

**ABSTRACTS OF
LECTURES AND POSTERS**

THE
World
Mycotoxin
Forum[®]
13TH
CONFERENCE

WMFmeetsItaly

16-18 MAY 2022
PARMA-ITALY

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Key to the abstracts of lectures and posters:

- the abstracts of lectures and posters are grouped separately;
- the lectures are grouped according to the daily programme; and
- the posters are grouped according to theme and then in an alphabetical order according to the presenting/corresponding author.

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WELCOME TO PARMA

The World Mycotoxin Forum® is the leading international meeting series on mycotoxins dedicated to assembling the world's best minds across the spectrum of integrated strategies ensuring the safety and security of the food and feed supply chain. The World Mycotoxin Forum® brings together a holistic conference programme covering the latest issues in mycotoxin management and is targeted at everyone working in the mycotoxin space – researchers, food and feed industry, laboratories, policy makers, and enforcement agencies from around the world.

The 13th conference of the World Mycotoxin Forum® – **WMFmeetsITALY** – will offer an excellent way to network, share ideas, and formulate recommendations and conclusions on how to close knowledge gaps. It will include:

- presentations and discussions in plenary meetings and parallel sessions
- poster sessions
- workshops
- WMF Young Scientists Forum
- company pitches, case studies, and industry updates covering a wide range of topics
- a concurrent instrument/manufacturers exhibition providing information on equipment, products, and services.

The aim of this year's conference is to elaborate further on key strategic issues looking forward, amid the current challenges. High-quality speakers, ample time for discussions, and every opportunity to establish rewarding contacts are values the World Mycotoxin Forum® wants to uphold. You are invited to take part in the discussions with participants from different disciplines and meet business relations in your area.

We wish you an active and fruitful meeting!

General conference chairs
Rudolf Krska
Chris Elliott

Local conference chairs
Chiara Dall'Asta
Michele Suman



ABOUT PARMA

Con il patrocinio



Located in northern Italy in Emilia-Romagna region, Parma is a wonderful destination for those who appreciate art, architecture, and Italian food. The city, located at the gateway to the area producing Parmigiano Reggiano cheese and balsamic vinegar, is probably most famous for Prosciutto di Parma. In addition to these Italian delicacies, there is plenty to do and see in Parma. The city has delightful streets, art museums, and a celebrated cathedral and baptistry.



P92**EFFECT OF WATER ACTIVITY AND TEMPERATURE ON GROWTH AND TRICHOTHECENE PRODUCTION BY *FUSARIUM CEREALES* ISOLATED FROM DURUM WHEAT GRAINS**J. Erazo, S. Palacios, A. Del Canto, S. Plem, M.L. Ramírez and **Adriana M. Torres**Research Institute on Mycology and Mycotoxicology, National Scientific and Technical Research Council – Universidad Nacional de Rio Cuarto, Argentina
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The major pathogen associated to fusarium head blight (FHB) is included in the *Fusarium graminearum* species complex. However, recently there have been reports of *F. cerealis* causing the disease in wheat and barley. This pathogen is able to produce deoxynivalenol (DON) and nivalenol (NIV). Nevertheless, the effect of environmental factors on growth and mycotoxin production by this species have not been studied so far. The aim of this study was to determine the effect of water activity (a_w , 0.99-0.90) and temperature (15, 20, 25 and 30°C) on growth and DON and NIV production by three *F. cerealis* strains (RCFG6046, RCFG6029, RCFG6076) isolated from durum wheat grains. A wheat-based medium was used and adjusted to the different a_w with glycerol. Plates were inoculated centrally and incubated during 28 days (three replicates per treatment). Growth rate (mm/day) was determined and mycotoxin production was analysed after the incubation period by HPLC-UV. All strains were able to growth at all temperatures and all a_w except at 0.90. Maximum growth was observed at 0.99 a_w and 25°C and it decreased as water availability was reduced. Minimum growth was observed at 0.93 a_w and 15°C. Mycotoxin production was strain dependent. Strains RCFG6046 and RCFG6076 produced both DON and NIV, being NIV the most produced, while RCFG6029 just produced DON. Strains RCFG6029 and RCFG6046 just produced DON at the optimum growth condition unlike RCFG6076 that produced only NIV. For some conditions, RCFG6076 was able to produce both toxins simultaneously in contrast to RCFG6046 that cannot produce both toxins at the same time. Maximum NIV production (9,796.5 µg/kg) was observed for RCFG6076 at 0.97 a_w and 30°C and the minimum level (1,075.57 µg/kg) was detected at 0.95 a_w and 15°C for the same strain. No NIV was detected at 0.93 a_w at any temperature. DON production was observed for all conditions tested. The highest DON concentration (2,954.35 µg/kg) was produced at 0.93 a_w and 30°C for strain RCFG6076 while the minimum was detected at 0.99 a_w and 20°C for the same strain. In conclusion, *F. cerealis* was able to produce both toxins in a wide range of a_w and temperatures, however, this production was strain dependent. Maximum levels were produced during stress conditions and NIV was produced in high levels. Considering that NIV is more toxic than DON, this presents a risk for human consumption since these strains were isolated from durum wheat.

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