

STATEMENT

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on a competition for a professor in the field of higher education "7. *Health care and sport*", in the professional direction "7.3. *Pharmacy*" and scientific specialty "*Pharmacognosy*" for the needs of the Department of "Pharmacognosy and Pharmaceutical Chemistry" of the Faculty of Pharmacy at the Medical University - Plovdiv, announced in the State Gazette № 15/21.02.2025

by prof. Alexander Borisov Zlatkov, PhD, DSc

Member of the Scientific Jury (Protocol of the FC No. 4/23.04.2025) and Order No. P-2155/28.04.2025

The review of the materials submitted in the competition is based on the requirements of the Act on the Development of Academic Staff in the Republic of Bulgaria, the Regulations for its implementation, as well as the Regulations on the Development of Academic Staff at the Medical University - Plovdiv.

General description of the submitted materials for the competition.

The review was prepared on the basis of the Decision of the Meeting of the Scientific Jury and Minutes No. 1/29.04.2025. There are no established procedural violations.

Documents for participation in the announced competition for the academic position of "professor" in the scientific specialty "Pharmacognosy and phytochemistry" in the Department of "Pharmacognosy and Pharmaceutical Chemistry" at the Faculty of Pharmacy at MU - Plovdiv have been submitted by the sole candidate, Assoc. Prof. Niko Yosif Benbassat, Ph.D., associate professor in the same department. According to the Declaration of Originality and Authenticity submitted by the applicant dated 14.04.2025. the documentation has been prepared according to the requirements of the current legal framework and no plagiarism in scientific works has been proven according to the law.

- In connection with my participation as a member of the scientific jury, I declare that:

- I have no conflict of interest;
- I have not found any violations in the course of the competition so far and I have no comments on the materials provided to me for review.

Career profile of the candidate - biographical and professional data

Assoc. Prof. Niko Benbassat was born in 1963 in Sofia. In 1988 he obtained the "Master" degree in Pharmacy at the Faculty of Pharmacy of the Medical University - Sofia (diploma No. 007694/20.01.1988). During the period 1989 - 1992 he was a full-time doctoral student in the Department of "Pharmacognosy and Pharmaceutical Botany" of the Faculty of Pharmacy at the Medical University - Sofia, where in 1995 he defended his dissertation on the topic "Phytochemical study of taxones of the genus *Astragalus L.*" distributed in our country and acquired the ESD "Doctor" (Candidate of Pharmaceutical Sciences, diploma No. 23472/27.02.1995 issued by the Higher Attestation Commission) in the scientific specialty Pharmacognosy (code 03.02.02). In the period 1993 – 1995 he worked in the same department as a specialist and successively held the positions of Senior Assistant (1995 – 1997) and Chief Assistant (1997 – 2013). In 2013 N. Benbassat was elected Associate Professor at the Faculty of Pharmacy at MU – Sofia in the scientific specialty "Pharmacognosy and Phytochemistry" (diploma MUS-AD-D-2013-017 of MU-Sofia), which he holds up to now. In parallel, Benbassat acquired a specialty in "Medicinal Plants and Herbalism" (diploma No. 006847, reg. No. 007694/01.01.2000 of MU-Sofia) and "Analysis of Medicinal Products" (certificate AS No. 012218/ reg. No. 013844/07.07.2008 of MU-Sofia). In 2019, he was appointed to the academic position of "associate professor" at the Faculty of Pharmacy of the Medical University - Plovdiv. Assoc. Prof. N. Benbassat is a member of the Bulgarian National Federation of Pharmaceutical Sciences (member of the management board), BAPhT, BBS, BSA and Bulgarian Pharmaceutical Union.

Assoc. Prof. N. Benbassat is fluent in English. During the years Assoc. Prof. Benbassat has held various positions in the pharmaceutical industry.

Academic and teaching activity of the candidate

From the presented documents it is clear that Assoc. Prof. N Benbassat has serious pedagogical experience. He is engaged in a considerable amount of teaching and learning work.

From the beginning of his teaching career to the present, Assoc. Prof. Benbassat has been actively involved in the education of students in the course "Pharmacognosy".

For the entire period of his teaching activity, Assoc. Prof. Benbassat has a full teaching workload. In the last 2 academic years, it was 2436.9 hours, of which 1508.9 hours were classroom work, with an annual norm of 360 hours, required by the rules of the MU-Plovdiv, which is evident from the presented report on the academic workload.

