STAITMENT

from Prof. Tatyana Ivanova Vlaykova, PhD
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Regarding: the procedure for the Academic position of " Professor" in the scientific specialty Biochemistry, professional field 4.3. Biological sciences, field of higher education 4. Natural sciences, mathematics and informatics

1. **Information about the procedure**

The procedure was announced for the needs of the Department of "Biochemistry, Molecular Medicine and Nutrigenomics" at the Faculty of Pharmacy, MU-Varna in the State Gazette - no. 59/26.07.2022.

Reason for submitting this review: I am a member of the scientific jury of the procedure, according to Order No. P-109-359/21.09.2022 of the Rector of MU-Varna.

2. Brief information about the candidates in the competition.

One candidate submitted documents for the announced procedure, **Associated Professor Yoana Dimitrova Kiselova-Kaneva, PhD.** The candidate's documents are well organized and arranged and are in full compliance with the requirements of the Law on the Development of the Academic Staff in the Republic of Bulgaria and the Regulations for the Development of the Academic Staff at the MU "Prof. Dr. P. Stoyanov" – Varna.

Associate Professor Yoana Kiselova received a master's degree in Biology with an additional qualification in Genetics and Cell Biology at the Paisii Hilendarski University of Plovdiv, and in 2009, after successfully passed state exam at Medical University - Sofia, she acquired a specialization in Biochemistry in the system of the Ministry of Health. In the period 2004-2006, she was a full-time PhD student, and then until 2011, a half-time PhD student, and in 2011 she defended his PhD thesis with the title "Study of the antioxidant activity of Bulgarian medicinal plants" and obtained the PhD degree in the scientific specialty "Biochemistry".

Assoc. Prof. Yoana Kiselova worked for 4 years as a Research assistant III degree at the Institute of Genetics of the Bulgarian Academy of Sciences, and since 2006, the professional development of Yoana Kiselova has been implemented in the Department of "Biochemistry, Molecular Medicine and Nutrigenomics" of the Faculty of Pharmacy, MU-Varna. In 2006 she started work as an assistant professor, in 2009 as senior, in 2011 as head assistant professor, and since 2013 she has been working as an Associate professor of biochemistry in the same department. According to the report from the "Human Resources" Department of MU-Varna, Associate Professor Kiselova has over 19 years and 8 months of work experience in the specialty.

Prof. Kiselova performs a number of administrative and expert activities: since 2016, she has been the Head of the Department of "Biochemistry, Molecular Medicine and Nutrigenomics", and since 2017, she has been the head of the Section " Nutrition and quality of life" and the Head of the Scientific Group "Nutrigenomics and personalized nutrition" at the Section "Nutrition and quality of life" at the Scientific Research Institute of MU-Varna.

3. Completion of the requirements for obtaining the academic position "Professor".

In the current procudure, Assoc. Prof. Kiselova presents in her Academic Report 30 scientific papers and 4 workbooks. Of the scientific works, **14 are** publications in journals referenced in WoS/Scopus and **with impact factor (IF) (total IF= 45,838), 10 are** in journals refereed **in WoS/Scopus without IF**, but with quartiles, **2 are chapters** of monographs published by international publishing houses (InTech) and **4 were** published in refereed Bulgarian scientific journals. The articles published in journals with IF are fewer than those presented in the Academic Reference, because since 2018 the journal *Bulgarian Chemical Communications* is not referenced in WoS and has no IF – the articles are from 2018, 2019 and 2020.

In the Academic report, correctly and to the aid of the scientific jury, Assoc. Prof. Kiselova also presented the scientific works that meet the requirements for the PhD and AD "Associate professor", which do not overlap with those for the current procedure and which will not be subject of analysis.

To the documents, Associate Professor Kiselova has additionally included a list of attendanceat scientific forums, of which 42 are at international scientific forums and 4 at local and/or university scientific forums.

When searching in Scopus, Yoana Kiselova's profile is associated with over 320 citations and with a citation index of 6 (h-index, Hirsch index, according to SCOPUS).

The submitted Academic Report for the fulfillment of the minimum national requirements shows that Assoc. Prof. Kiselova covers and even exceeds the required points in many indicators (D, D, E):

Indicators' groups	***Indicators***	***Required points***	***Assoc. Prof. Kiselova***
А	1. PhD thesis	**50**	**50**
В	4. Habilitation work - publications that are referenced and indexed in world databases with scientific information (Web of Science и Scopus)	**100**	**Total points =101** **2 x 25(Q1) = 50** **1 x 15(Q3) = 15** **3 x Q4 = 36**
Г		**200**	**317**
	7. Scientific publications WoS/Scopus		Общо 287 3 x25 (Q1) = 75 1x20 (Q2) = 20 8x15 (Q3) = 120 6x12 (Q4) = 72
	8. Chapters in monographs (15ps)		2 x 15 = 30
Д	11. Citations (WoS/Scopus) (x2т)	**100**	**86x2=172**
Е		**150**	**267.83**

