



## OPINION

on the materials for participation in a competition for the academic position “Professor”, area of higher education 6. Agricultural sciences and veterinary medicine, professional field 6.5. Forestry, scientific specialty “Forest plantations, breeding and seed production”, in the discipline “Forest genetics and breeding”, announced by the University of Forestry in State Gazette № 37/7.5.2019 г., code of the procedure FOR – P – 0419 – 07.

### **Candidates for participation in the competition are:**

1. Petar Zhelev Stoyanov

**Author of the opinion: Dr. Tatiana Vassileva Stankova, associate professor in professional field 6.5. Forestry from Forest Research Institute of Bulgarian Academy of Sciences**

### **1. Synopsis of the biographic data of the candidate**

Dr. Petar Zhelev Stoyanov graduated from the University of Forestry in professional speciality Forestry in 1985 and started his work in the same year at "Trakia" State Hunting Range in Plovdiv, where he held the position of a forestry officer until 1987. From 1987 to 1990 he was a PhD student at the University of Forestry, where he elaborated a PhD thesis entitled “Ecological-biological and selective-genetic studies of the Scots pine populations in the Rhodopes” and in 1992 he acquired the educational and scientific degree “doctor” (at that time called “candidate of the agricultural sciences”). From 1992 until now he was working at the University of Forestry (UF) and was holding consecutively the academic positions “assistant professor”, “senior assistant professor”, “chief assistant professor” and “associate professor”. He has been a chair of the “Dendrology” department for 4 years and for more than 8 years he holds the position “Deputy rector of UF”. He has a command, with different levels of proficiency, of 3 foreign languages and is a member of 2 national and 2 international professional organizations.

### **2. Compliance of the submitted documents and materials of the applicant with those required under the Regulations for development of the academic staff (RDAS) in the UF**

Application and all requested documents to it (legalized copies of diplomas and certificates, references, lists and summaries), according to article 65a(4) of RDAS in the UF, are available. The currently submitted materials do not duplicate those used to obtain educational and scientific degree “doctor” in 1992 and those submitted in the competition for the academic position “associate professor” in 1999. Summaries of the scientific publications for the competition are provided in Bulgarian and English languages. The reference for verification of the compliance with the national threshold requirements according to article 2a paragraphs (1-4) of RDAS in the UF shows that the candidate fulfils and even exceeds the thresholds by groups of criteria. Evidences are provided according to the lists by groups of criteria. For B group of criteria, the candidate has chosen to present as a habilitation work 10 articles, published in journals, which are referenced and indexed in the world data bases Web of Science and Scopus. According to the legal requirements, they are accompanied with a habilitation extended reference, which integrates them under the heading "Population-genetic diversity of coniferous species in Bulgaria", includes an introduction

and a bibliography clearly distinguishing the articles with which the candidate participates in the particular group of criteria, and describes accurately and specifically his original scientific contributions in the study of the variability of 6 coniferous species. In addition to the lists and the evidence on the six mandatory groups of criteria, the applicant has also provided information on his participation in expert bodies, editorial boards, procedures for awarding scientific degrees and academic positions, scientific forums, etc.

### **3. Assessment of the applicant's teaching and educational activities**

During the last 20 years, Assoc. Prof. Petar Zhelev has supervised more than 100 Master and Bachelor students who developed and successfully defended their graduation theses in the fields of dendrology, genetics, seed production and introduction of a significant number of tree species for different regions of the country and beyond (Cyprus, Greece). The impressive number of graduates shows both his ability to attract students' interest in the subjects he teaches and his ability to be a useful adviser in their first attempts to carry out research. Assoc. Prof. Petar Zhelev has been a scientific supervisor of four PhD students, and two more are currently under his supervision. Two of his former PhD students continued to pursue research and teaching at the University of Forestry and the Forest Research Institute of B.A.S.

A clear prove of the candidate's successful work as a scientific supervisor is the bright international realization of his student Dr. Gancho Slavov, currently a researcher at Statistical Genomics, Rothamsted Research (RRes), Harpenden, UK. The applicant's ability to train prospective young researchers at a high scientific level is also confirmed by the joint scientific publications with his students, on the results of their theses, in prestigious scientific journals with an impact factor such as *iForest* and *Canadian Journal of Forest Research*.

