



Mini Review

NEW ASPECTS OF COOPERATION BETWEEN THE REPUBLIC OF BULGARIA AND THE FEDERAL REPUBLIC OF GERMANY IN THE FIELD OF HIGHER VETERINARY EDUCATION

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ABSTRACT

In 2023 the Faculty of Veterinary Medicine marked its centennial anniversary since its establishment as the first of its kind in Bulgaria. In the year 2024, the World Organization for Animal Health (WOAH) also celebrated globally a centennial anniversary since its formation as the OIE in 1924, when Germany and Bulgaria participated as its co-founders.

With regard to these remarkable events, we decided to make a short retrospective analysis of the century-long fruitful cooperation between Bulgaria and Germany in the field of higher veterinary education and its importance and effectiveness under the new conditions and realities in the world and the concept of "One Health" proclaimed by the World Organisation for Animal Health (WOAH), World Health Organization (WHO), Food and Agriculture Organization of the United Nations (FAO), World Trade Organization (WTO) and the European Union (EU).

Key words: veterinary medicine; higher education; Trakia University; Germany; One Health.

The first steps towards a long and fruitful cooperation were taken in 1923, when the Faculty of Veterinary Medicine (FVM) was established at Sofia University in Bulgaria. The founders of this epoch-making work were Academician Stefan Angelov, Prof. Grozyo Dikov and Prof. Stanko Petrov who had completed their veterinary medical education in Germany. They formed the first faculty council and elected Academician Stefan Angelov as a dean. During his seven mandates, managed the faculty and paved the path for its development. Together with his fellows, he formed the departments, drew up the study plans and programs and initiated the construction of the physical and technical base. A number of erudite professors from German veterinary faculties were invited to the new faculty and appointed on a competitive basis as heads of some of the main departments. Among them were the first lecturers Prof. Heinrich Bittner from Berlin, Head of the Department of Anatomy, Histology and Embryology, Prof. Johannes Nörth – Leipzig, presiding over the

Department of General Therapy, Pharmacology and Toxicology, as well as Prof. Kurt Krause from Berlin and Prof. Rudolf Sümmel from Giessen.

Some of the specialized departments were headed by Bulgarian veterinary professors who had completed their higher education in other European veterinary faculties, and the general departments were led by erudite Bulgarian specialists from the Faculty of Agronomy and Forestry, the Medical Faculty and other specialized departments of Sofia University.

Prof. Stefan Angelov served as a dean of the FVM for seven terms and as a graduate of Humboldt University in Berlin, contributed the most to inviting competent German lecturers to Bulgaria. He also succeeded in building and maintaining a stable bilateral agreement which allowed the comprehensive use of German achievements and experience in the field of education, research, diagnostics, therapy, prevention, veterinary-hygiene activities and food control by Bulgarian specialists and researchers.

The merit of the other deans who ruled the FVM during 1923-1958 also left a significant impact (Table 1).

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Table 1. List of the first deans of the Faculty of Veterinary Medicine in Bulgaria

№	Name	Number of Mandates	Graduated	
			Country	City
1	Prof. Stefan Angelov	7	Germany	Berlin
2	Prof. Grozyo Dikov	5	Germany	Berlin
3	Prof. Stanko Petrov	2	Germany	Stuttgart
4	Prof. Petar Bichev	1	France	Lyon
5	Prof. Mosko Moskov	3	Germany	Berlin
6	Prof. Panayot Popov	1	Austria	Vienna
7	Prof. Ksenophont Ivanov	2	Germany	Berlin
8	Prof. Ignat Emanuilov	3	Bulgaria	Sofia
9	Prof. Boyan Nachev	1	Germany	Berlin
10	Prof. Georgi Pavlov	4	Italy	Turin
11	Prof. Asen Petkov	1	Germany	Berlin

Table 1 shows that the largest number of deans completed their education in Germany, a total of 7, and there were also graduates of French, Austrian, Italian and Bulgarian higher schools. Out of the total 30 mandates, German graduates managed the FVM for 21 mandates. The last dean, who had been a German alumnus and headed the FVM from 1953 to 1958, was Prof. Mosko Moskov. In this situation, it is logical to conclude that the higher veterinary education in Bulgaria developed under the influence of the German educational tradition and experience. The same applies to a large extent to the veterinary science in the system of the Bulgarian Academy of Sciences. Out of 7 academicians in the period 1947-1995, three graduated from veterinary faculties in Germany and held managerial positions in its governing bodies.

