



REVIEW

worked out by Assoc. Prof. Krasimira Ilieva Malinova, PhD, from the University of Forestry - Sofia, in the field of higher education 6. *Agricultural Sciences and Veterinary Medicine*, professional area 6.3 *Animal Breeding*, scientific specialty *Special Branches (Sericulture)*, assigned a member of the scientific panel with Order No. RD-16-650/01.06.2023 of the Rector of the Agricultural University – Plovdiv

regarding a competition for occupying the academic position of *Associate Professor* in the field of higher education 6. *Agricultural Sciences and Veterinary Medicine*, professional area 6.3 *Animal Breeding*, scientific specialty *Sericulture*, announced in the State Gazette, issue 30/04.04.2023 with a candidate - chief assistant professor Krasimira Lyubenova Avramova, PhD, from the Department of Animal Breeding Sciences at the Agricultural University - Plovdiv

1. General data on the candidate`s career and professional progress

Chief Asst. Prof. Krasimira Avramova, PhD, was born on October 29th, 1983. She graduated from the Agricultural University of Plovdiv (AU Plovdiv) in 2006 obtaining a Bachelor`s degree in General Agronomy. In 2007 she obtained a Master`s degree in Sustainable Land Management. In the period 2008-2011 the candidate was a full-time doctoral student at the Department of Animal Breeding Sciences of AU Plovdiv and in 2011 she successfully defended her doctoral dissertation in the scientific specialty of Sericulture.

In 2005 Asst. Prof. Kr. Avramova obtained the qualification *Professional Pedagogy* in the University`s Center of Additional Training.

Since 2011 the candidate has been working as a lecturer at the Department of Animal Breeding Sciences of AU Plovdiv. From 2011 to 2013 she occupied the academic position of assistant professor, and since 2013 up to the present she has been occupying the position of chief assistant professor.

Chies Asst. Prof. Kr. Avramova has a good command of English language and computer skills. She has attended numerous qualifications and courses: professional qualification in Hunting Management in the University of Forestry - Sofia (2014); specialization in Sericulture in Padua, Italy (2009); course in Organic Farming (2012).

Since 2016 up to the present Chief Asst. Prof. Kr. Avramova has been a member of the Central Commission of Quality at AU Plovdiv.

2. General description of the submitted materials

The following materials have been submitted to the Rector of AU Plovdiv in conformity with the Act on Development of the Academic Staff in the Republic of Bulgaria (ADASRB) and the Regulations for its application: personal documents, certificates, a list of research works, an author`s check up for their contributions, a check up for citations and scientific forums. A list containing abstracts of all research papers in Bulgarian and English language has been also submitted.

In the present competition for the academic position of Associate Professor

Krasimira Avramova, PhD, has participated with a total production of 30 research works, as well as a published book based on a dissertation work:

- ❖ Research publications by the nomenclature specialty - 30:
 - Publications related to the doctoral dissertation - 4, which are not subject of reviewing;
 - Publications with impact factor – 3;
 - Publications in reviewed and referenced scientific journals - 13;
 - Publications in conference collections - 10;

The personal participation of Chief Asst. Prof. Avramova in the above mentioned works is evident from the fact that 4 of them are individual, in 6 she is a first author, in 5 - a second author, and in the rest 11 - a third and subsequent author.

26 works are subject of analysis in the present review.

3. Main directions in the candidate`s research work . Demonstrated skills or talents for research management (project management, attracted external funding, etc.

The research work of Chief Asst. Prof. Kr. Avramova, PhD, is related to the application of artificial food in mulberry silk moth breeding, the study of the productive properties of mulberry silk moth new breeds and hybrids at a provocative breeding regime, the influence of heavy metals and some insecticides on silkworm growth. Other studies are related to the identification of new mulberry varieties, as well as the analysis of 1-deoxyojirimycin (DNJ) content in Bulgarian mulberry varieties

Except for the teaching work, Chief Asst. Prof. Avramova has taken part in many other academic and social activities in different projects:

