

Up to
the Chair of a scientific jury,
appointed under Order No. P-2155/28.04.2025
of the Deputy Rector of the R&D
of Medical University-Plovdiv,
Prof. Dr. Maria Tokmakova, MD, Ph.D.

Attached I enclosing: REVIEW

by a contest for holding an academic position PROFESSOR;
in the scientific specialty "Pharmacognosy and Phytochemistry";
announced for the needs of MU-Plovdiv, department of "Pharmacognosiy and Pharmaceutical
Chemistry"
announced in SG, Nr.15/21.02.2025

Reviewer: Prof. Nikolay Georgiev Lambov, MD
Scientific specialty: "Medication Technology and Biopharmaceuticals".

Adc
Pos Заличено на основание ити", bl.324, incoming ref. A
e-m Чл.5 §1, б."В" Регламент (ЕС)2016/679
Pho

R E V I E W

by prof. Nikolay Georgiev Lambov, Ph.D.

Subject: Competition for the academic position "PROFESOR" in the scientific specialty "Pharmacognosy and Photochemistry" in the field of higher education 7. Health and Sports, in the field of professional field 7.3. "Pharmaty", for the needs of department of "Pharmacognosy and Pharmaceutical Chemistry" at the Faculty of Pharmacy at Medical University- Plovdiv, announced in the State Gazette, issue 15 of 21.02.2025.

In the announced competition for the academic title "PROFESOR" only one candidate participates – Associate Professor Niko Iossif Benbassat, Ph.D., from the Department of "Pharmacognosy and Pharmaceutical Chemistry" of the Faculty of Pharmacy of MU-Plovdiv, for the needs to which the competition was opened.

By Order No. P-2155/ 28.04.2025 of Deputy The Rector of MU-Plovdiv I am included in the scientific jury, which at its first meeting decided to prepare a review.

The set of electronically submitted materials **is in full compliance** with the legal requirements and the requirements of Art. 120 of the Academic Development Regulation in MU-Plovdiv (2021) for the appointment to an academic position "professor", the submitted evidence being not repeated with the submitted and assessed in the acquisition of the education qualification degree "Ph.D." and the occupation of the academic position "associate professor" (declaration of originality and credibility of the presented scientific output).

All administrative deadlines for the competition have been met.

I declare that I do not have joint publications, a conflict of interest, and I am not a related person within the meaning of the LDACRB to the candidate.

Candidate Career Profile

Assoc. Prof. N. Benbassat, Ph.D. graduated from higher pharmaceutical education in 1988 at the Faculty of Pharmacy of MU-Sofia and acquired a **master's degree in Pharmacy** (diploma No. 007694/ 20.01.1988).

Initially, he worked for one year as a technology-exposure of pharmaceutical forms in the chemical-pharmaceutical plant in the city of Dupnitsa, and in the period 1989-1992 he was a regular graduate student (Ph.D.) in the "Department Pharmacognosy" of the Faculty of Pharmacy at MU-Sofia.

Since 1993, he has been a successive assistant, senior and chief assistant in the "Department of Pharmacognosi" at the Faculty of Pharmacy at MU-Sofia. In 2013, he acquired the scientific title "**Assoc. Profesor**" under the scientific specialty "Pharmacognosy and Phytochemistry" (MUS-AD-D-2013-017 diploma of MU-Sofia), which he currently holds.

Since 2019, he has also been an Associate Professor at the Department of Pharmacognosy and Pharmaceutical Chemistry of the Faculty of Pharmacy of MU-Plovdiv.

In 1995, Assoc. Prof. N. Benbassat defended a dissertation on the topic “*Phytochemical study of distribution taxa in Bulgaria of the genus “Astragalus L.”*” and obtained the **Ph.D. degree** in the scientific speciality “Pharmacognosy and Phytchemistry”(diploma No. 23472/27.02.1995 issued by the Higher Attestations Commission).

Increasing your qualification, Assoc. N. Benbassat has acquired specialties in the “Drug Analysis” (Certificate AS No. 012218/reg. No. 013844/ 07.07.2008 of the Medical University of Sofia) and “Healing Plants and Herbal Affairs” (diploma No. 006847, reg. No. 007694/01.01.2000 at MU-Sofia).

Assoc. Prof. N. Benbassat is a member of the BSPS (member of the Board of Directors), BFT, BDS, ABC and BFU.

Teaching Activity

Assoc. Prof. N. Benbassat gives lectures, conducts practical exercises and seminars and participates in the semester and state exams of the training discipline "Pharmacognosy". He has also participated in the development of curricula in the teaching discipline.

The teaching load of Assoc. Prof. N. Benbassat over the last 2 academic years has been impressive – **2,436.9 hours** (of which 1,508.9 hours were in the classroom), with an annual MU-Plovdiv annual norm of 360 hours. He is the co-author of 1 guide to practical exercises and 3 teaching aids in the training discipline he teaches.