Under the supervision of Assoc. Prof. Benbassat, 2 dissertations for the acquisition of the ESD "doctor" have been successfully defended and he is currently the supervisor of 1 doctoral student as well as two postgraduate students under the Postgraduate Studies. Assoc. Prof. Niko Benbassat has participated in the development of the curricula of the discipline he teaches and is the co-author of 1 manual for practical exercises and 3 study aids in the same discipline.

Research activity of the candidate

In relation to his scientific research work, Assoc. prof. N Benbassat fully covers the scientometric criteria established in the Regulations for the terms and conditions for acquiring scientific degrees and holding academic positions at the MU-Plovdiv.

To participate in the competition for position of professor, Benbassat presents a list of works, distributed as follows:

Refereed and indexed in Scopus and/or Web of Science – 27 full-text publications, as well as 4 publications published in non-refereed journals with scientific review and 2 published chapters of collective monographs, referred and indexed in Scopus or a total of 33 scientific publications, which I consider to be relevant to the topic of the competition and subject to review. The total IF of the submitted publications is 60.1.

The majority of the presented publications are in journals with IF – 23 articles, with the Hirsch index of the candidate being 11 according to the submitted reference. The publications of Assoc. Prof. Benbassat have been cited 128 times in scientific publications, referenced and indexed in world-renowned databases of scientific information. The scientific results have been separately presented at 6 international and 5 national scientific forums. Associate Professor Benbassat participated in 6 intra-university projects of the MU-Plovdiv, 3 of which were supervised by him.

In compliance with the requirements of the Law on the Development of the Academic Staff in the Republic of Bulgaria, Assoc. Prof. Benbassat also

participated in the competition with a monographic work on the topic "Essential Oils - Sources, Preparation, Analysis and Application", Sofia, 2025, Phaeton Publishing House (ISBN 978-619-270-152-9) with two reviewers.

A general description of the candidate's scientific activity

The scientific research activity of Assoc. Prof. Benbassat is mainly focused on research in the field of medicinal plants, their phytochemical composition and their application in medical practice in the treatment of a number of diseases. Serious attention is paid to essential oils, which is reflected in his monographic work.

The long-term scientific research of Assoc. Prof. N. Benbassat has found successful implementation in pharmaceutical practice – 32 plant-based nutritional supplements have been successfully developed and implemented in regular production, which in my opinion is an impressive result.

The main contributions reflected in his scientific publications are of a decidedly scientific and scientifically applied nature and, in my opinion, represent a significant contribution to pharmaceutical science and practice:

I. Scientific contributions:

1. A significant part of Assoc. Prof. N. Benbassat's research is related to the evaluation of the benefits of plant-based diets in weight reduction. The largest systematic analysis in the world has been conducted to assess the potential of plant-based diets to accelerate body mass reduction. The data presented emphasize that plant-based diets can play a significant role in future strategies to combat obesity, as well as in the control of some chronic diseases.

2. As a second aspect of the scientific contributions distinguishing Assoc. Prof. Benbassat's research, one can point out the determination of the chemical composition of the essential oils of populations of the genus *Tanacetum*, distributed in Bulgaria. A high content of monoterpenes was found, exhibiting pronounced antioxidant activity in the absence of toxicity, which makes them suitable for potential medical application.

II. Scientific-applied contributions:

1. A comprehensive histochemical study was conducted describing the localization of secretory structures in the roots and rhizome of *Rhaponticum carthamoides* (Willd.), cultivated in Bulgaria. For the first time, essential oil was

extracted and characterized from the roots and rhizome of *R. carthamoides*, cultivated in Bulgaria. The data from the study could be used in the quality control of *R. carthamoides* and serve to prevent the adulteration of the plant raw material in question with impurities. The histochemical study of a little-studied plant species *Echinophora tenuifolia* L. subsp. *Sibthorpiana* resulted in a comprehensive study of its chemical composition. Sixteen volatile components were identified in the oil, representing about 90% of the total amount of essential oil. Methyleugenol was determined as the main component. Studies were also conducted on the plant *Crithmum maritimum* L., growing in Bulgaria, and the localization of the secretory structures was established and the chemical composition of the essential oil was studied. As a result, 18 compounds were identified with the dominant components dillapiole and γ -terpinene. Also, for the first time, the chemical profile of the essential oil isolated from *T. macrophyllum* (Waldst. & Kit.) Schultz Bip. was determined, in which 39 components were identified.