- Project: „Advocating the Role of Silk Art and Cultural Heritage at National and European Scale“ ARACNE, „Call: HORIZON-CL2-2022-HERITAGE-01-02 — Europe’s cultural heritage and arts - promoting our values at home and abroad“
 - Measure 1 Knowledge Transfer and Awareness Actions, sub-measure 1.1 Vocational Training and Skills Acquisition under the Rural Development Program for the period 2014-2020;
 - Building up a Training Center for practical teaching to students in the professional areas of Crop Science and Plant Protection at the Agricultural University - Plovdiv, BG16RFOP001-3.003-0007-C01, financed under the operational program Regions in Growth (2014-2020);
 - Introduction of electronic forms for distance learning at the Agricultural University - Plovdiv, BG051PO001-4.3.04-0032;
 - Joint reference strategies for rural activities of reduced inputs (AGRO_LESS) – contract № B3.11.02, Interreg Greece-Bulgaria
 - Alternation of the biological features of mulberry silk moth (*Bombyx mori* L.) influenced by forages collected in regions with high content of heavy metals in soil, Forestry University - Sofia;

- Student Internship Project, BG 051P001-3.3.07-0002, Partnership Contract Д01-167/18.06.2013, Human Resources Development Operational Programme;
- Building Key Competences and Folk High School Pedagogy in XXI Europe - № 2014-1-PL01-KA200-003642;
- Support for the Development of PhD Students in the Scientific Field of Agricultural Sciences and Related Scientific Specialties, BG051PO001/07/3.3-02/49, under Human Resources Development Operational Programme, with AU Plovdiv as a leading organization (foreign associate - prof. Yordanka Kuzmanova, DSc).

4. Assessment of the candidate`s pedagogical preparation and teaching work. Her role in the training of young scientists

Chief Asst. Prof. Kr. Avramova, PhD, has been working as a lecturer for 11 years and 9 months. She reads lectures and do practical classes to undergraduate students in Plant Protection, General Agronomy, Zoo-engineering and Zoo-engineering with Information Technologies, as well as to postgraduate students specializing Animal Selection and Reproduction and Agri-business. Chief Asst. Prof. Avramova is an author of 10 teaching syllabuses.

The candidate`s teaching workload over the last five years has been estimated to 3182 academic hours. She has supervised 23 graduates, who have successfully defended their diploma theses - 3 in Bachelor`s degree and 20 in Master`s degree. Taking into account the submitted check out, in the last five years the candidate`s teaching and pedagogical workload has been higher than the required norm.

5. Significance of the obtained results, proved by citations, publications in prestigious journals, awards, membership in international and national scientific organizations, etc.

The research works submitted by the candidate correspond to the scientific specialty of the present competition - Sericulture, as they are a subject of analysis.

The research studies conducted by Chief Asst. Prof. Avramova are in the field of Sericulture as they involve issues related to the application of artificial foods to mulberry silk moth breeding, the examination of productive properties of new breeds and hybrids of mulberry silk moth at a provocative breeding regime, the influence of heavy metals and some insecticides on silkworm growth. An analysis has been carried out related to the content of 1-deoxynojirimycin (DNJ) in Bulgarian mulberry varieties.

The candidate`s research results have been cited in 11 publications, 10 of them in impact factor journals and international editions.

According to the point system of the Regulations for Application of ADASRB, the research works, along with the citations, form 511,07 points in total and are grouped as follows: group A - 50 points at minimum requirements of 50; group B - 168,6 points at required 100, group Г - 217,47 points at required 200, group Д - 75 points at minimum required 50. These results correspond to and exceed the minimum requirements of the Regulations for Application of ADASRB at AU Plovdiv. The candidate has personal

participation in all research studies. Three of the publications of Chief Asst. Prof. Avramova are in impact factor/impact ranking journals:

1. T.Staykova, E. Ivanova, D. Grekov, K. Avramova 2012. Genetic variability in silkworm (*Bombyx mori* L.) strains with different origin. *Acta Zoologica Bulgarica*, Volume 64, Issue SUPPL.4, 2 Pages 89-94. ISSN: 03240770 SJR (2012) – 0.231 Q4;

2. Staykova, T., Ivanova, E., Tzenov, P., Vasileva, Y., Pantaleeva, D. A., Grekov, D., & Avramova, K. (2015). Genetic analysis of isoenzyme polymorphism in silkworm (*Bombyx mori* L.)(Lepidoptera: Bombycidae) strains and phylogenetic relationships. *Acta Zoologica Bulgarica*, 67(1), 117-125. ISSN: 03240770 SJR (2012) – 0.235 Q4;

3. Tzenov, P., Avramova, K., & Grekov, D. (2022). Study on the possibilities for creation of new silkworm, *Bombyx mori* L. hybrids with high tolerance towards unfavorable larval rearing conditions by crossing sex-limited for larval markings with hardy silkworm breeds. *Bulgarian Journal of Agricultural Science*, 28, 1. ISSN 1310-0351 – print ; ISSN 2534-983X – online SJR (2021) – 0.248 Q3.

