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Belgrade

FEMS Conference on Microbiology

in association with
Serbian Society of Microbiology

30 June - 2 July

2022 • Serbia

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ABSTRACT BOOK**

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Message from the organizers

Dear colleagues and friends,

The 1st FEMS Belgrade Conference on Microbiology in collaboration with Serbian Society for Microbiology was held from 30 June to 2 July 2022.

A large number of high-quality scientific contributions was presented at the Conference. We are delighted to have been able to put them together and send you the FEMS Conference Abstract Book. With thanks to your contributions, we can now proudly present an abstract book that both reflects the scientific abundance of the conference and serves as a memento of an event worth remembering. We thank all participants and in particular the presenters of these abstracts for making this happen!

This conference was a pioneering endeavour, one of the largest and most important microbiology events in East Europe in 2022. As in 2020, when we had to pursue the first conference online due to the COVID-19 pandemic, this conference faced challenging times but could luckily be held both onsite and online.

Again, in 2022, we were faced with the great challenges as it was the case back in 2020, and yet again, a brave decision to move ahead has been made and it paid off.

You showed large interest to become part of the Conference and our joint history. Almost 1.000 scientific contributions were submitted, and more than 870 were approved. This showcases not only the large interest to be part of the conference, but also it is the reason this event was such a success.

We are thankful and proud to have welcomed almost 600 microbiologists from 40 European countries and another 20 countries worldwide, almost 200 more participants online. With ten core scientific sessions, including one session with the best grant alumni presentations, three plenary lecture and a COVID-19 round table, six industry lectures and a satellite symposium, the total of invited lectures amounted to 60. In addition, six thematic sessions with over 120 short oral/e-poster presentations of selected participants-authors in the main program Finally, over 400 e-posters/presentations on demand, in total over 600 presentational items, uploaded on the Conference ONLINE platform and accessible to participants until the 31 December 2022.

We thank the pharmaceutical, lab and biomedical industry partners from Serbia, the South East Europe region and worldwide for their recognition of the importance of the event, their participation and their support.

We hope that you enjoyed the content and all the other aspects of the Conference. If you missed anything, you can catch up by watching the recordings, presentations or have a detailed look at the posters.

We warmly wish you health, love and happiness and are looking forward to the new encounters, coming up next: FEMS 2023 Congress in Hamburg, FEMS 2024 Conference in Tallinn and numerous events of the SSM in Serbia and South East Europe region.

Sincerely



Hilary Lappin-Scott

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Prof. Hilary Lappin-Scott
Scientific Committee Chairperson,
FEMS President



Vaso Taleski

.....

Prof. Vaso Taleski
Organizing Committee Chairperson,
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**926 / THE INFLUENCE OF CHROMATE ON THE RESPIRATION
ACTIVITY OF BAKER'S AND BREWER'S YEAST****03****Keywords:** *Saccharomyces cerevisiae*, *Respiration*

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Metals are widespread in nature and organisms are constantly exposed to them through a variety of sources, therefore, there is a need for microorganisms to have the ability to respond to potentially toxic metals in their environment. One of such metals is chromium (Cr), and the toxicity of Cr is dependent on oxidation state and solubility. Chromate (Cr(VI)) is a powerful oxidizing agent, and is more toxic than Cr (III).

The aim of this work was to determine the influence of chromate on the respiration and enzymatic activity of baker's and brewer's yeast, *Saccharomyces cerevisiae*.

The baker's and brewer's yeast were grown overnight in a liquid medium containing 400 μM and 600 μM Cr(VI). The effects of chromate on respiration were analyzed using a Micro-Oxymax respirometer (Columbus Instruments, USA). Additionally, the specific activity of superoxide dismutase (SOD) was measured. All the results obtained were compared to the control samples which were grown in the liquid medium without Cr.

The results suggest that the concentrations of chromate used were not sufficient to affect the respiration activity in both baker's and brewer's yeast; however, some effects are visible on the enzymatic level. The specific activity of SOD in brewer's yeast decreases with the increase of Cr(VI), whereas in baker's yeast the enzyme remains active. In baker's yeast there is also an increase in SOD activity in the presence of 400 μM Cr(VI), while the activity in the presence of 600 μM Cr(VI) is similar to the control sample.