Assessment of *in vitro* activity of the new triterpenoid antifungal, SCY-247, against a collection of yeasts causing fungaemia in patients admitted to a tertiary hospital in Madrid from 2014 to 2024

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Background

Beta-d-glucan synthase inhibitors, that include the echinocandins and the new fungerp family, are useful drugs for the management of fungaemia

SCY-247, a second-generation IV/oral triterpenoid antifungal, is currently under investigation for the treatment of fungal infections

Objective

To gain insight on the *in vitro* antifungal activity profile of SCY-247, we studied the susceptibility of a collection of blood culture fungaemia isolates to SCY-247

Materials and Methods

Incident fungaemia yeasts isolates (n=537)

525 patients; 12 patients had mixed fungaemia

Gregorio Marañón Hospital (Madrid, Spain)

January 2014 to October 2024

SCY-247 activity was studied by the EUCAST E.Def 7.4 procedure

Minimum inhibitory concentration (MIC) was defined as the lowest concentration reaching ≥ 50% of fungal growth inhibition compared to the drug-free control well

Results

- Epidemiology of the bloodstream isolates are shown in the Figure

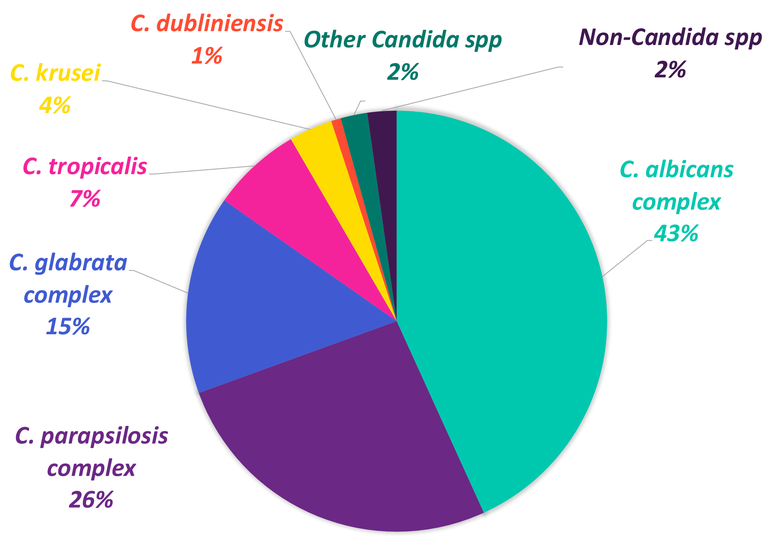

Figure. Isolates tested and broken down by species

- SCY-247 modal MIC value (0.03 mg/L) against ***C. albicans*** was lower than the modal MIC values against the remaining species
- Several *C. albicans* isolates (n=10) showed an MIC equal to or lower than the lowest concentration tested (0.004 mg/L)
- In contrast modal MIC values against ***C. tropicalis***, ***C. krusei***, and other ***Candida* spp** were the highest ones found (0.5 mg/L)
- Modal MIC values against ***C. glabrata*** and ***C. parapsilosis*** were in between (0.125 mg/L and 0.25 mg/L, respectively)
- Though the number of isolates was low, the *in vitro* activity of SCY-247 against non-Candida spp isolates and rare *Candida* spp was lower (MIC range between 0.25 mg/L and >16 mg/L)

Table. SCY-247 MIC distributions against the isolates tested

Species	SCY-247 MICs (in mg/L)												
	≤0.004	0.008	0.016	0.03	0.06	0.125	0.25	0.5	1	2	4	8	≥16
***C. albicans* complex (n=232)**	10	5	15	**88**	58	38	14	4	0	0	0	0	-
***C. parapsilosis* complex (n=141)**	0	0	0	0	3	25	**67**	44	2	0	0	0	-
***C. glabrata* complex (n=82)**	0	0	0	1	28	**49**	2	2	0	0	0	0	-
***C. tropicalis* (n=37)**	0	0	0	0	1	2	7	**24**	3	0	0	0	-
***C. krusei* (n=18)**	0	0	0	0	0	0	1	**13**	4	0	0	0	-
***C. dubliniensis* (n=4)**	0	0	0	0	0	0	3	1	0	0	0	0	-
Other *Candida* spp (n=11)	0	0	0	0	0	1	0	**6**	3	1	0	0	-
Non-Candida spp (n=12)	0	0	0	0	0	0	1	2	0	2	6	0	1

Cells with the "-" symbol indicate non-tested antifungal concentrations. Values in bold indicate modal MIC values

Conclusions

- **We demonstrated a potent *in vitro* activity of SCY-247 against a collection of clinical *Candida* spp isolates causing fungaemia**
- **MIC values against isolates belonging to the most common *Candida* species were ≤1 mg/L**

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