

STATEMENT

by **Teodora Petrova Popova, PhD** – associated professor,
Plovdiv University “Paisii Hilendarski”, Faculty of Biology,
Department of “Developmental Biology”

About a dissertation for awarding the educational and scientific degree “doctor” (PhD) by:

Field of higher education: 4. Natural sciences, mathematics, and informatics
professional direction, 4.3. Biological Sciences,
doctoral program “Genetics”

Author: *Stanislav Ivanov Ivanov*

Title: *“Human phenotypic diversity in a complex of descriptive and behavioral characteristics”*

Scientific supervisor: *Prof. Ph.D. Evgeniya Neshova Ivanova – Department of “Developmental Biology”, Faculty of Biology, Plovdiv University “Paisii Hilendarski”*

1. General presentation of the procedure and the PhD candidate

By Order No. RD-22-215 from 28.01.2025 by the Rector of the University of Plovdiv "Paisii Hilendarski" I was appointed a member of the scientific jury for providing a procedure for the protection of dissertation, entitled "Human phenotypic diversity in a complex of descriptive and behavioral characteristics" for the acquisition of the educational and scientific degree "Doctor" (PhD) in the field of higher education 4. Natural sciences, mathematics and informatics, professional field 4.3 Biological Sciences, doctoral program “Genetics.” The author of the dissertation work is Stanislav Ivanov Ivanov - a PhD student in regular form of training with a scientific supervisor Prof. Ph.D. Evgeniya Neshova Ivanova (Plovdiv University “Paisii Hilendarski”).

The set of materials on the procedure, provided by Stanislav Ivanov Ivanov, is in accordance with Art. 36 (1) of the Rules for Development of the Academic Staff of the University of Plovdiv, and includes the following documents:

- A request to the Rector of Plovdiv University for the opening of the procedure for the defending of dissertation work;
- Autobiography (CV) in European format;
- Minutes from the departmental council related to reporting the readiness to open the procedure and preliminary discussion of the dissertation work;

- Dissertation work;
- Abstract;
- A list of scientific publications on the topic of the dissertation work (and additional publications);
- Copy of the scientific publications;
- Declaration of originality and authenticity of the attached documents;
- Certificate of compliance with the minimum national requirements.

There are applied also: Opinion from the scientific supervisor Prof. Evgeniya Ivanova, PhD, regarding the dissertation project and decisions of the territorial expert medical committees in lieu of the fee due.

Copies of 4 (four) published articles are attached to the materials on the procedure.

Stanislav Ivanov completed his higher education at Plovdiv University "P. Hilendarski" (2018 - Bachelor's degree in Psychology, 2020 - a Master's degree in Human Resources Management). The PhD student has ten years of work experience in various fields, such as: trade, social work, supporting people with disabilities, human resources, psychological counseling, conducting seminars, coaching, motivational lectures.

2. Relevance of the topic

Psychogenetics is interested in the traits that characterize a person's personality and behavior throughout ontogenesis. Efforts are directed at studying the genetic basis of individual psycho-emotional and personality traits, as well as the mechanisms of interaction between the genotype and environmental factors. Personality traits reflect the characteristic patterns of people's thoughts, feelings, and behavior.

The presented dissertation investigates the phenotypic diversity in the Bulgarian population, focusing on selected descriptive and behavioral characteristics, considered in a complex. On a national and international scale, such studies are rare due to the complexity of the studied matter. The lack of significant scientific data on the frequency of occurrence of descriptive and psychological signs, and the dependencies between them among the adult population in Bulgaria, determines the relevance and originality of the present dissertation.

3. Knowing the problem

The doctoral student has made a thorough literature review on the scientific topic of the dissertation. The number of literary sources cited in the bibliography is impressive - 456, of which 116 have been published in the last 10 years. The doctoral student adequately interprets the results of the conducted study, as well as the results of research by other teams working in the relevant scientific

field. Stanislav Ivanov shows excellent knowledge of the state of the problem, the ability to analyze and apply the accumulated knowledge in the implementation of the specific scientific work.

4. Research methodology

The applied methodological approaches allow for solving and adequately answering the tasks set in the dissertation, which ensures the achievement of its goal.

