



## Faculty of Agriculture, Trakia University

### OPINION

**By:** prof. Vasil Kostadinov Atanasov, DSc;  
Faculty of Agriculture at Trakia University, Stara Zagora;  
Registered at the National Centre for Information and Documentation with scientific rank „Doctor of agricultural sciences“, professional area 6.3. Animal Husbandry and “Professor” in Professional area 4.3. Biological sciences

**Regarding:** Competition for the academic position of "Associate Professor" in the scientific specialty "Microbiology", professional area 4.3. Biological sciences

#### **1. Information about the competition**

The competition was announced for the needs of the Department of Biochemistry, Microbiology and Physics at the Faculty of Agriculture at the Thracian University - St. Zagora in PG - № 61/10.07.2020

**Reason for submitting this opinion:** member of the scientific jury of the competition, according to Order №2266/01.10.2020. of the Rector of Trakia University, Stara Zagora.

#### **2. Brief information about the candidates in the competition.**

One candidate participates in the competition - Chief. Assistant Dr. Toncho Gospodinov Dinev from the Section of Microbiology at the Department of Biochemistry, Microbiology and Physics, FA at TrU, St. Zagora.

*Brief biographical data:* Ch. Assistant Professor Dr. Toncho Dinev was born on July 23, 1977 in the town of St. Zagora. He completed his secondary education in 1996 at the Technical School of Veterinary Medicine in Stara Zagora. He graduated in Veterinary Medicine in 2002 at the Stara Zagora University. From 18.02.2004 to 18.02.2007 he was a full-time doctoral student in pharmacology at the Faculty of veterinary medicine at TrU. He defended a dissertation on "Comparative studies on side effects, antimicrobial activity and pharmacokinetics of aminoglycosides and aminocyclitols in goats and microorganisms isolated from goats" (Commission № 11,

Protocol № 6 of 15.06.2007) After winning a competition in 2010. was appointed assistant professor of pharmacology in the Faculty of veterinary medicine, and in 2014 for assistant in microbiology at the Department of Biochemistry, Microbiology and Physics, at the AF at TrU, St. Zagora. In 2016 was elected to chief assistant.

### **3. Fulfillment of the requirements for holding the academic position "Associate Professor".**

Ch. Assistant Professor Dr. Toncho Dinev has exceeded the requirements for group of indicators D, E and E in Appendix 8.1. for the Minimum national and additional requirements to the scientific and teaching activity of the candidates for the academic position "Associate Professor". In addition, it has a solid asset by other criteria, namely:

**Research work:** Ch. Assistant Professor Dr. Toncho Dinev was the head of 1 research projects, and in other 7 pcs. (one of which is international) is a member of the author's team. The candidate has participated in a total of 10 international scientific forums.

**Publication activity:** On the topic of the announced competition Ch. Assistant Professor Dr. Toncho Dinev has indicated for participation a total of 34 titles, of which: 2 pcs. abstract and dissertation, 3 pcs. scientific publications related to the dissertation, 17 pcs. fully published scientific papers, in English. From them:

- In journals with impact factor (IF) - 8 issues: (Papers -11 6-11, 17 and 22);
- In journals with impact rank (SJR) - 8 issues: (Papers № 12, 13, 15, 16 and 18-21);

Besides them are presented:

- Ten participations with reports and posters in national and international scientific forums (Papers № 25 to 34);
- Monography on the scientific specialty of the competition (№ 23);
- Guide to Microbiology (№ 24)

The **total IF** of the submitted publications (excluding the IF values of the publications related to the dissertation for the award of ONS "Doctor") is: **9.45**

The **total number of points** /according to the reference submitted by the candidate/ based on the values of quartile (Q) of the editions in which the works were published is: 237.00.

The **citation index** (h-index, according to SCOPUS) of the candidate in the competition for the academic position "Associate Professor" is: **6.00**

Except that Ch. Assistant Professor Dr. Toncho Dinev covers the minimum national requirements of NATIONAL CENTRE FOR INFORMATION AND DOCUMENTATION in the competition, in my opinion this is a solid certificate, proving the wide popularity and importance of the achieved scientific results and their contributions.

#### **4. Evaluation of the teaching activity**

According to Reference №1, the necessary classroom employment is provided - lecture courses with a schedule of 84 teaching hours. Ch. Assistant Professor Dr. Toncho Dinev has so far given lectures and exercises in the disciplines of Microbiology - in the specialties of Agronomy, Zooengineering and Fish Farming and Aquaculture, Microbiology and microbiological methods of treatment - in the specialty of Ecology and Environmental Protection, Biological control of water specialty Fish Farming and Aquaculture, as well as Microbiology of meat and meat products - master's program in Zooengineering. He is a co-author of 1 piece Microbiology Exercise Guide and 4 New Curricula. He was the mastermind of 9 successfully defended graduates. Last but not least, I put the personal and teaching qualities of the candidate, whom I have known from the very beginning of his scientific career. Ch. Assistant Professor Dr. Toncho Dinev is an extremely responsive and ethical colleague, an established pedagogue with a strong academic behavior, a workaholic at heart and a researcher by vocation. Wanted and respected expert not only by colleagues - researchers, but also by practitioners.