6. Significance of contributions to science and practice. Motivated answer to the question asking to what extent the candidate has a clearly defined profile of the research work

In the period 2008 – 2023 Chief Asst. Prof. Avramova conducted numerous research studies, followed by publishing the obtained results. The research papers submitted for reviewing were written correctly, with a clearly defined purpose. Appropriate research methodology was used. They contained well presented scientific information and well formulated conclusions. The factual material was processed by modern statistical methods, which made it possible the revealing of tendencies related to the experiment's biological nature.

In her scientific production the candidate has formulated scientific and applied, original and methodological contributions, which can be grouped in the following 10 types of contribution:

As a whole, I accept the check up of contributions and note some of them in the present review considered as more significant.

Furthermore, I would like to notice that in my opinion there is one contribution distinguished as original, and one of methodological contribution.

I. SCIENTIFIC AND APPLIED CONTRIBUTIONS

1. It has been established the influence of artificial food on the main biological and technological indicators of some Bulgarian hybrids of mulberry silk moth (*Bombyx mori* L.)(Г14; Г11).
2. It has been studied the dynamics of biological and technological indicators of different breeds and hybrids of mulberry silk moth. There have been defined the breeds and hybrids that are most appropriate for breeding in Bulgaria (Г15;Г16;Г17;Г18;Г23).
3. It has been established the influence of heavy metals on silkworm growth, as well as on cocoon yield (Г22; Г25).

4. It has been established the genetic variety of different mulberry silk moth breeds and appropriate markers for examination and differentiation of new silkworm breeds have been determined (B2; B4).
5. It has been reported the influence of *Aktara* and *Confidor* insecticides on mulberry silk moth (B3).
6. There have been traced back the larva biological parameters after feeding with contaminated mulberry leaves, as there have been reported significant differences in the results between the test and the control groups (B5).
7. The research studies supervised by the candidate resulted with original data about the use of artificial food for silkworm breeding in the summer season; there have been defined the appropriate seasons and ages for artificial food application (B6).
8. Via studies related to the influence of abiotic factors and provocative breeding regime, it has been established the range of adaptability of some new silkworm breeds and hybrids (B7;B8;B9;B10).

II. ORIGINAL CONTRIBUTIONS

9. For the first time in Bulgaria there have been received original data for the content of 1-deoxynojirimycin (DNJ) in mulberry leaf, as it has been established the influence of the variety and the influence of the vegetation stage (B1).

III. METHODOLOGICAL CONTRIBUTIONS

10. It has been proposed the introduction of the following indexes: clark of energy distribution and clark of protein transformation in Sericulture, as well as methods for their estimation (Г12).

7. Critical notes and recommendations

I do not have any notes regarding the candidate`s research production. In the majority of her scientific works she has introduced personal ideas or has been an active participant in their realization. The publications` data has undoubtedly presented the candidate as a serious scientist in the field of Sericulture, who has met the requirements and the procedure for occupying the academic position of Associate Professor.

8. Reviewer`s personal impressions and opinion

I have a personal opinion about Chief. Asst. Prof. Kr. Avramova based on our acquaintance more than 10 years ago - since the time when she was a doctoral student, and later when she became a professor assistant at the Department of Animal Breeding Sciences at AU Plovdiv. During this time I have had the opportunity to work and do research studies with the candidate. Together we have participated in various scientific forums and conferences. She shows great competence and erudition, and lays her opinion and statement always anywhere. In my opinion, the candidate possesses high moral qualities, solidarity and ethicalness. Not in the last place is her skill to work

successfully in a team.

CONCLUSION

Taking into account the analysis of the candidate's pedagogical, scientific and scientific-applied work, I consider that Chief Asst. Prof. Krasimira Avramova, PhD, meets the requirements of ADASRB and the National Regulations for its application, as well as the Regulations for its application of AU Plovdiv . The submitted materials and documents regarding the present competition exceed the minimum scientific-metric indicators for occupying the academic position of *Associate Professor* in the professional area 6.3 *Animal Breeding*, scientific specialty *Sericulture*.

All this gives me grounds to evaluate **POSITIVELY** the candidate's overall work. I allow myself to propose the honorable scientific panel to vote also positively, and the Faculty Council of the Faculty of Agronomy at AU Plovdiv to elect **Chief Asst. Prof. Krasimira Avramova, PhD**, for *Associate Professor* in the scientific specialty *Sericulture*.

Date: 21.07.2023 year

Sofia

REVIEWER:..........
(Assos. Prof. K. Malinova, PhD)