Assoc. Prof. N. Benbassat is the scientific co-supervisor of **3** defended Ph.D. students, of which **2** obtained the EQD “Ph.D.” and the supervisor of **2** specialist in the post-graduates in the system of MU-Plovdiv.

Summarizing the educational and teaching activities of Assoc. Prof. Niko Benbassat can categorically define him as a built, erudite and continuously developing teacher who fully meets the requirements of LDACRB¹, RILDACRB² and the Academic Development Regulation at MU-Plovdiv for the occupation of the academic position "Professor":

- ***He has 37 years of teaching experience, of which 12 are an “associate professor”;***
- ***He gives lectures, conducts practical exercises and seminars, and participates in the conducting of semester and state exams;***
- ***He has 2,436.9 hours of teaching in the last 2 academic years;***
- ***He was the scientific co-supervisor of 2 successfully defended PhD students, under requirement 2;***
- ***co-author of 1 manual and 2 teaching aids, under required for 1.***

¹ Law on the development of academic composition in the Republic of Bulgaria

² Regulation for the implementation of the Law on the development of academic composition in the Republic of Bulgaria

Research activity

Assoc. Prof. N. Benbassat co-authored **33 original papers in scientific journals** that were not included in the dissertation work and used in the acquisition of the academic position, **with 27** of them in scientific journals referred to and indexed in world-renowned scientific databases (Scopus and/or Web Science only), with **23** in “factor impact” journals on Clarivate Analysis. The very high “impact-factor” of some of the scientific journals – *Pharmaceutics* – 5.4, *Plants* – 4.0, *Molecules* – 4.2 – makes an impression, which is undeniable evidence of the high value of published scientific research.

The total “impact-factor” of the candidate is very high - **60.1** and the **h-index - 11**.

The remaining **4** publications are in unreferenced journals, with scientific review and **2** published chapters from collective monographs, referred and indexed in Scopus.

For the period 2022-2025 Assoc. Prof. N. Benbassat there is **128 citations** of 12 of the scientific journals referred to and indexed only in Scopus and/or Web Science, which strongly proves that his developments are well known and appreciated by the global scientific community.

Assoc. Prof. N. Benbassat has participated in **11 scientific forums - 5** national and **6** international, of which 2 abroad (Basel and Paris).

The applicant has been involved in **6** intra-university scientific projects of MU-Plovdiv, of **3** of which he was the leading researcher.

Assoc. Prof. N. Benbassat is the author of 1 monographs “*Essential Oils – Sources, Receiving, Analysis and Application*”, 2025, publishing house of “Phaethon” (ISBN 978-619-270-152-9) with two reviewers.

The research work of Assoc. Prof. N. Benbassat has also found real practical realization in medical practice – developed and implemented in regular production are an impressive **32** plant-based dietary supplements. In my opinion, this is an extraordinary achievement.

The research activity of Assoc. Prof. N. Benbassat is mainly in the field of research of medicinal plants, their phytochemical composition and application in medical practice. His main contributions reflected in scientific publications are definitely scientific and scientifically applied and, in my opinion, are a significant contribution to pharmaceutical science and practice:

1. Original scientific contributions

➤ the world’s largest systematic analysis of plant-based diets to date has been performed to evaluate the potential for reducing body weight, obesity control and certain chronic socially significant diseases;

➤ The chemical profile of the essential oils of populations of the genus *Tanacetum* in Bulgaria has been clarified. A high monoterpene content characterized by pronounced antioxidant properties and a lack of toxicity has been found, making them suitable for potential medical use.

2. Scientific-nature contrabutions

➤ A highly effective thin-layer chromatography (HPTLC) method for the quantitative determination of galactose and mannose has been developed and validated, which is characterized by high sensitivity, good linearity, accuracy and reproducibility. The method was applied for analysis of their content in hydrolyzed galactomaan (galactose : mannose 1 : 1) isolated from fenugreek, for which antidiabetic, hepatoprotective, anti-carcinogenic and antioxidant activity greater than vitamin C has been found;

➤ For the first time, histochemical studies have been conducted to determine the exact location of essential oils in:

✓ *Rhaponticum carthamoides* (Willd.), cultured in Bulgaria and the exact composition of the essential oil has been established;

✓ *Crithmum maritimum* L. growing in Bulgaria – the essential oil is secreted in the leaves and stem and 18 compounds with dominant components dillapiole (over 34%) and γ -terpinene (over 20%);

✓ *Echinophora tenuifolia* subsp. *Sibthorpiana* and its chemical profile was first investigated;

➤ A comparative analysis of the essential oils isolated from the seeds of *Trigonella foenum-graecum* L., cultured in Bulgaria and India, was performed. 36 compounds were identified, with the highest proportion being sex viterpenes (over 33%). It was found that the content of the most important component of cubenol, for which antimycotic and antibacterial activity has been shown in the Bulgarian samples is 29.88%, and in those from India - 38.17%;