	13. Supervision of PhD students, who has successfully defensed the PhD thesis (50/n)		2x50 = 100
	14. Participation in national scientific or educational projects (x10 ps)		7x10=70
	15. Participation in international scientific or educational project (x20 ps)		1x20=20
	16. Leading/management of a national scientific or educational project (x20 ps)		2x20=40
	18. Funds recruited from projects managed by the applicant (1pt/5000)		120000/5000=24
	20. Issued university workbooks (20/n)	4 workbooks	2 x (20/5) = 8 1 x (20/6) = 3.33 1 x (20/8) = 2.5 Общо = 13.83

4. Assessment of the candidate's educational and teaching activities

As mentioned at the beginning, Assoc. Prof. Kiselova began her academic and teaching activities in 2006, when she was elected through a competition exam for assistant professor in biochemistry at the Department of "Biochemistry, Molecular Medicine and Nutrigenomics" of MU-Varna. According to the reference from the "Human Resources" Department of MU-Varna, Prof. Kiselova's teaching experience is about 16 years (15 years and 10 months). According to the reports of the Educational office Assoc. Prof. Kiselove each year has higher auditorium engagement that the required 126 hours: 155 hours per year during the last 5 years.

Assoc. Prof. Yoana Kiselova is very actively involved in the teaching process of students from almost all specialties at MU-Varna. She conducts lectures, seminars and practical exercises on the compulsory discipline "Biochemistry" for students from the specialties "Medicine" (Bulgarian and English studies), "Dental Medicine" (Bulgarian and English studies), "Pharmacy" (Bulgarian studies); lectures on the compulsory course "Biochemistry and Pathobiochemistry" for "Medical Laboratory Technicians"; lectures on "Transfer of technologies and innovations in pharmacy" and lectures on 3 elective courses, one of which is both in Bulgarian and in English.

To optimize the learning process, Prof. Kiselova co-authored the development and updating of 4 workbooks, two in Bulgarian and two in English, issued in the last 2 years (2020-2021).

In addition to the auditorium engagements, Assoc. Prof. Kiselova has commitments with specialists and PhD students in biochemistry. She is the supervisor of two PhD students who have successfully defended their PhD thesis: Neshe Ferahova Nazifova-Tasinova (2015) and Miglena Nikolaeva Todorova (2019).

5. Brief description of the presented scientific papers

In her research work, Assoc. Prof. Kiselova continues and deepens the main direction developed for many years in the Department of Biochemistry of the University of Varna, aimed at studying the phytochemical composition and biological activity of Bulgarian medicinal plants as a potential resource for nutraceuticals and

studying the genetic basis of the individual sensitivity of people to food and food ingredients and of the appearance of obesity, metabolic syndrome and other socially significant multifactorial diseases.

But Assoc. Prof. Kiselova's interests are directed in other fields as well, which gives reason to summarize the scientific interests, publication activity and contributions from them in the following three directions:

1) Biological activity, composition, metabolism and safety of natural raw materials, food additives and synthetic molecules (B4.1, B4.2, B4.3, B4.4, B4.5, B4.6, G7.1, G7.2, G7.3, G8.1, G8.2);

2) Investigation of molecular markers in search of new diagnostic and prognostic approaches (G7.4, G7.5, G7.6, G7.7, G7.8, G7.8, G7.10, G7, G7.11, G7.12, G7.13, G7,14, G7.15, G7.16, G7.17);

3) Development and adaptation of new preparative and analytical methods (B4.3, G7.18).

The research in these areas has been carried out with the financial support of about 20 research projects, in which Prof. Kiselova participated as a leader or expert in the work teams. She is the head of one current project financed by the Scientific Research Fund, of Ministry of Education, the head of 3 other projects, funded by MU-Varna; she is a member of the teams of 1 international project under 7FP, 5 projects financed by the Scientific Research Fund, of Ministry of Education, (one before AD "associate professor") and 7 projects from the University of Varna.

6. Brief evaluation of the candidate's main scientific and scientific-applied contributions

A significant part of the publications presented in the procedure include the results of research on the medicinal plant *Sambucus ebulus L.* Publications including these studies are included in indicator B4 and have the value of a habilitation work. The results of these studies lead to a number of original contributions, such as the detailed characterization of the phytochemical composition of extracts from the fruits of the dwarf elder (*Sambucus ebulus L.*), with a large part of the established compounds being identified for the first time, and for the remaining compounds, the results have a confirmatory nature.

Studies of the gene expression of specific selected genes in macrophage cell cultures also lead to another group of results and contributions of an original scientific-theoretical and scientific-applied nature, which contribute to clarifying the mechanisms of action of extracts from the fruits of the dwarf elder on processes such as oxidative stress and inflammation. These results prove their antioxidant, cytoprotective and anti-inflammatory effects and provide a rational basis for the introduction of this raw material for the production of functional foods, nutritional

The results of the research on the metabolic effects of sulfur-containing mineral waters of two of the springs from the Varna Basin are original with scientific and applied nature, proving that their consumption improves the redox status in humans by increasing the plasma levels of thiol antioxidants.

