STATEMENT

By Ivan Vladimirov Svinyarov, PhD, Associate Professor

of Faculty of Chemistry and Pharmacy, Sofia University "St. Kliment Ohridski "

with regards to the materials submitted to participate in the procedure for

Associate Professor

Academic job vacancy within the Institute of Organic Chemistry with Center of Phytochemstry, Bulgarian Academy of Science (IOCCP-BAS),

in the field of higher education

4. Natural Sciences, Mathematics and Informatics

professional field

4.2. Chemical Sciences, scientific major "Bioorganic Chemistry, Chemistry of Natural and Physiologically Active Substances"

1. General Information on Applicant's Activity

Summary of the reviewed materials

In the competition for Associate Professor, announced in the State Newspaper, issue 43 from 31 May 2019, and on the webpage of the Institute of Organic Chemistry with Center of Phytochemstry, BAS, Head Assist. Prof. Dr. Boryana Stoykova Trusheva has been a single candidate.

The documents submitted by the applicant are in accordance with the all requirements of the Law for the development of the academic staff in the Republic of Bulgaria, the Rules for its implementation, the Rules for the conditions and the order for acquiring scientific degrees and occupying academic positions in BAS and at Institute of Organic Chemistry with Center of Phytochemstry, BAS.

Short biography review

Ms. Boryana Trusheva, born in 1979 in Sandanski, Blagoevgrad, graduated (2002) with Master degree in Organic and Analytical Chemistry in the Faculty of Chemistry in Sofia University "St. Kliment Ohridski". In 2006, she defended a PhD thesis "Chemical composition and biological activity of propolis in different geographical regions" in IOCCP-BAS under Professor Vasya Bankova, DSc. In 2006, Ms Trusheva was appointed as a Chemical Specialist. Since 2007, she has also been a Head Assistant Professor in the IOCCP-BAS. Ms Trusheva, PhD, made a short specialization in Skopie, North Macedonia in the field of liquid chromatography and mass spectrometry as a part of CHROMLAB project under FP7 in EU. She also had 3 short-term visits – 1 as a part of ERASUM program and 2 in execution of FP7 EMAP and H2020 EXANDAS projects. Three master theses related to characterization of propolis with different origin have been developed with the support of Boryana Trusheva, PhD – 1 under her leadership and 2 under her consultation. The candidate also led an internship with 1 student.

2. Scientific contributions and Citations of the Applicant

Publications and impact

The candidate listed 35 scientific works – 30 reasarch articels, 4 book chapters and 1 certificate for a registered utility model. Five out of the 35 publications have been included in the PhD thesis.

The candidate participates in the current competition with 28 scientific works including a certificate for a registered utility model, 3 book chapters and 24 publications (4 review papers) published in journals as follows: Q1 – 8, Q2 – 10, Q3 – 3, Q4 – 2 and 1 in a journal without a Q. Most of the works have been published in hight ranked international journals, such as *Microporous and Mesoporous Materials* IF^{2018} = 4.182, *Food Chemistry* IF^{2011} = 3.655, *Polymer* IF^{2017} = 3.483, *RSC Advances* IF^{2016} = 3.108, *Phytochemistry* IF^{2018} = 2.905*, Fitoterapia* IF^{2018} = 2.431. Dr. Boryana Trusheva has presented an exhaustive and accurate list of contributions under her authorship, including works outside of her PhD thesis. The outline of future research at the end of her Habilitation report of the scientific contributions is impressive and points to a clear vision for her future development.

The candidate has listed an exceptional number of 778 citations in referenced journals, including 514 which are outside her PhD thesis. She has also listed 451 citations in journals and books which have not been referenced in Scopus and/or Web of Science, patents and PhD theses. This significant number of citations proves that Dr. Trusheva works in a modern scientific field. Most of her publications are related to the isolation and characterization of new compounds and establishment of composition of propolis in different geographic areas. Seven of the publications are review reports summarizing important qualitative and quantitative characteristics of propolis. On the one hand, her works on applied science are important contributions in the field of extraction, concentrations and analysis of biologically active compounds in propolis, and on the other making propolis water-soluble.

The scientific work reflected in the candidate's publications is in the field of chemistry of natural compounds. The objectives of her research are to define the chemical composition of propolis and to find out the relation between it and the observed biological activity. The main research object is propolis from different geographical origin produced by honey bees (*Apis mellifera*) and stingless bees (*Melipona fasciculata*).

For the characterization of propolis different chromatographic methods have been used for the separations and isolation of individual compounds. The composition of the initial products and the structure of the individual compounds have been defined with a skillful combination of instrumental methods (GC/MS, NMR, UV и IR). For the characterization of the phenol composition of the samples, the candidate used spectrophotometric methods based on Folin–Ciocalteu's reagent, DPPH free radical etc.

After becoming a PhD, the candidate has been taken part in 11 scientific projects – 3 international projects, 6 projects funded by the National Science Fund and 2 projects in cooperation with Macedonia and Vietnam. Boryana Trusheva has also worked on 6 contracts with companies related to analysis of natural products with propolis origin.

Assessment of the personal scientific contributions

The candidate`s personal contribution to the researched filed and publications is obvious and significant. In most of the publications, Boryana Trusheva is the first or second author. In 4 of the publications she is also the corresponding author which demonstrates her leading role.

The habilitation report on scientific contributions correctly summarizes the work performed and reflects the scientific results achieved.

3. **Critical Remarks and Recommendations**

I have no critical remarks or recommendations to the documents presented by the candidate.

CONCLUSION

The documents submitted by Dr. Trusheva are **in accordance with all the requirements** of the Law for the development of the academic staff in the Republic of Bulgaria, the Rules for its implementation, the Rules for the conditions and the order for acquiring scientific degrees and occupying academic positions in BAS and at Institute of Organic Chemistry with Center of Phytochemstry, BAS.

The candidate has presented a significant number of scientific works, published after her PhD thesis. They are internationally recognized and contain unique and applicable scientific contributions mainly in the field of characterization of propolis with different origin and making it in water-soluble form.

Boryana Trusheva's scientific research achievements **fully match** with the specific requirements of the Rules for the conditions and the order for acquiring scientific degrees and occupying academic positions in BAS and at Institute of Organic Chemistry with Center of Phytochemstry, BAS and **fully attest her scientific qualifications**.

After getting acquainted with the materials for the competition and the scientific works, after making an analysis of her scientific contributions and contributions to the applied science, I do support Boryana Trusheva`s candidature, I provide my **positive evaluation** and would like to recommend to the scientific jury to prepare a report-proposal to the IOCCP – BAS scientific committee to select **Head Assist. Prof. Boryana Stoykova Trusheva, PhD**, for the position of **Associate Professor** in IOCCP-BAS in the field of higher education 4. Natural Sciences, Mathematics and Informatics, professional field 4.2. Chemical Sciences, scientific major "Bioorganic Chemistry, Chemistry of Natural and Physiologically Active Substances".

04.09.2019 **Statement Author**: .....

Sofia *Assoc. Prof. Ivan Svinyarov, PhD*