# International Symposium on Tick-Borne Pathogens and Disease ITPD 2023

## In honour of Gerold Stanek

Organised by the
Austrian Society for Hygiene, Microbiology and Preventive Medicine (ÖGHMP)
and under the auspices of the
ESCMID Study Group for Lyme Borreliosis (ESGBOR)

22 to 25 October 2023

**Venue**
Parkhotel Schönbrunn, Vienna, Austria

# BOOK OF ABSTRACTS

ÖGHMP
Österreichische Gesellschaft für Hygiene, Mikrobiologie und Präventivmedizin

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MANAGING INFECTIONS PROMOTING SCIENCE

**ÖGHMP**
Austrian Society for Hygiene, Microbiology and Preventive Medicine and

**ESGBOR**
ESCMID Study Group for Lyme Borreliosis

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# Abstracts
# of presentations
# during the poster sessions

## P70 Isolation of Borrelia lusitaniae from the blood of a patient with multiple erythema migrans

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1 Group for Medical Entomology, Centre of Excellence for Food and Vector-Borne Zoonoses, Institute for Medical Research, National Institute of Republic of Serbia, University of Belgrade, Belgrade, Serbia, 2Clinic for Infectious and Tropical Diseases, University Clinical Center of Serbia, Belgrade, Serbia, 3Faculty of Medicine, University of Belgrade, Belgrade, Serbia, 4 Faculty of Medicine, University of Pristina temporarily settled in Kosovska Mitrovica, Serbia

In early June 2022, a 10-year-old child came into the primary ward of The Clinic for Infectious and Tropical Diseases of the University Clinical Centre of Serbia with a clinical presentation of disseminated erythema migrans. The patient and the mother could not recall if there had been a tick bite. A sample of blood was taken, and antibiotic therapy with amoxicillin was started immediately. Human serum sample was checked for the presence of IgM antibody against *Borrelia burgdorferi* sensu lato by commercial ELISA test and the sample was positive for IgM.

Blood was collected into the sterile K2EDTA tube, immediately transported to the Laboratory at the Institute for Medical Research, National Institute of the Republic of Serbia, University of Belgrade, and centrifuged twice at 2200 rpm for 17 min at room temperature. After centrifugation, one part of the serum was served for DNA extraction using ammonium hydroxide, ethanol, and sodium acetate while the sediment was inoculated into a 6 mL tube with Barbour-Stoenner-Kelly-H (BSK-H) medium under aseptic conditions and incubated as 33°C. After 16 days of incubation, viable, motile, and spiral-shaped microorganisms were observed in the initial BSK-H culture under dark-field microscopy, and incubation was prolonged for 29 days. DNA from the culture was extracted using centrifugation, dissolving the sediment in the water, and heating at 95°C for 10 minutes. After extracting DNA from the human serum and the culture, *rrf-rrl* rDNA intergenic spacer and flagellin gene (*flaB*) were amplified by conventional PCR, and sequencing of obtained PCR products was performed commercially (Macrogen, Amsterdam, the Netherlands).

After analysis of the sequences obtained, *Borrelia lusitaniae* was confirmed in human serum and culture. This is the first isolate of *B. lusitaniae* from a human blood sample that confirms that *B. lusitaniae* can disseminate via the hematogenous route.

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