Of significant applied nature are the results of the analyzes performed regarding cytotoxicity and species composition of cyanobacteria in water samples collected during blooms from reservoirs with diverse purposes, which contribute to clarifying the importance of such pollution as a potential risk factor for human and animal health .

Another part of the results lead to original and confirmatory contributions with a scientific-theoretical and applied nature, which are important for establishing some

mechanisms of therapeutic action of various synthetic and natural substances such as melatonin, the homeopathic anti-inflammatory agent Ferrum phosphoricum (FP), iron-containing nutritional supplements, a newly synthesized organophosphorus compound and others. Some of these studies are related to the development of new therapeutic agents.

The results of the research carried out in direction 2 "Research of molecular markers in search of new diagnostic and prognostic approaches" contribute to establishing the applicability of some molecular indicators in plasma, urine and saliva as diagnostic and prognostic markers in cardiovascular diseases (CVD), pyelonephritis and gingivitis in children and obesity.

The contributions from the studies of the expression of serum matrix Gla-protein (MGP) in peripheral mononuclear cells are original, and those of serum MGP and vitamin D status in patients with cardiovascular diseases are mainly confirmatory and would contribute to clarifying the role of the investigated indicators as biomarkers on CVD risk and progression.

The results of the studies of mRNA levels for IL-6, MMP-8 and GSS (glutathione synthetase) in saliva of children with pyelonephritis are interesting and original, which warrant these indicators to be proposed for more extensive studies to confirm their potential as biomarkers of pyelonephritis in children.

Results from determination of sulfated glycosaminoglycans in obese type 2 diabetic patients on metformin therapy lead to original applied contributions. Determination of urinary glycosaminoglycan profile can be proposed as a non-invasive method to monitor metformin therapy in D2T patients.

Along with the works having an emphasized fundamental and scientific-applied nature, the work of Associate Professor Kiselova is also related to the development and improvement of methods for analysis and sample preparation (Strategy 3 "Development and adaptation of new preparatory and analytical methods"). The results of this direction lead to the derivation of contributions of an applied methodological nature.

7. Critical remarks and recommendations

I have no critical remarks about the candidate for academic position "Professor", Prof. Yoana Kiselova. The documents are well prepared and organized, which helps a lot in their evaluation by the scientific jury. Only the reference of scientific contributions is prepared in too much detail, being presented as a list of the results and conclusions, rather than to of contributions.

CONCLUSIONS:

In the procedure for the academic position "Professor" in the field of higher education 4. Natural sciences, mathematics, and informatics, professional direction 4.3. Biological Sciences, and scientific specialty "Biochemistry", announced for the needs of the Department "Biochemistry, Molecular Medicine and Nutrigenomics", Faculty of Pharmacy, Medical University "Prof. Dr. Paraskev Stoyanov", Varna applied Assoc. Prof. Yoana Kiseova-Keneva, PhD.

The official documents submitted for the teaching and research activities of Associate Professor Yoana Kiselova show that she meets and in many of the indicators significantly exceeds the minimum national requirements and the requirements of MU-Varna for the academic position of "professor".

Undoubtedly, Assoc. Prof. Kiselova is a proven specialist and respected lecturer with extensive teaching experience and a clearly defined scientific profile. Scientific studies are focused on current problems and have high scientometric indicators and citability, which proves their importance.

The evidence from the documents presented during the procedure, as well as my personal impressions of Associate Professor Kiselova as a very capable, goal-oriented, consistent and precise young scientist who dedicatedly and selflessly shares his experience and knowledge both with his colleagues and with the students he teaches, give me the confidence to conclude that she unquestionably deserves to be given the academic title of "Professor".

Bearing in mind everything highlighted above regarding the teaching activity, scientometric indicators, scientific contributions, and personal qualities of Assoc. Prof. Yoana Kiselova, as well as taking into account the requirements of the Law on the Development of the Academic Staff in the Republic of Bulgaria and the Regulations for the Development of the Academic Staff at the MU "Prof. Dr. P. Stoyanov" - Varna for the acquisition of the academic position "PROFESSOR", I give **my positive opinion** with complete conviction. In my capacity as a member of the Scientific Jury for the announced procedure for the academic position "PROFESSOR" in the scientific specialty "Biochemistry, I recommend to the esteemed members of the Scientific Council and the Academic Council of MU-Varna to vote positively for awarding Assoc. Prof. Yoana Dimitrova Kiselova- Kaneva, PhD with academic position "Professor"

05.12.2022, Stara Zagora

Member of the Jury:.....

/Prof. Tatyana Vlaykova, PhD/