



Federation of European
Microbiological Societies

FEMS Online Conference on Microbiology

28 – 31 October 2020

ELECTRONIC ABSTRACT BOOK

in association with
the Serbian Society
of Microbiology





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Message from the organizers

Dear colleagues and friends,

We would like to cordially greet you at the end of the FEMS 2020 ONLINE Conference on Microbiology, that has been successfully organized at the end of October 2020.

One great idea became reality. It would not have been possible without all of you, for which we are grateful. A pioneering endeavor in many different aspects and in challenging times. First, as a first Conference of the kind in the FEMS history, planned as a middle sized event, oriented in parallel to regional and global audiences, both in terms of content delivery and participation and an event done in partnership with the national/regional association and the dedicated PCO. Second, as a first major Conference event fully organized as an ONLINE format in European microbiology in 2020. Third, as the first major FEMS Conference event organized in complex times, with numerous challenging, even adverse psychological, societal and economic effects for the whole professional community, and, in addition, microbiologists being the one of the few medical professions directly standing in the front line of the COVID-19 response.

We made a brave decision and it paid off. With the new world of ONLINE possibilities, we strive and succeed to organize the most suitable formats to cover the scientific content of the conference, discuss the most challenging topics of the day and to enable scientific exchange and the interaction with the participants in a safest possible manner.

We are happy to say that, despite all different complexities, overall results of the Conference and the whole concept went beyond our bravest expectation. Almost 700 microbiologists from 40 European countries and another 20 worldwide, making the ONLINE Conference global event, eight scientific sessions, including one session with best selected grantees presentations and four Symposiums, organized in two parallel streams, four plenary lectures and COVID-19 Round Table for the whole audience, total of over 70 invited lectures with prerecorded lectures. In addition, over 50 prerecorded presentation prepared by participants-authors in the main program, in 7 corresponding ORAL ONLINE sessions, all together more than 30 hours of prerecorded material. Finally, another 60 video presentations, over 400 e-posters and some 10 Company materials, in total almost 600 presentational items, uploaded on the Conference ONLINE platform and accessible to participants until the 27. October 2021.

As FEMS, we are delighted that we were able to put together a great scientific program and contribute to the Conference success. Moreover, in light of the challenging times we live in and all different complexities it entails, and also to support your enthusiasm and scientific rigour, we decided to support your effort by waiving conference fees for the ONLINE Conference for almost 300 colleagues, authors of scientific papers, submitted until 15. March 2020.

Despite the circumstances, the pharmaceutical and medical industry has been with the Conference, providing valuable support and building solid basis for broader future collaboration.

We sincerely hope that you also enjoyed all different contents and aspects of the Conference and that you would be able to catch up with those recordings and presentations you may have missed or have a detailed look at posters.

We would like to warmly wish you health, love and happiness, Merry Christmas and a Happy New Year and are looking forward to the new encounters, in the next occasion, FEMS 2022 Conference in Belgrade.

Sincerely

Prof. dr Vaso Taleski, Chair, COC

Director of Events & Internationalization, FEMS

Prof. dr Hilary Lappin Scott

FEMS President

Prof. dr Bauke Oudega, Chair, CSC

FEMS Past President

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Prof. dr Dragojlo Obradović, Co-chair, CSC

President, SSM



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MAIN CONFERENCE PROGRAM

WEDNESDAY, 28th October 2020

Schedule for Wednesday, 28th October 2020. Includes sessions on 'The Control of Viral diseases by vaccination', 'Discussion and Q&A', 'Break', and 'FEMS Networking Session'.

THURSDAY, 29th October 2020

Schedule for Thursday, 29th October 2020. Includes sessions on 'PLENARY LECTURE', 'Discussion', 'Break', 'PFIZER', 'FEMS SESSION', and 'ONLINE Oral Session No. 1 & 2'.

FRIDAY, 30th October 2020

Schedule for Friday, 30th October 2020. Includes sessions on 'Plenary', 'Discussion', 'Break', 'PFIZER', 'PROMEDIA', 'FEMS Networking Session', and 'ONLINE Oral Session No. 3 & 4'.

