

OPINION

by Assoc. Prof. Nora Angelova Angelova
about the competition for acquiring the academic position of
“Associate Professor”
at the Institute of Mathematics and Informatics of the
Bulgarian Academy of Sciences,
in the field of higher education: 4. Natural Sciences, Mathematics and Informatics; professional
field 4.6. Informatics and Computer Science (Computer models in genomics),
announced in the Bulgarian State Gazette No. 91/ 02.11.2021

The only candidate in the competition is Assistant Prof. Rumyana Kirova Yordanova, PhD.

1. Reason for expressing the present opinion

The reason for expressing the present opinion is my appointment as a member of the Scientific Jury by order № 343/23.12.2021 of the Director of the Institute of Mathematics and Informatics (IMI) of the Bulgarian Academy of Sciences (BAS), regarding the procedure for acquiring the academic position “Associate Professor” in the field of higher education: 4. Natural Sciences, Mathematics and Informatics; professional field in professional field 4.6. Informatics and Computer Science; scientific specialty “Informatics (Information modelling of service networks)”, announced in the Bulgarian State Gazette No. 91/02.11.2021.

I declare that as a member of the scientific jury, all the documents of the only candidate in the competition, Assistant Professor Rumyana Yordanova, were provided to me.

2. Short biographical data

In 2005 Assistant Prof. Rumyana Yordanova accomplished her PhD degree in bioinformatics at the Marquette University, WI, US. The diploma was legalized at the Institute of Mathematics and Informatics - BAS in 2016. In 1992 she acquired a master degree in informatics at the Sofia University “St. Kliment Ohridski”.

During the period from 2017 to 2020, Rumyana Yordanova worked as a consultant in the *Alexion Pharmaceuticals*, US. In 2016 r. she worked as a consultant in *Bristol-Myers*

Squibb, US. From 2013 until now, she has occupied the position of Assistant at IMI-BAS. From 2016 until now, she has worked as a researcher at Hokkaido University, Sapporo, Japan.

From the presented professional autobiography of the candidate, it is evident that he has excellent English skills.

A copy of diploma for educational and scientific degree "Doctor" (PhD), issued by BAS on 02.02.2016, with No.000046 and a copy of diploma of master degree, No.118741, issued by SU "St. Kliment Ohridski" on 20.02.1996 are presented in the documents.

From the submitted documents it is evident that the candidate has over 9 years of work experience as an assistant and over 3 year of work experience as an Assistant Prof. in and meets the minimum requirements of the regulations for the application of Act for the Development of the Academic Staff in the Republic of Bulgaria.

3. Scientific publications

According to the presented List of all publications of the candidate, Dr. Yordanova is author of 24 scientific publications, 18 of which are in journals with impact factor or impact rank.

A large part of the scientific research of the candidate is devoted to information approaches for the analysis and integration of "omics" data. The main difficulty in analyzing this type of data is their huge size, different ways of generating them and different degrees of complexity, which is a prerequisite for obtaining interesting results in the field of "Big data" in biology.

4. Scientific-metric indicators

Table 1 presents the minimum required points by groups of indicators for holding the academic position of "Associate Professor", according to the regulations for the application of Act for the Development of the Academic Staff in the Republic of Bulgaria in IMI-BAS and the points of Assistant Professor Romyana Yordanova on the same indicators.

Group of indicators	Minimum required points for the academic position “Assoc. Prof.”	Points of Romyana Yordanova
Group A	50	50
Group B	-	-
Group C	100	150
Group D	220	290
Group E	70	84
Group F	20	30

Table 1: Candidate’s scientific-metric indicators and minimum required points by groups of indicators for the academic position “Associate Professor”

According to the presented “*List of publications of Romyana Yordanova for holding the academic position of Assoc. Prof.*”, Dr. Yordanova takes part in the competition with a cumulative habilitation thesis consisting of 3 publications with IF that are indexed in Web of Science and Scopus and 8 more scientific publications with IF and/or SJR. The applicant does not have publications for which he is the only author and fulfills the requirements for at least five publications in the journal with impact factor or impact rank.

According to the reference for the fulfillment of the minimum requirements by a candidate in a competition for the academic position "Associate Professor" at IMI-BAS, Dr. Yordanova has participated in 4 projects. Two of the mentioned projects do not earn points for criterion E. Two of the mentioned projects do not earn points under criterion E. One of the projects is national, and one is international that brings 30 points to the applicant on this indicator, not 40 as indicated in the documents.

According to the reference for the fulfillment of the minimum requirements by a candidate in a competition for the academic position "Associate Professor" at IMI-BAS, Dr. Yordanova presents 14 citations in Scopus for participation in the current competition.

5. Contributions of the candidate

Assistant Professor Romyana Yordanova has attached a well-described habilitation extended reference for his scientific publications.

The focus of her research is in the field of information methods in genomics, in particular the development and implementation of bioinformatics and statistical methods for the analysis and integration of “omics” microbiological data. All scientific publications use methods for visualization of input and output data using the programming language R and specialized internal software Ingenuity Pathways Analysis (IPA). The publications also make a global error analysis (Global Error analysis) using the statistical method for the percentage of false discoveries, permutation and stimulation methods, the R language, as well as the interpretive language Perl.

6. Notes and personal impressions

I would like to note the discrepancy between the number of citations in the "*List of citations of publications for the competition of Romyana Kirova Yordanova*" and those presented in the "*Reference for fulfillment of the minimum requirements by a candidate for the academic position Associate Professor at IMI- BAS*".

The presented CV contains 5 scientific publications without impact factor or impact rank, but in the "*Complete list of publications of Romyana Kirova Yordanova*" 6 publications without IF or SJR are listed.

The number of citations in the "*List of citations of publications for the competition of Romyana Kirova Yordanova*" exceeds the number of citations in the "*Reference for fulfillment of the minimum requirements by a candidate for the academic position Associate Professor at IMI- BAS*". The list of citations includes autocitations and is not numbered.

I do not know Dr. Romyana Yordanova.

7. Conclusion

After reviewing the submitted documents, I believe that the candidate Romyana Kirova Yordanova fulfills all the requirements of the law and the Regulations to it and the Regulations for the specific requirements for acquiring academic degrees and occupying academic positions at BAS and IMI-BAS.

With all that has been said above, I give a positive conclusion of the materials for participation in the competition. This provides me with reason to recommend to the honorary members of the Scientific Jury to appoint Assistant Prof. **Dr. Romyana Yordanova** to the academic position “**Associate Professor**” in professional field **4.6 Informatics and Computer Science (Computer models in genomics)**.

14.02.2022

The opinion was prepared by:.....

(Assoc. Professor Nora Angelova Angelova,
Sofia University "St. Kliment Ohridski", FMI)