

Review

about a contest for the academic position "associate professor" in "Cell Biology";
announced by Department of Cell Biology and Developmental Biology, Faculty of Biology, Sofia University "St. Kliment Ohridski";
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General presentation of the documents and procedure

The contest announcement for an academic position of "associate professor" and the procedure for arriving at a decision are based on the following documents: *i)* Act on Development of the Academic Staff in the Republic of Bulgaria, amend. 12.III.2021; *ii)* Regulations on the Implementation of the Development of Academic Staff in the Republic of Bulgaria Act, amend. 19.II.2019; *iii)* The Rules on the Conditions and Procedure for Acquiring Science Degrees and Holding Academic Positions in Sofia University "St. Kliment Ohridski", amend. 26.V.2021; and *iv)* The order of the Rector of The University of Sofia № PД-38-180/ 5.IV.2022.

The presented set of materials (all in PDF) comply with the requirements and are well structured. Furthermore, the *necessary procedure detailed in the points above has been followed.*

Compliance with the "minimum national requirements" for the position of "associate professor".

Chief Assist. Prof. Georgi Nikolaev Georgiev, PhD is the only candidate for the academic position announced. The information contained within the documents is enough to gain sufficient insight in his achievements. Documents analysis shows that dr. Georgiev satisfies the required criteria as detailed below¹:

Group	indicator		points
A	1	A successfully defended doctorate thesis	50
B	4	Publications in scientific journals, which are referenced and indexed in renowned scientific databases	105
Г	7	Publications in scientific journals, which are referenced and indexed in renowned scientific databases, and are outside of the scope of section B4	250
Д	11	Citations in scientific journals, monographs, inclusion of works in scientific summaries and patents, which are referenced and indexed in renowned scientific databases	61

Publications submitted to the contest

The list of publications submitted to the contest exceeds formal "minimum national requirements":

- all papers (16) are published in journals with Impact factor;
- the number of citations referencing said publications exceeds the "minimum national requirements". I cannot find self-citations – obvious or otherwise. The check of three citations selected at random showed that the candidate's publications are having a real and positive impact.

In addition to the presented scientific activity it is important to note dr. Georgiev's *popularisation of his and his co-authors findings*. He has participated in four congresses and conferences and submitted seven works across them.

¹Group designation is according to the Bulgarian alphabet

A few of the above (and possibly future) publications are a result of his *participation in eight funded research projects*.

Educational activities

While examining the documents submitted with his application I have noted:

- active participation in reading lectures; oversight of both course-related and extracurricular exercises with students;
- research supervision of six master's theses.

Assessment of the scientific contributions

Dr. Georgiev has presented summary on claimed scientific contributions. The more significant findings that are the result of research published could be formulated as follows:

1. The effect of pineal hormone melatonin on expression of transcription factors linked to cells' reprogramming has been studied. The activation of MT₁ melatonin receptor is probably related to phosphorylation of ERK1/2.
2. Up-regulation of both types melatonin receptors was observed along with stimulation of P450 aromatase protein expression. This points out at the significance of melatonin in processes regulating ovarian granulosa-lutein cells.
3. Specific dose-dependent expression of both MT₁ and MT₂ receptors by melatonin treatment was demonstrated in human PHA-activated PBMC.
4. Of particular practical value are the tracked effects of various antitumor agents on model cell lines — dimethylsphingosine and miltefosine induced apoptosis in adenocarcinoma; the effect of resveratrol on the lipid compositions and sphingolipid metabolism; quercetin effect on plasma membrane phospholipid and fatty acid composition.
5. It was demonstrated that high glucose concentrations are able to attenuate TGFβ signal transduction pathway in in vitro model system, based on experimentally wounded three-dimensional fibroblast cell culture.

6. A significant increase in the antioxidant enzymes superoxide dismutase and catalase has been demonstrated in the transition of fibroblasts from a proliferative to a quiescent state — an observation with potential to use these enzymes as biomarker.

Personal observations

I have witnessed the beginning of the candidate's professional career. Being a jury member, I have had the opportunity to gain deeper insight in his previous works which lay outside of the scope of the current contest. I believe that dr. Georgiev's tenure as a university lecturer would be a very valuable contribution to the specific research carried out in the Department of Cell Biology and Developmental Biology.

Critical notes and recommendations

- The candidate is listed as the first author of 6 out the 17 papers submitted as part of his application, but *he does not have single author publications*. I have no reason to doubt the personal and equal contribution of the candidate to all his multiple author publications. However, coming up with one author "program" works (such as hypotheses and theories) would give him the possibility for demonstrating a leadership role in a specific scientific topic.
- The included bibliographies are formatted correctly, but they follow *different standards*. The adoption of an automated system removes such tedious technical problems and it is a necessary tool for every scientist.
- All publications are of an experimental nature and in specialised journals with high Impact factor. However, one crucial skill which these do not demonstrate is *the ability to popularise the author's findings* using accessible language for specialists in neighbouring fields. Scientific reviews are a mean for expression which must not be overlooked.
- Four of the publications include the listing of "*Nikolaev, G*" as one of the authors. Based on indirect data (the problem being addressed, the address, and co-authors) I can deduce that we are talking about the same person i.e. the candidate. Multiple family names are accepted amongst artists,

political leaders and religious figures, but when used in contests they need to be officially documented (for example, by using a "declaration for identity of names").

- In the submitted documentation there are *no reference given as proof for "expert activity"*. I am taking it on good faith that dr. Georgiev has reviewed master's theses and scientific publications.

The above suggestions for improvements should not be interpreted as a barrier to offering the position to the candidate.

Conclusion

Dr. Georgiev is a reputable scientist and educator, with proven competency in the area of cell biology. He has published papers in peer-reviewed journals cited by others. He exhibits notable organisational methodology to scientific work. The scientific papers submitted as part of his application are satisfactory in number and quality, and they have received publicity. As a member of the jury, I confidently express my *positive opinion* to offer chief assistant professor Georgi Nikolaev Georgiev, PhD the position of "associate professor" in "Cell Biology".

Reviewer: