the Department of Pharmaceutical Technology but also on an international scale.

The achievements of Mgr. Chiazor Ugo Ogadah demonstrate her scientific maturity, and I positively evaluate her dissertation. I recommend the dissertation thesis for defense.

March 18, 2024

assoc. prof. PharmDr. Barbora Vraníková, Ph.D.
supervisor