➤ For the first time, comparative studies of black cumin, curcumin and hydroxytyrozole oil were conducted in experiments on mice found to be protective of the colon, antioxidant effect, and reduction of lipid peroxidation;

➤ An antioxidant study was conducted for the first time in *Sambucus nigra* L. and *Sambucus ebulus* L., which found that the phenolic compound contained was a carrier of their biological activity;

➤ The chemical profile of the essential oil isolated from *T. macrophyllum* (Waldst. & Kit.) Schultz Bip., which identified 39 components;

➤ A synergistic antibacterial effect has been shown between oregano oil nano-encapsulated and gentamicin included in a hydrogel.

Summarizing the results of the research work as well as the scientific indicators of Assoc. Prof. Niko Benbassat can draw the firm conclusion that they demonstrate his significant achievements in the field of " Pharmacognosiy and Phytochemistry" and fully satisfy the requirements of the Academic Development Regulation of MU-Plovdiv for the occupation of the academic position "Professor":

- *33 scientific publications of which 23 in journals with “impact-factor” – required 20 and 8, respectively;*
- *128 citations in foreign scientific journals (Scopus and Web of Science) – at requirement 30;*
- *6 scientific research projects;*
- *total impact factor 60.1 and h-index - 11.*

Personal impressions

I know Assoc. N. Benbassat from his student years and I observe his continuous upward development as a teacher and scientist. He has a very good impression on his intelligent behavior, very good knowledge, strong scientific interest, work capacity, ability to lead and make independent decisions. As a special dignity, I consider the extremely large number of plant-based dietary supplements developed and implemented in the production, which is undeniable evidence that its studies have real application in medical practice, something extremely rare in phytochemical studies.

It is well-deserved and respected by colleagues and students. Therefore, I believe that his election as a professor will contribute to increasing the level of training and research at the Faculty of Pharmacy of MU-Plovdiv.

Summary

The scientist’s indicators Assoc. Prof. N. Benbassat **significantly exceeds the minimum requirements** for the scientific and teaching activity of the candidates laid down in the Academic Development Regulation of MU-Plovdiv for the occupation of the academic position “Professor” in the professional field 7.3. “Pharmacy” - where a requirement for a minimum number of points **1660 is required**, the candidate has collected **3808.4 points**.

Indicators Group	Indicators value as adopted by the MU-Plovdiv	Assoc. Prof. Niko Benbassat points
A	50	50.0
In	100	100.0
D (5-9)	300	322.74
E (10)	500	1920.0
F (13-22)	150	401.66
G	560	1014.0
Total number of points	1660	3808.4

CONCLUSION

As a result of all of the above, it can be concluded that Associate Professor Niko Iossif Benbassat, Ph.D. fully complies with the set of criteria and indicators under Art. 2b, para. 2 and 3, respectively the requirements under Art. 2b, para 5 of LDASRB, the Rules for its implementation as well as the specific rules adopted of MU-Plovdiv, as defined in the

Academic Development Regulation of MU-Plovdiv for the occupation of the academic position “PROFESOR” in the professional field 7.3. “Pharmacy”:

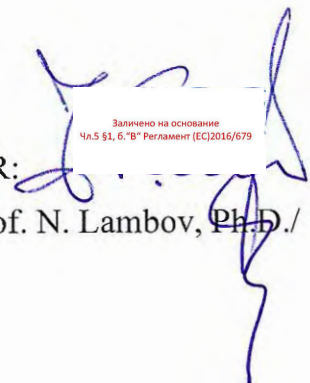
- Has acquired an SED “Ph.D.” in the scientific field of the announced competition;
- Has there is a monographic work presented;
- Has sufficiently significant and original research papers, publications and other scientific developments;
- Complies with the minimum national requirements and the specific rules of MU-Plovdiv;
- the evidence presented does not repeat the “Ph.D.” provided for the occupation of the academic position “associate professor”;
- there is no proven plagiarism in the presented scientific papers.

Having in mind the lecture’s qualitates and skills, the long-standing experience in the training of students, as well as the high value of scientific achievements, I firmly believe that Assoc. Prof. Niko Iossif Benbassat, Ph.D., fully meets the requirements for the acquisition of the academic possition “PROFESSOR” under the scientific specialty “Pharmacognosy and Phytochemistry” for the needs of the Department of “Pharmacognosy and Pharmaceutical Chemistry” of the Faculty of Pharmacy at Medical University of Plovdiv and I express my full support for his candidacy.

Sofia,
dated 18.05.2025

REVIEWER:

/Prof. N. Lambov, Ph.D./



Заличено на основание
Чл.5 §1, 6-8 Регламент (ЕС)2016/679