Assoc. Prof. Petar Zhelev is often sought as an evaluator in procedures for awarding scientific degrees and academic positions, and for the last 20 years, he has participated in a total of 29 such procedures.

### **4. Assessment of applicant's scientific, applied and publishing activities**

#### **4.1. Participation in scientific, applied and educational projects**

For the last 20 years, Assoc. Prof. Petar Zhelev has been a project leader from the Bulgarian side of 4 and participated in 3 international projects. He has led an institutional project under the Human Resources Development Program and has participated in an Infrastructure Project for the creation of a University Laboratory for Biotechnology and Molecular Genetic Research. He has been a leader or participant in 30 national scientific and applied projects. I consider appropriate to mention here also the candidate's past or current participation in the National Council on Biological Diversity, in the COST Programme domain "Forests, Their Products and Services (FPS)", in the group of experts on the "Climate Change and biodiversity" topic to the Berne Convention, in the Interdepartmental Coordination Working Group to the Convention on Biological Diversity, subdivision Climate Change and Biodiversity, and in the National Commission for Forest Tree Breeding and Seed Production.

The facts presented show that Assoc. Prof. Petar Zhelev has the qualities to manage successfully teams of experts for the implementation of projects. In addition, he is sought as an expert and can be a part of interdisciplinary scientific groups.

#### **4.2. Characteristic of the published scientific results**

To participate in the competition, the candidate has submitted 86 scientific publications. Of these, over 1/3 (33 titles) are publications in journals referenced and indexed in the global Web of Science and Scopus databases, and 39 publications are articles in reviewed journals or conference proceedings. Assoc. Prof. Petar Zhelev is among the authors of 4 books and 10 chapters of books. Along with the scientific articles, there are also 26 applied scientific and popular articles, reviews and other publications, as well as 1 teaching manual. All presented scientific papers are collective, proving the skills of the candidate for teamwork, and his leading participation in 11 of the scientific publications testifies to his ability to initiate research ideas and to manage successfully their realization. It is noteworthy that his studies of a fundamental nature, especially on the variability of the forest tree species, are found not only in such authoritative international journals in the field of genetics as *Heredity*, *Journal of heredity*, *Forest Genetics*, *Conservation genetics*, but also in prestigious journals in the fields of biology and forest science such as *Canadian Journal of Forest Research*, *iForest*, *European Journal of Forest Research*, *Annals of Botany*, *Plant Biosystems*. No less impressive is the participation of the scientist as a co-author of chapters from the Bulgarian Red Book on habitats with oaks, books and book chapters on the conservation of genetic resources, adaptation and sustainable forest management in the conditions of climate change.

I consider it appropriate to mention here the participation of Assoc. Prof. Petar Zhelev in numerous, mostly international, scientific forums (over 50 for the last 20 years), incl. as a keynote speaker. The candidate is a member of the editorial boards of 2 impact factor journals and 2 journals with SJR, has made reviews for such renowned scientific journals as *Forest Ecology and Management*, *Biochemical Systematics and Ecology*, *Biology*, *Acta Zoologica Bulgarica*, *Forest Genetics* and others.

The above-mentioned facts present Assoc. Prof. Petar Zhelev as an established and internationally recognized scientist, among the leaders in his scientific field.

#### **4.3. Impact of the applicant's scientific activity in the literature (quotation records)**

With the submitted in the Self-Assessment Report for compliance with the national threshold requirements for the academic position "Professor", 105 citations in scientific publications, referenced and indexed in the world databases Web of Science and Scopus, Assoc. Prof. Petar Zhelev exceeds more than 15 times the threshold for group D of criteria. However, the quotations included in the report are only a small part of the total number of citations to the applicant's work, which after 1999 are more than 600, 270 of which are in impact factor journals. The high citation rate of the scientific works of Assoc. Prof. P. Zhelev is confirmed also by his Index of Hirsch (h index), which, according to Scopus, counts to 9. Many of his articles have more than 20 and some even more than 60 quotations in publications, referenced and indexed in Scopus and Web of Science.