SATURDAY, 31st October 2020

Schedule for Saturday, 31st October 2020. Includes sessions on 'FEMS Networking Session', 'Session 5', 'Session 6', 'Discussion and Q&A', 'ONLINE Oral Session No. 5 & 6', and 'BIOMERIEUX'.

COVID-19 ROUND TABLE Moderator - Linda Kenney, USA

COVID-19 Round Table sessions: 13.30-13.40 Tanja Jovanović, Serbia; 13.40-13.50 Miroslav Radman, Croatia/France; 13.50-14.00 Ivan Dikić, Germany; 14.00-14.10 Peter Hotez, USA; 14.10-14.20 Jean-Claude Piffaretti, Switzerland; 14.20-14.30 Stefan Pöhlmann, Germany; 14.30-14.40 Alexander Suvorov, Russia; 14.40-14.50 Marion Koopmans, The Netherlands.

Discussion and Q&A 18.35-19.30

Discussion and Q&A sessions (18:35-19:30): 18.35-18.43 Kusum Dhakar, Israel; 18.43-18.48 Marija Mojčević, Ireland; 18.48-18.53 Sara Fareed Mohamed Wahdan, Germany; 18.53-18.58 Harold Alejandro Jurado Rivas, Hungary; 18.58-19.06 Daria Peranić, Croatia; 19.06-19.11 Munavvara Dzhuravaeva, Tajikistan; 19.11-19.30 Discussion.

CLOSING CEREMONY AND ADDRESS 20.00 Hilary Lappin-Scott, Vaso Taleski, Lazar Ranin



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CONFERENCE ABSTRACTS

EVALUATION OF IN VITRO ANTIBIOTIC EFFICACY AGAINST LOCAL STRAINS OF BORRELIA BURGENDORFERI SENSU LATO - THE CAUSATIVE AGENTS OF LYME BORRELIOSIS

Gorana Veinović, Sanja Čakić, **Darko Mihaljica**, Ratko Sukara, and Snežana Tomanović

Group for Medical Entomology, Centre of Excellence for Food and Vector Borne Zoonoses, Institute for Medical Research, University of Belgrade, Belgrade, Serbia

Background. Lyme borreliosis is tick-borne disease caused by spirochaetes from the *Borrelia burgdorferi sensu lato* complex. The disease has been recorded in Serbia in 1987, however, there is no data on exact borrelia strains infecting humans.

Objectives. The study aimed to evaluate the efficacy of antibiotics, usually used in clinical practice, against 21 borrelia strains isolated from *Ixodes ricinus* ticks from Serbia: eight *Borrelia afzelii*, eight *Borrelia lusitaniae*, three *Borrelia garinii*, and two *Borrelia valaisiana*.

Methods. The broth microdilution assay was used. MICs were determined by dark-field microscopy, after 72h of incubation at 33°C under anaerobic conditions.

Results. The MIC range for all *Borrelia* isolates was as follows: amoxicillin, 0.125-2 mg/L; ceftriaxone, 0.016-0.063 mg/L; cefuroxime, 0.063-1 mg/L; azithromycin, 0.0017-0.11 mg/L; doxycycline, 0.125-1 mg/L. According to the obtained MIC results, all isolates were susceptible to all antibiotics, but their effectiveness against tested *Borrelia* was in following order: ceftriaxone, cefuroxime, azithromycin, doxycycline, and amoxicillin. The statistically significant less susceptibility to ceftriaxone, cefuroxime, azithromycin, doxycycline, and amoxicillin was found for 0/21, 1/21, 4/21, 5/21 and 9/21 isolates, respectively. The MICs of amoxicillin and azithromycin were significantly lower in *B. lusitaniae* and *B. valaisiana* than in *B. afzelii* and *B. garinii* ($P < 0.05$). The MICs of doxycycline in *B. garinii*, *B. lusitaniae* and *B. valaisiana* isolates were significantly lower than in *B. afzelii* ($P < 0.05$). There were no differences between isolates in susceptibilities to ceftriaxone and cefuroxime ($P > 0.05$). Our results show differences in susceptibility among isolates but indicate that all antibiotics used in the therapy are effective against tested borrelia strains



International Standard Book Number (ISBN)

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**Assigned number**

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ISBN-978-86-914897-6-2
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