#### **5. Brief description of the presented scientific papers**

According to the stated research interest and way of exposure, the scientific production of Ch. Assistant Professor Dr. Toncho Dinev covers research in the following areas and directions:

- Study of the pharmacokinetics and side effects of some modern antimicrobial agents (antibiotics, fluoroquinolones, etc.) in the body of different species of animals;
- Antimicrobial activity of probiotic bacteria, plant species, plant extracts, foods and environmental factors;
- Veterinary medical research in the field of microbiology, clinic and pathomorphology of experimental and spontaneous infections;
- Ecological-aquatic microbiological studies concerning the biological purification of waters with the help of microalgae in the modern closed aquaculture recirculation systems;
- Ecological-microbiological studies concerning the microflora of the gastrointestinal tract in fish and birds, as well as the nature, importance and

application of probiotics, prebiotics and synbiotics as functional foods in some mammals;

6. Synthesized assessment of the main scientific and scientific-applied contributions

As a result of these studies, the concentration and behavior of a number of antimicrobial compounds in birds and mammals have been studied and determined for the first time. Microbiological and HPLC methods were used. HPLC analysis of antibiotics has been found to be significantly more accurate and sensitive than the microbiological method for their determination. For the first time, in a comparative aspect, the changes in the values of ESR (erythrocyte sedimentation rate) after treatment of goats with therapeutic doses of amikacin (10 mg / kg), tobramycin (5 mg /kg), apramycin were studied and determined. mg/kg), gentamicin (4 mg/kg), kanamycin (10 mg/kg) and spectinomycin (20 mg/kg). It has been found that apramycin alone does not affect statistically significant **ESR /erythrocyte sedimentation rate/**.

For the first time in Bulgaria, the scientific information published in the last 10 years about the antimicrobial activity of *Lactobacillus plantarum* and *Lactobacillus acidophilus* has been collected, summarized and analyzed. The latter is one of the main probiotic species in the intestinal ecosystem of humans, which is widely used in the production of functional dairy products.

For the first time, the inhibitory activity of seaweed extracts *Ulva rigida*, *Cladophora vagabunda* and *Ceramium rubrum*, distributed in the Black Sea, against 10 species of microorganisms was studied and determined.

For the first time, the fungicidal activity of extracts from different parts (roots, flowers, leaves and stems) of three species of plants of *Amaranthus* spp.

For the first time, the influence of the water lentil *Lemna minuta*, as the only plant in the aquaponic recirculation system, on various microorganisms in the water - coli-forms, *Escherichia coli*, *Enterobacteriaceae*, *Salmonella* spp and its microbial count (total number of microorganisms) was determined. It was found that this plant has a strong antimicrobial activity and the ability to significantly reduce the amount of all the above microorganisms.

For the first time in our country some microbial parameters (total number of microorganisms, *Salmonella* spp., Coliforms, *E. coli*, *E. coli*-titer, total coli-titer) of the waters in Ovcharitsa dam, used for cooling of TPP “Maritsa East 2” have been determined. It was found that the content of coliforms, *Salmonella* spp. and the total number of microorganisms in the waters of the dam is much higher than in the waters

of the Maritsa River, which is explained by the higher temperature of the water of the dam (which activates their growth) and their longer stagnation. It was established that according to the indicators of pollution with coliforms and Salmonella spp., The studied waters do not meet the requirements of the Bulgarian legislation regarding their use for irrigation of agricultural lands.

The indicated scientific and applied contributions are original or with elements of originality.

### **7. Main critical remarks and recommendations**

In the reference submitted by the candidate, the total number of points based on the values of quartile (Q) of the editions in which the works were published is 237.00. After a thorough inspection, I noticed some discrepancies in the quartiles of the magazines listed in the Scimago Journal Rank (SJR). For example, work №№7, 10, 13, 14, 15 are in Q3 and carry 15 points instead of the indicated 10. Correctly calculated, the number of points of Dr. Toncho Dinev is much more.

I recommend the candidate to continue his research in the field of aquatic microbiology, as it is a new and valuable field for Bulgaria

### **8. Conclusion:**

The presented scientific production by Ch. Assistant Professor Dr. Toncho Gospodinov Dinev fully meets the requirements for associate professor referred to in Appendix 8.1. of AF at TrU and the minimum national requirements of NATIONAL CENTRE FOR INFORMATION AND DOCUMENTATION in accordance with Art. 2b, para. 2 of the Law for development of the academic staff in the Republic of Bulgaria. In my opinion, the research activity of the candidate makes a number of significant contributions in the field of pharmacokinetics and side effects of some modern antimicrobial agents in the body of different species of animals. The antimicrobial activity of probiotic bacteria, plant species, plant extracts, foods and environmental factors has also been studied. Apart from being a good scientist, he is also an established teacher with valuable pedagogical experience.

I recommend to the respected members of the Scientific Jury and of the FS at the AF at TrU to award Ch. Assistant Professor Dr. Toncho Gospodinov Dinev Academic position "ASSOCIATE PROFESSOR" in the scientific specialty "Microbiology", professional field 4.3 "Biological Sciences".

28.10.2020.  
Stara Zagora

Signature: .....  
/Prof. DSc Vasil Atanasov/