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Brucellosis as Priority Public Health Challenge in South Eastern European Countries

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Brucellosis is a global zoonosis that presents severe public health challenge and major economic burden, especially for the countries in the South Eastern Europe and the Mediterranean. The incidence of brucellosis caused by *Brucella melitensis* is very high, primarily in sheep and goats. The World Health Organization (WHO) designated brucellosis as one of 7 neglected, under-detected, and underreported zoonotic diseases and it remains a major cause of morbidity throughout the world, with serious health implications, particularly for the poorest segment of the human population and in medically underserved regions (1,2).

B. melitensis infection in livestock decreases productivity, mostly through increased number of abortions and weak offspring, decreased milk production, and loss of trade opportunities. *B. melitensis* is very contagious for humans and the disease, if not treated promptly and effectively, can become chronic and affect multiple body systems, causing severe complications (3). Economic losses caused by the disease in humans are a consequence of long-term hospital treatment, cost of drugs, and loss of work or income due to illness. Costs related to brucellosis are further increased by costly control and eradication programs: serology tests for animal check-ups, animal vaccine, and compensation to the farmers for slaughter of the infected animals (4,5).

Regional conflicts and wars or reduced vigilance in control programs, together with international travel and trade in agricultural products, have resulted in a resurgence and deterioration of the disease in some developing countries, including the countries formed after the breakup of Yugoslavia (4,6,7).

In 2009, the Government of Macedonia and the German Academic Exchange Service and ReplekPharm-Skopje sponsored the International MetaNET Project Thematic Scientific Conference Brucellosis in South Eastern Europe and Mediterranean Region, which was held in Struga, Republic of Macedonia, from 12-14 November 2009 (www.brucellosis09.iph.mk). The Conference was attended by more than

150 experts from almost 20 countries in Europe and beyond, representatives from Food and Agriculture Organization (FAO), European Commission, and the WHO, as well as 10 top-level experts on brucellosis from all over the world, who were invited as keynote speakers.

The aims of the Conference were the following:

- to review the current strategies and approaches and identify weak points in brucellosis prevention and control;
- to initiate the exchange of knowledge and data from fundamental and applied research, experiences, and views on various epidemiological and public health aspects of brucellosis, veterinary conditions, and activities including vaccines and animal models, immunology, molecular biology and genomics, laboratory and sero-diagnostics, pathogenesis, clinical aspects, and treatment of patients with brucellosis;
- to encourage collaboration and strengthen international ties and professional networks among South Eastern European and Mediterranean countries and beyond; and
- to provide a forum for discussion and recommend tools and procedures relevant to perspective developments in various aspects of brucellosis prevention, control, and eradication at the national and international level.

The Declaration adopted at the conference (see p. 372, [web-extra material](#)) is a positive step toward sharing the essential information and experiences for promoting brucellosis prevention, control, and eradication (8). It endorses the concept of "One world – one health – one medicine" as a new professional and public health imperative and cooperation among veterinary and human health services, professionals, and authorities, stock-breeders, and food production industry (9). It also fosters the organized intersectorial and regional collaboration within and between the countries in South Eastern Europe, with

technical and financial support from the European Commission, FAO, and other international organizations. All countries in the region should be included, regardless of the magnitude of brucellosis incidence (10).

To further contribute to such efforts, FAO, the International Organization for Animal Health, and the WHO intend to develop a standard "peer review" evaluation process of national and regional brucellosis control and eradication programs, which must be properly planned, coordinated, and resourced. Country-specific programs might be submitted to FAO for review and be a subject of modifications at the country level (3,10).

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