

# **10th International Conference on Reactive Oxygen and Nitrogen Species in Plants**

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## **Abstracts**

A panoramic view of Budapest, Hungary, featuring the Danube River, the Chain Bridge, and the Hungarian Parliament Building. The Parliament Building is a large, ornate Gothic Revival building with a prominent red dome and spires. The Chain Bridge is a suspension bridge with stone towers and metal cables. The Danube River flows through the city, and the Chain Bridge spans across it. In the background, there are hills and a clear blue sky.

**Meeting of the Plant Oxygen Group of the Society for Free Radical Research-Europe**

## **P-98. POLYAMINES MODIFY THE NITROSATIVE STATUS OF SALT-STRESSED PLANTS**

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Although there is accumulating evidence that polyamines are involved in the response of plants to both salinity and nitrosative stress, their role is not yet fully understood. The present study attempts to examine the effects of hydroponic root treatments with putrescine (Put, 1 mM), spermidine (Spd, 1mM) and spermine (Spm, 1mM) on nitrosative homeostasis in leaves of citrus plants (*Citrus aurantium* L.) exposed to 100 mM NaCl for 15 d. Nitric oxide (NO) steady-state levels and DAF-2DA-derived fluorescence were stimulated by NaCl treatment and especially by the application of polyamines in the salt-treated plants. Transcriptional analysis showed that the expression of several genes encoding proteins associated with NO biosynthesis, including *AOX*, *XO*, *GSNO*, *NOS*, *NiR* and *NR*, is regulated by polyamine application. In addition, S-nitrosoglutathione reductase (GSNOR) activity was suppressed in plants treated with Put and Spd. The profile of tyrosine-nitrated proteins was diminished by the application of polyamines. The characterization of nitroproteome by mass fingerprinting revealed several protein targets which are involved mainly in photosynthesis, disease/defense, energy and protein destination/storage. These data strongly support a function of polyamines in modulating the nitrosative status upon salt stress.