2. Another direction in Assoc. Prof. Benbassat's research is the comparative analysis of the chemical composition of plant sources of different origins. A large-scale comparative analysis of essential oils isolated from the seeds of *Trigonella foenum-graecum* L. cultivated in Bulgaria and India was carried out. In the course of the study, 36 compounds were identified, with over 33% being the share of sesquiterpenes (over 33%). It was found that the content of the most important component - cubenol, for which antimycotic and antibacterial action has been proven in the Bulgarian samples, is comparable to that in the samples from India. One of the latest developments of Assoc. Prof. Benbassat, related to the study of the antibacterial effect of essential oils, is the demonstration of a synergistic antibacterial effect between nanoencapsulated oregano oil and gentamicin included in a hydrogel.

3. In recent years, research on the antioxidant effect of Biologically Active Substances of plant origin has occupied an increasingly large share in the developments of Assoc. Prof. Benbassat. Pilot comparative studies have been conducted on the effect of black cumin oil, curcumin and hydroxytyrosol on mice, and a protective effect on the colon, antioxidant effect and reduction of lipid peroxidation have been established. Similar studies related to the potential antioxidant study of *Sambucus nigra* L. and *Sambucus ebulus* L. show that the contained phenolic compounds are carriers of their biological activity.

The contributions of Assoc. Prof. Benbassat's research are scientific and applied, with both groups being equally represented.

Assoc. Prof. Benbassat's participation in obtaining the results is essential. Obviously, the quality of the scientific developments with the candidate's participation is at a very high level, as is the ability to work in a team. The presented facts define Assoc. Prof. N. Benbassat as a qualified scientist.

Assessment of monography.

In the competition for the position of ad. d. "professor" Assoc. Prof. N. Benbassat participated with a monography entitled "Essential oils - sources, preparation, analysis and application", Plovdiv, 2025, Phaeton Publishing House (ISBN 978-619-270-152-9) with two reviewers. The monography provides extremely complete, well-structured and illustrated information about essential oils. In recent years, the same as carriers of high therapeutic potential, which could find application in the treatment of a number of diseases in the future, are also perceived as key elements in the development of alternatives to synthetic preservatives and pesticides. In light of the above, the monographic work of Assoc. Prof. Benbassat can be considered fundamental in the field of extraction, standardization and application, incl. with therapeutic purposes, of essential oils isolated from plant species common in Bulgaria. It may be useful to both established scientists and doctoral candidates, students and specialists working with the cited substances.

Citation of the candidate's publications in national and foreign literature (publication image).

According to Scopus data, Assoc. Prof. Niko Benbassat's H-index is 11 (excluding the auto-citations of all co-authors). A total of 12 publications by Assoc. Prof. Benbassat have been cited 128 times in scientific publications, referenced and indexed in world-renowned databases of scientific information after taking up the position of Associate Professor.

Decision

The values of the scientometric indicators of Assoc. Prof. Niko Benbassat in the main groups of indicators compared with the requirements of MU-Plovdiv, set out in Table I.2. Appendix 1 of the Regulations for Academic Development at

MU-Plovdiv for occupying the academic position of "professor" in the professional field 7.3. Pharmacy, are presented in the table:

| A group of indicators | Minimal points according to national requirements | Requirements of MU-Plovdiv | доц. Niko Yosif Benbassat |
|------------------------------|--|-----------------------------------|----------------------------------|
| A | 50 | 50 | 50 |
| C | 100 | 100 | 100 |
| D | 200 | 300 | 322.74 |
| E | 100 | 500 | 1920 |
| F | 100 | 150 | 401.66 |
| G | - | 560 | 1014 |
| Total points | 550 | 1660 | 3808.4 |

As can be seen, Assoc. Prof. N. Benbassat fully meets the minimum national requirements and the specific rules of MU-Plovdiv for holding the academic position of "professor".

Based on what was said in my review about the assets in the educational, teaching and scientific research work of the candidate in the competition for the academic position of "professor" in the scientific specialty "Pharmacognosy and phytochemistry", I assume that Assoc. Prof. Niko Yosif Benbassat, Ph.D. is a proven teacher and scientist, possessing the necessary qualities to occupy this academic position. His qualifications, teaching experience and achieved scientific results allow me to give a positive assessment and confidently propose to the esteemed Scientific Jury to support my proposal for awarding the academic position of "professor" to Assoc. Prof. Niko Yosif Benbassat, Ph.D. in the field of higher education: 7. Health and Sports, professional field: 7.3. Pharmacy and scientific specialty: Pharmacognosy and phytochemistry.

Sofia

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Заличено на основание
Чл.5 §1, 6."В" Регламент (ЕС)2016/679

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