These data confirm the relevance and importance of the applicant's research as well as his peers' interest in the problems and results presented in his papers. The impressive number of citations show that the scientific production of Assoc. Prof. Petar Zhelev is well known to the scientific community here and abroad.

#### **4.4. Contributions in the candidate's research works (scientific, scientific-applied, applied)**

The candidate's work contains both adding new information or confirming existing facts and observations

contributions to the fundamental scientific knowledge in the field of genetics as well as scientifically-applied contributions, part of which are methodological.

Among the scientific contributions of Assoc. Prof. Petar Zhelev, leading position occupy those based on his studies on the variability of a number of forest tree species, both using genetic markers and morphological and morphometric features. I would point out here the pioneer application of isozymes genetic markers in *Pinus peuce*; the established high level of inbreeding in *Pinus mugo*; the determined higher degree of genetic differentiation of the European populations of *Pinus nigra* as compared to those of *Pinus sylvestris*; the finding that *Abies borisii-regis* is a product of a relatively recent introgressive hybridization; the distinguished relatively high degree of differentiation in *Sorbus torminalis* in Eastern Europe; the significantly higher genetic diversity found in the common hornbeam on the Balkans as compared to other parts of Europe; the established intermediate inheritance of a number of morphometric features in hybrids between Scots pine and Mountain pine; the observed lack of geographic differentiation among the *Juniperus oxycedrus* populations on the Balkan Peninsula; the comparatively low genetic variability found in *Rupicapra rupicapra balcanica* etc. Another important group of contributions related to the forest tree breeding is based on results assessing the heritability of height, diameter and volume growth in native and foreign progenies of Scots pine, in Eastern Plane and in Silver fir. Another group of scientific contributions of the applicant, of botanical and dendrological nature, includes dendrological characteristics of different territories in Bulgaria, the overview of the woody flora of Bulgaria, the new information on the natural habitats, the significance and the phytochemical composition of a number of medicinal plants, etc.

Scientific-applied are the contributions of Assoc. Prof. Zhelev, related to the conservation of the genepool of the forest tree species as well as those in the field of ecology. It is worth noting the participation of the applicant in the methodological studies related to: the monitoring of the status and the conservation in the context of climate change of the forest genetic resources; the identification of the habitats of high conservation value; the forest management within the NATURA 2000 nature conservation network; the system of measures to mitigate the impact of climate change on the forests in Bulgaria. Important studies of scientific-applied nature are those related to the conservation of the genetic resources of the Eastern Plane, the Black Poplar and the Silver Fir in Bulgaria, the development of technical guidelines for the conservation of the genetic resources of Turkey and Hungarian oaks, the research on various plant communities and rare plant localities, related to their protection and the conservation of biodiversity.

##### **5. Assessment of the applicant's personal contribution**

The contributions of Assoc. Prof. Petar Zhelev are results of his own research and analyses. In collective works, the applicant has developed issues related to his competencies and I consider his participation in the collective publications equal to that of the other authors. I also believe that his contribution to the led by him scientific projects is guiding and decisive.

##### **6. Critical remarks and recommendations**

The results of the work of Assoc. Prof. Petar Zhelev could find more tangible application not only in ecology and conservation of genetic resources and biodiversity, but also in forest management, primarily for establishment of forest plantations with selected genetic material. The image and position

of the candidate in the scientific and professional community would also help to change forestry policy in this direction.

### **7. Personal impressions**

I know Assoc. Prof. Petar Zhelev as an erudite, dedicated to his work, established scientist with high international prestige. I particularly respect his professional and human responsiveness, commitment to the problems of the others, willingness to cooperate and help in difficult moments, honesty and loyalty.

### **8. Conclusion**

The analysis of the whole professional activity of Assoc. Prof. Petar Zhelev shows that he not only fulfils, but also substantially exceeds the requirements for the academic position "Professor", laid down in the Academic Staff Development Law and the relevant regulations. **I propose the candidate Assoc. Prof. Dr. Petar Stoyanov Zhelev to take the academic position "Professor" in the discipline "Forest Genetics and Breeding" of the professional field 6.5. Forestry.**

Author of the opinion:

/Assoc.

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