

Scientific opinion

**from Kaloyan Dobrinov Georgiev, PhD, D.Sc.,
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Member of the scientific jury on the basis of order № RD-38-454 / 21.09.2021 of the Rector of Sofia University "St. Kliment Ohridski "and appointed for preparation of an scientific opinion, according to the protocol from the first meeting held on 11.10.2021.

REGARDING: Competition announced in SG no. 63 of 30.07.2021 for holding the academic position "Associate Professor" in the scientific specialty "Technology of dosage forms and biopharmacy", field of higher education 7. Health and sports, professional field 7.3. Pharmacy, for the needs of the Faculty of Chemistry and Pharmacy at Sofia University "St. Kliment Ohridski ".

One candidate participates in the competition - Ch. Assistant Professor Zahari Penkov Vinarov, Ph.D. The candidate has submitted all the necessary documents for the competition in accordance with the PRAS of Sofia University, as well as a reference for the implementation of the minimum requirements for holding the position of "Associate Professor".

Biography of the candidate

The candidate obtained his Master's degree in Pharmacy at Medical University - Sofia in 2009, and in 2014 defended his dissertation on "In-vitro studies of enzymatic lipolysis of triglycerides in the digestive tract" in professional field 4.2 Chemical Sciences in the Department of Chemical Engineering of the Faculty of Chemistry and Pharmacy of Sofia University "St. Kl. Ohridski" with scientific supervisors acad. Nikolai Denkov and prof. Slavka Tcholakova. The same year, the candidate was appointed as an assistant professor, and two years later (in 2016) - as a senior assistant professor in the Department of Chemical and Pharmaceutical Engineering. From September 2019 to October 2021, the candidate was a post-doctoral fellow in the group of the renowned drug absorption expert Prof. Patrick Augustijns, at the Drug Delivery and Distribution unit of the Department of Pharmaceutical and Pharmacological Sciences of the Catholic University in Leuven, Belgium (KU Leuven). In 2021, the candidate defended independently (without supervisors) a dissertation in professional field 7.3 Pharmacy

(Pharmaceutical technology and biopharmacy) on “Improving the solubility of hydrophobic drugs by solubilization in surfactant micelles”. Currently, the candidate continues to be a senior assistant professor at Sofia University “St. Kl. Ohridski”.

Teaching activities

Zahari Vinarov has five years of teaching experience (two years as an assistant professor and three - as a senior assistant professor). For this period, he reported considerable classroom duties (over 550 hours/academic year), the main part of which (over 90%) were due to conducting practical exercises in Pharmaceutical technology - part 1 for Pharmacy students at the Faculty of Chemistry and Pharmacy of Sofia University “St. Kl. Ohridski”, in accordance with the subject of this competition.

The candidate has experience in involving students in research activities, as illustrated by his supervision of 4 diploma theses, 1 bachelor's thesis and the publishing of 7 scientific articles in co-authorship with students. He also supports the international interactions of the students, by organizing internships in foreign pharmaceutical companies (DSM Biomedical, the Netherlands) and research visits to renowned European universities (University of Copenhagen and the University of Southern Denmark). In addition, Zahari Vinarov participated in the preparation of the doctoral program in Pharmaceutical technology and biopharmacy, which demonstrates his interest in the future training of doctoral students at the Faculty of Chemistry and Pharmacy.

Research activities

The candidate has submitted for participation in the competition 20 scientific publications and two books, all of which are related to Pharmaceutical technology and biopharmacy, generally falling into the fields of (1) approaches to improve the solubility and oral bioavailability of poorly water-soluble drugs and (2) biopharmaceutical research tools.

Five of the publications were used to defend two dissertations: one in professional field 7.3 Pharmacy, Pharmaceutical technology and biopharmacy (on "Improving the solubility of hydrophobic drugs by solubilization in surfactant micelles") and one in professional field 4.2 Chemical Sciences (on "In-vitro studies of enzymatic lipolysis of triglycerides in the digestive tract"). The remaining 15 articles were published in renowned journals with impact

factor (including *Advanced Drug Delivery Reviews*, *European Journal of Pharmaceutical Sciences*, *Molecular Pharmaceutics*, etc.) and were used to cover the minimum national requirements in group D, by indicator 7 (163 points).

Zahari Vinarov has published a book based on his defended dissertation in professional field 7.3 Pharmacy entitled "Mechanisms of solubilization of hydrophobic drugs from surfactants" and with ISBN 978-954-07-5298-3. The book was used to cover the minimum national requirements in group D, through indicator 6 (40 points).

The candidate has published a habilitation thesis - a monograph on "Solubilization: fundamental principles and biopharmaceutical applications" (ISBN 978-954-07-5307-2), which includes new results and conclusions on the role of solubilization in the context of Pharmaceutical technology and biopharmacy. The important practical issue of drug solubilization at conditions close to those in the human gastrointestinal tract and the relevant research methods are described in a separate chapter of the monograph. The monograph was used to cover the minimum national requirements in group B, through indicator 3 (100 points).

The candidate's scientific work is well accepted in the literature, as evidenced by the number of citations (319 citations by SCOPUS, without self-citations, 4785 points) and the candidate's Hirsch index (10 by SCOPUS, without self-citations) and his membership in a number of international pharmaceutical organizations (expert group at Ph.Eur., AAPS, EUFEPS) and journal editorial boards (*Journal of Pharmacy and Pharmacology*, *Frontiers in Drug Delivery*). Zahari Vinarov participates in the Core-group of the "European Network for Understanding the Processes Related to Oral Absorption" and is a co-chair of Working Group 3 (advanced formulations).

CONCLUSION

The scientific production of Dr. Zahari Penkov Vinarov fully complies with the Law on the Development of the Academic Staff in the Republic of Bulgaria, as well as the Regulations for its application for the academic position of "Associate Professor". The minimum requirements are fully met for holding the position of "associate professor", and in many of the indicators it exceeds them. All this gives me a reason to give a **POSITIVE EVALUATION** and to propose to the esteemed members of the Scientific Jury to vote for the award of the academic

position of "Associate Professor" in the field of higher education. 7. Health and sports, professional field 7.3. Pharmacy (Technology of dosage forms and biopharmacy), for the needs of the Faculty of Chemistry and Pharmacy at Sofia University "St. Kl. Ohridski".

16.11.2021 г.

Varna

Signature:

/assoc. prof. Kaloyan Georgiev, PhD, DSc/