

Distribution of bis(methylthio)gliotoxin production within the *Aspergillus* genus

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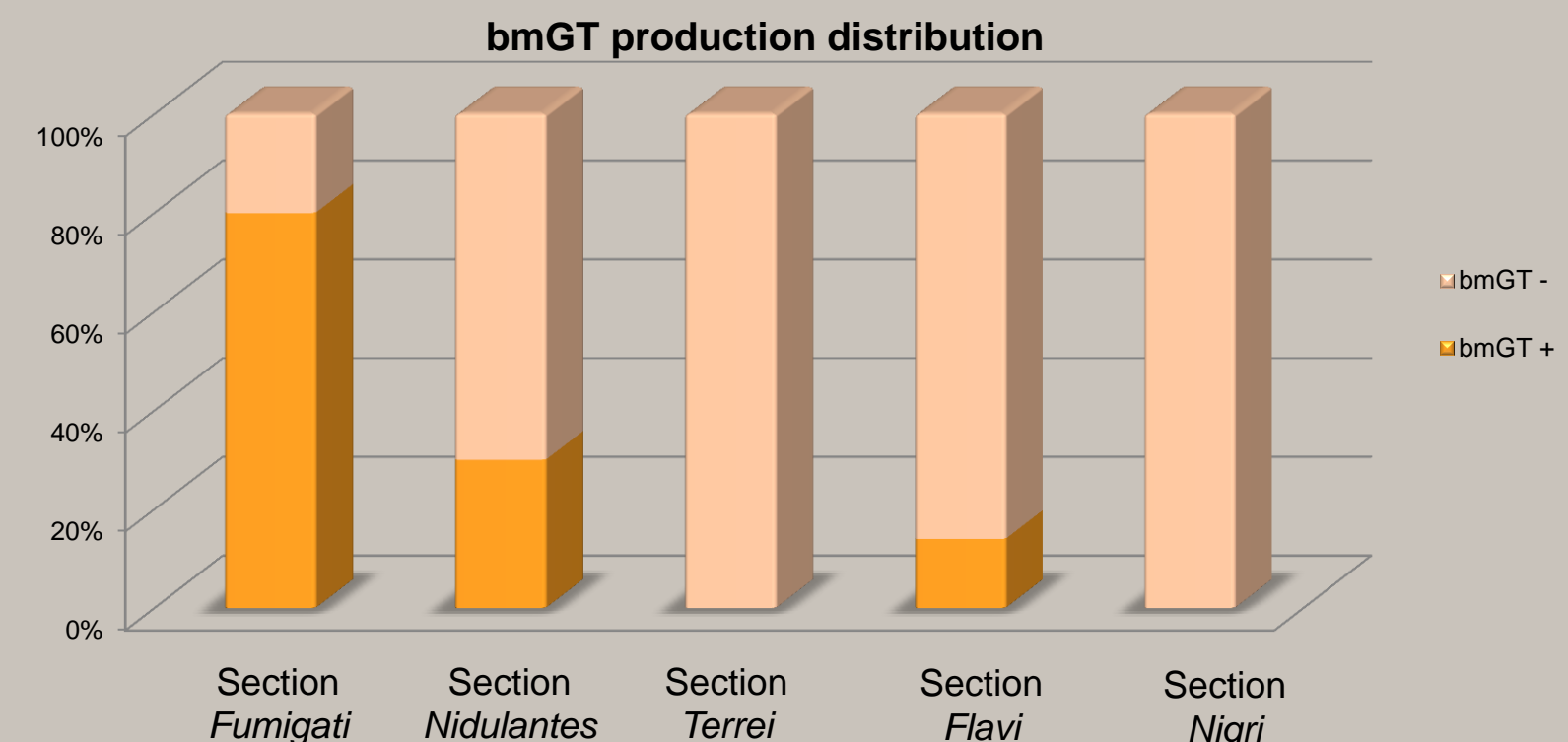
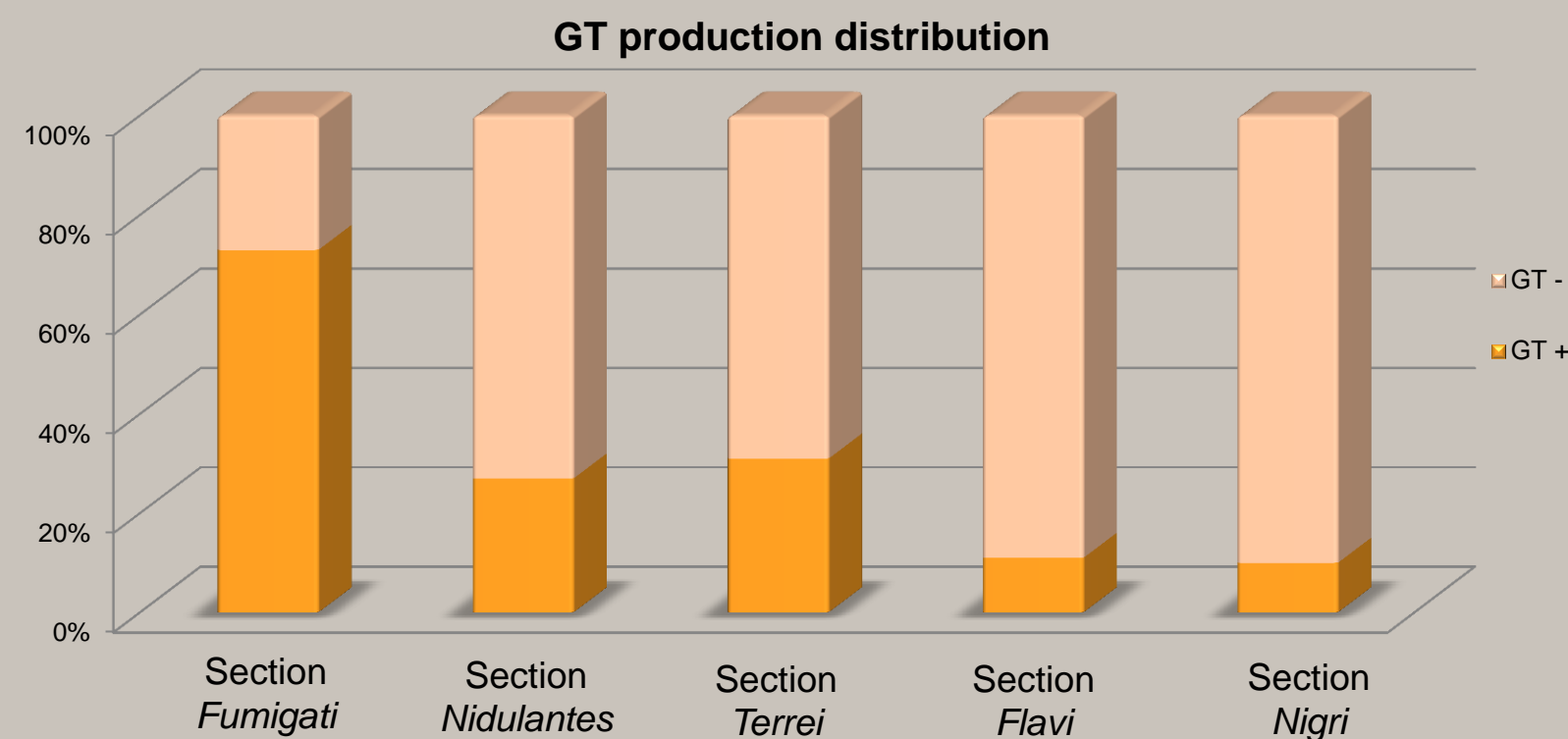
Several species of the genus *Aspergillus* can cause invasive aspergillosis (IA), an opportunistic infection associated with high mortality. During host infection, the secondary metabolites gliotoxin (GT) and bis-methylthio-gliotoxin (bmGT) are produced by several species of the genus *Aspergillus* in the hyphae stage.

Both GT and bmGT have been proposed as potential biomarkers of this disease but only bmGT seems to be a reliable IA diagnosis biomarker. Although there are several studies reporting GT production within different species of the genus *Aspergillus*, studies assessing frequency and distribution of bmGT-producing *Aspergillus* isolates are lacking.

In vitro GT and bmGT production by 241 different environmental and clinical isolates of five *Aspergillus* sections (section *Fumigati* (n=115), section *Nigri* (n=37), section *Terrei* (n=35), section *Flavi* (n=33) and section *Nidulantes* (n=21)).

1 ml of 12 McF conidial suspension was added to 9 ml of liquid medium (RPMI 1640 + glucose 20g/l)

GT and bmGT detection and quantification were performed by High Performance Thin Layer Chromathography (HPTLC) on culture supernatants.



The results indicate that bmGT is produced by most of the *Aspergillus* section *Fumigati* that are responsible of most cases of IA. In contrast this biomarker might not be useful to detect the infection caused by other less frequent species of sections *Nigri* and *Terrei* that were not able to generate this regulatory metabolite.