Before the establishment of the FVM in 1923, a number of 440 veterinarians had completed their higher education abroad, including 90 in Germany. They marked the beginning of the professional activities in the field of animal health treatment and disease prevention, food control and the first steps in research and diagnostics.

The contribution of the German specialists had been highly appreciated, both by the academic community of the FVM, Sofia University, and by the Bulgarian government. In 1934, Prof. J. Nyor and Prof. K. Krause were awarded the Order of Civil Merit III degree, and in 1939, with regard to the 50th anniversary of Sofia University, both professors were awarded the title of Doctor Honoris Causa of the Faculty of Veterinary Medicine at Sofia University. Although these awards and recognitions were

personal, they could also be seen as a recognition for the influence and contribution of German veterinary education to the development of veterinary science in Bulgaria.

Despite the relatively late foundation of the Faculty of Veterinary Medicine in Bulgaria - 160 years after the establishment of the first veterinary medical schools in Europe, over a short period of time it reached their accomplishments in terms of facilities, personnel potential, technical equipment and became one of the renowned veterinary faculties in Europe and the world. The main prerequisites for this were, on the one hand, the high erudition, dedication and love for the profession of its first founders, the majority of whom were graduates of prestigious European faculties (Germany, France, Italy) and, on the other hand, the successful employment through competitions of prominent scientists and lecturers, mainly from Germany.

Later, the departments were also filled through competitions with young academic staff members, graduates of the FVM, who took over the baton from their professors and contributed to strengthening the prestige of the faculty and continuing the cooperation with the German veterinary faculties in Berlin, Hannover, Leipzig and Giessen.

After 1945, for political reasons, this mutual cooperation was suspended. It was reinstated and improved after 1975. Great merit in this aspect should be given to Prof. Nikola Belev who used his personal and official expertise as a Director General of the Veterinary Affairs State Union (1978-1990), as a member of the executive committee in the OIE, as a chairman of the OIE Regional Commission for Europe

and the sub-regional bureau for Eastern European countries. Prof. Belev gained experience as a district veterinarian in Germany for five years and his one-year specialization at the Faculty of Veterinary Medicine in Hannover (1970-1971) had a great influence on his professional path.

Dr. Hinrich Meyer Gerbaulet, who was a long-time collaborator and consultant of the Ministry of Agriculture and Food in Bulgaria in the pre-accession period to the EU, also made a significant contribution in this regard, strengthening the Bulgarian-German cooperation. He also contributed significantly to the process of the EAEVE accreditation of the FVM at Trakia University, and also acted as a lecturer in the master's program in Veterinary Administration.

After the establishment of Trakia University, a new stage of cooperation was started. During the period 1995-2015, mutual fruitful contacts were established with the Faculty of Veterinary Medicine in Hannover. Several bilateral initiatives of management bodies and specialists from both institutions were undertaken. Professor Todor Stoyanchev completed a specialization on the problems of food safety and control and Professor Galina Simeonova specialized on equine diseases in Hannover.

In 1998, Prof. Ring from Hannover was awarded the honorary title of Doctor Honoris Causa by Trakia University for his contributions in the field of science and education.

In the period 2019-2024, with respect to the World Organization for Animal Health's proclaimed concept of One Health, the management bodies of Trakia University and the veterinary schools in Germany (Hannover, Giessen, Leipzig) took effective actions for its practical realization in the field of education, science and practice.

Through the long-standing bilateral cooperation with the University of Veterinary Medicine Hannover – TiHo, represented by its president Dr. Gerhard Greif, a very intensive exchange has been taking place in recent years, especially in the horse and small animal clinics and other structures in Hannover. Dr. Greif, who is also Doctor Honoris Causa of Trakia University, welcomed in 2020 a delegation from the Faculty of Veterinary Medicine at Trakia University-Stara Zagora. He showed the structural and

functional organization of their Research Centre for Infectious Diseases, and signed an agreement for specialization of academic staff and PhD students. This centre in Hannover served as a good example and allowed the implementation of good German practices in the One Health Institute established in 2023 at Trakia University.