The study presented by Stanislav Ivanov is fundamental – descriptive and analytical. It is aimed at characterizing and analyzing the phenotypic diversity in humans in a complex of descriptive and behavioral characteristics, also at clarifying the potential causal relationships between the studied signs (descriptive morphological, immunological, basic personality, genetic predispositions, creative potential), as well as determining possible statistically significant dependencies. The study included 945 individuals and this defines it as representative of the general population. From them, data were collected and processed regarding selected descriptive morphological signs, the five basic personality characteristics, some diseases with genetic predisposition, such as myopia, astigmatism, migraine, high blood pressure, allergies, as well as the manifestation of musical or other talent. Due to the comparison and analysis of the collected data by groups, the presented study has a pronounced comparative nature.

5. Characterization and assessment of the dissertation work and contributions

The dissertation is 202 pages long and follows a standard structure: Introduction (2 pages), Literature review (44 pages), Aim and objectives (1 page), Materials and methods (13 pages, of which 8 pages contain the descriptive, immunological, and multifactorial signs selected for analysis), Results and discussion (86 pages), Conclusions and Inferences (2 pages), Contributions (2 pages) and References (44 pages). Also included are a List of publications related to the dissertation and a List of additional publications (1 page), as well as Participation in scientific forums (1 page). 456 literary sources are cited, of which 5 in Cyrillic and 451 in Latin. The dissertation is excellently illustrated with precisely designed 38 figures and 37 tables.

The design of the dissertation complies with the requirements of the Rules for Development of the Academic Staff of the University of Plovdiv. The literature review on the topic of the dissertation is comprehensive. The aim of the study is clearly formulated and the tasks set are fully adequate and sufficient for its achievement. The researches and analyses, as well as the obtained results, are thoroughly described. The work ends with conclusions and inferences, the last of which (the seventh) indicates five trends and dependencies in the complex phenotypic profile of the studied population. The contributions of the research are clearly defined and include: 5 original scientific contributions, 2 confirmatory contributions, 2 methodological and 1 of an applied character.

During the review, I did not identify any plagiarism, which confirms the originality of the results and contributions.

6. Assessment of the publications and the personal contribution of the PhD student

The PhD student has presented 4 scientific publications on the topic of the dissertation, two of which are in scientific journals with Q4, one - in journal indexed in Scopus with Q3 (2020), and one in a collection of articles from the Balkan Conference on Biology. Stanislav Ivanov is the first author in one article. The results obtained have been actively promoted in 6 participations in scientific forums, include one international (outside Bulgaria). With the presented scientific publications, the PhD student over the minimum national requirements of points under indicator D (30 points), and fulfill 39 points.

Besides the list of publications related to the dissertation, Stanislav Ivanov is a co-author in 3 other publications – two in Q4 journal and one in Q3 (2020).

7. Abstract

The abstract is made according to the requirements of the relevant regulations and reflects the main results achieved in the dissertation.

8. Recommendations for future use of dissertation contributions and results

Stanislav Ivanov has successfully implemented the goals and objectives of his dissertation. Thanks to this, significant results have been achieved, which will contribute to the development of fundamental science, methodological approaches and those with an applied aspect. I would like to congratulate the doctoral student and his scientific supervisor for the in-depth dissertation work. He demonstrates mastery of several methods in a current scientific field and developed skills as a researcher.

CONCLUSION

The dissertation work contains scientific, scientific-applied results, which are an original contribution to science and meet all the requirements of the Law on the Development of Academic Staff in the Republic of Bulgaria, the Rules for the Implementation of the Law, and the relevant Rules of University of Plovdiv "Paisii Hilendarski". The materials presented and the dissertation results fully comply with the specific requirements of the Faculty of Biology to the University of Plovdiv, adopted in connection with the Rules of the university for the application of the Law.

The dissertation work shows that PhD student Stanislav Ivanov Ivanov has in-depth theoretical knowledge and professional skills in the scientific specialty "Genetics" in the field of psychogenetics and demonstrate qualities and skills for conduction a scientific study.

Due to the foregoing, I convincingly give my positive assessment of the study, presented by the dissertation work, the abstract, results, and contributions, and I offer the distinguished scientific

jury to award Stanislav Ivanov Ivanov, the educational and scientific degree “Doctor” (PhD) in the area of Higher education: 4. Natural sciences, mathematics and informatics, professional field 4.3. Biological Sciences, Doctoral Program "Genetics".

11.02.2025

Signature:

/ Assoc. Prof. T. Popova, PhD/