Despite the difficulties that our society faced during the Covid-19 pandemic, the management bodies of the Faculty of Veterinary Medicine and Trakia University did not cease their work, but continued even more diligently to engage in providing opportunities for students, lecturers and scientists to develop in the field of veterinary medicine, animal health and food safety through modern technologies and international virtual meetings, seminars, lectures, etc. The cooperation with German universities was active even under the conditions of uncertainty and health crisis. In 2020 a memorandum was signed between Trakia University and Justus-Liebig University of Giessen with Prof. Martin Kramer as a Dean of the Faculty of Veterinary Medicine. In addition to presenting innovative teaching methods and demonstrating a completely practical orientation of students' training during their last year of study, colleagues from Giessen showed the German model in small animal medicine with modern methods such as invasive cardiology, embryo transfer, imaging, etc. The positive results and the good experience of the school served for the realization of the idea of founding the first University Veterinary Hospital in our country and on the Balkans with clinics and the VetSim Simulation Centre in 2021.

The recognition of the support of the Faculty of Veterinary Medicine at the Justus-Liebig University in Giessen, which is also the founder of the veterinary educational model in our country since the time of Prof. Krause, was expressed by a unanimous decision of the Academic Council of Trakia University to award the honorary title of Doctor Honoris Causa to Prof. Martin Kramer in 2022. For more than 15 years with the assistance of Prof. Kramer (initially as a Head of the Small Animal Surgery and Imaging Clinic, subsequently as a Dean of the Faculty of Veterinary Medicine for several terms, and from 2021 onward as a Vice-President for Research at the Justus-Liebig University) numerous specializations of professors from Trakia University, bilateral

mobilities of academic staff and students under the Erasmus + program, as well as scientific conferences and workshops have been held. The contribution of the German colleagues from Giessen in the field of modern imaging diagnostics and 3D printing was highly appreciated as they gave directions for the improvement of these diagnostic techniques in our country, as well as the realization of the idea of opening a 3D laboratory in the FVM at Trakia University in 2023.

Another great friend of Trakia University, with whose help an intensive exchange of students and lecturers from Giessen took place, is Prof. Axel Wehrend, who in 2023 was awarded the honorary title Doctor Honoris Causa of Trakia University, during the celebrations of the centennial anniversary since the founding of the Faculty of Veterinary Medicine and the beginning of higher veterinary education in Bulgaria.

Prof. Wehrend holds the position of Director of the reproduction clinic at the Veterinary Faculty at Justus Liebig University and, together with Prof. Kramer, was among the initiators and implementers of a joint project between Bulgaria and Germany for the castration of stray dogs. Within the framework of the project, it was possible to conduct student internships for groups of students from Giessen and Stara Zagora in 2023 under the mentorship of professors from the Veterinary Surgery Department and the Vice-dean for clinical activities Prof. Plamen Georgiev. Within the grounds of the University Veterinary Hospital and the municipal shelter for stray animals in Stara Zagora, the students had the opportunity to acquire and improve their knowledge and skills that are part of their Day 1 Competencies and participated in moulding the figure of the modern veterinarian: one who could fully respond to the expectations of the society and the challenges facing the profession.

The relations with the veterinary faculty at the University of Leipzig and specifically with the Clinic for Hoofed Animals under the leadership of its director Prof. Alexander Starke are also intense and extremely fruitful. In the last few years, there has been an active exchange of experience between the two faculties among lecturers and students. Over the period of 2021-2023, the Clinic for Hoofed Animals at Leipzig has accepted over 200 veterinary students and lecturers on short- and long-term internships.

Prof. Starke's contribution was particularly active in the creation and establishment of the University Veterinary Hospital with clinics at Trakia University. He shared good practices and experience in the service, consulting and management of more than 80 farms and over 25 thousand patients who passed through the clinic under his management only for the past year. As an expert and friend of Trakia University, Prof. Alexander Starke participates in many of our events, including the National Round Table "Challenges for the Veterinary Medical Profession and Digitalization" in 2021, the celebrations on the occasion of the 100th anniversary of the FVM-Stara Zagora, promotion of the graduating veterinarians from Trakia University, the XXII Middle European Buiatrics Congress in Stara Zagora in 2023, an international round table on Food Security in Modern Society, etc. Prof. Starke's call to share what he has learned, to pass on experience and to support the development of the profession is his mission, which he fulfills by personal example. Evidence of this is his impulse and support by providing personal scholarships on his part for two graduates of the FVM-Stara Zagora (students in veterinary medicine from the 4th and 5th year) during his participation as a guest lecturer in the IV Educational Congress of the Bulgarian Veterinary Union (BVS) with international participation in 2023, in which nearly 50 students from the Faculty of Veterinary Medicine of Trakia University in Stara Zagora participated for the first time. This was realized thanks to Prof. Iliya Tsachev, Head of the Department of Veterinary Microbiology, Infectious and Parasitic Diseases and Dr. Dimitar Yanovski, Deputy Chairman of the Bulgairan Veterinary Union. The students were given the opportunity to carry out a three-month internship at the Clinic for Hoofed Animals in Leipzig under the mentorship of Prof. Starke.

The cooperation between Bulgaria and Germany in the field of veterinary education continues in other directions and forms, including a number of private veterinary clinics. In Bavaria, in 2021, an agreement was signed to conduct practical training for students from the FVM-Stara Zagora at a clinic with an equine reproductive center (Dr. Feigel) with a staff of 14 veterinary practitioners.

The management of Trakia University concluded contractual relations under the Erasmus + program for lecturers and students with the Lüsche Horse Clinic in the city of

Bakum, which is one of the largest clinics in Germany, with more than 120 staff members. The bilateral arrangements were made possible thanks to the Head of the clinic, Dr. Mark Koene, who is the veterinarian in the German national equestrian team. Other bilateral meetings to agree on joint courses and seminars for better quality and practical training of veterinary specialists were also held at an experimental farm of the Chamber of Agriculture of the Schleswig-Holstein state in Germany. There the latest technologies in animal husbandry are researched and tested together with various feed additives and feeds before they are placed on the market in Germany.

At the invitation of the Rector of Trakia University, in early 2024, the President of the European Board of Veterinary Specializations EBVS, Prof. Heiko Natues, visited Stara Zagora and the FVM and shared his unreserved support to Bulgarian veterinarians for their enrollment as specialists at the EBVS through the means of flexible mechanisms and residency programs.

A direct result of the signed agreements, mobilities, exchange of experience in the last year between Bulgaria and Germany in the field of higher veterinary education is the implemented project between Trakia University - Stara Zagora and several foreign partners hosted by the German University of Applied Sciences at Neu-Ulm and a contract on the Erasmus + educational exchange program. At the beginning of 2024, the organizers from Neu-Ulm welcomed lecturers and students from several countries and universities, including a team from Trakia University - Stara Zagora with representatives from the rector's management, the Faculties of Economics, Medicine and Veterinary Medicine. Our students had the unique opportunity to work conceptually in international teams within the one-week event Startup Camp One Health 2024, funded by Erasmus+ program (BIP) KA131, 2023. The German experience in creating a creative environment for generating and discussing ideas led to the development of new interpersonal communication skills, the

creation of professional interest networks, application of digital and communication skills by young people and forward-thinking with the integration of digital technologies in the health, medicine and animal health sector within the One Health concept.

CONCLUSION

The retrospective analysis of the century-long cooperation between Bulgaria and Germany in the field of higher veterinary education shows that it had developed successfully and fruitfully, with the exception of the period 1945-1960, when for political reasons it was suspended and later re-established.

Analyzing the philosophical essence of the One Health concept, the management bodies of the Trakia University and the collaborating Faculties of Veterinary Medicine in Germany (Hannover, Leipzig, Giessen) undertook new effective actions during the period 2019-2024 for its practical implementation at national, European and global level.

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