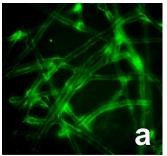


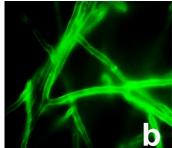
Mauro Magnani PhD mauro.magnani@uniurb.it

Humanized recombinant monoclonal antibodies to overcome Candida albicans and Aspergillus fumigatus infections and drug resistance

mAb 2G8 was originally developed as a murine monoclonal antibody directed against β1,3-glucan, a major cell wall polysaccharide that is crucial for growth and survival of *Candida albicans* and *Aspergillus fumigatus*. mAb 2G8 was show to provide protection in multiple models of fungal diseases, including vaginal and systemic *Candida* infection and invasive aspergillosis.

a, b: Immunofluorescence staining pattern of hyphal filaments of *Aspergillus fumigatus*





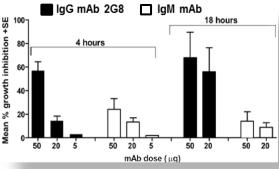
In vitro studies

e, **f**: Immunofluorescence staining pattern of *Candida albicans* germ-tubes





Candida albicans growth-inhibitory activity by the mAbs 2G8



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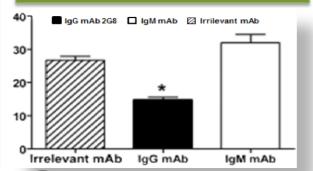
AMR focus

Global workshop for novel anti-infectives

mAb 2G8

- 1. selectively recognize β 1,3-glucan
- 2. is able to efficiently inhibit
- in vitro the growth of
- Aspergillus f. and Candida a.
- 3. Inhibit adherence to human epithelial cells

Ability by the mAbs 2G8 to inhibit adherence of *Candida albicans* to human epithelial cells.









Community for Open Antimicrobial Drug Discovery

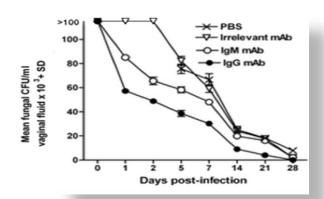


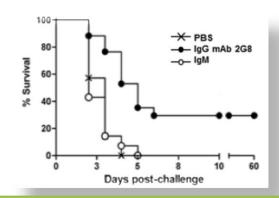
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Humanized recombinant monoclonal antibodies to overcome Candida albicans and Aspergillus fumigatus infections and drug resistance

Protection by the anti-β-glucan mAbs 2G8 in a rat model of vulvovaginal candidiasis.

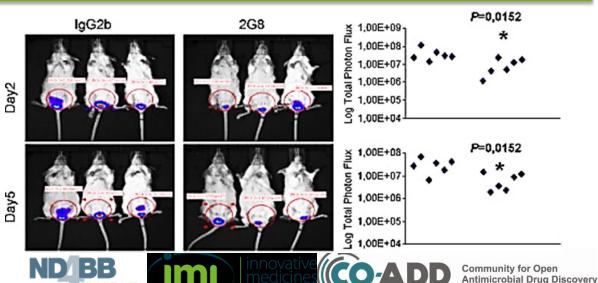
Survival of mice given a single, prophylactic administration of the anti-β-glucan mAbs 2G8 and lethally infected with *C. albicans*





Kinetics of the experimental vaginal candidiasis in mice administered with mAb 2G8.

In vivo studies





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Humanized recombinant monoclonal antibodies to overcome Candida and Aspergillus infections and drug resistence

Murine CDRs VH Murine CDRs VL

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Patents

US 12/851,962 EP 20050791821 CA 2580362

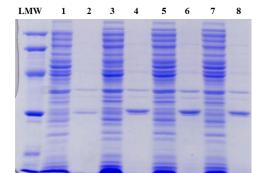
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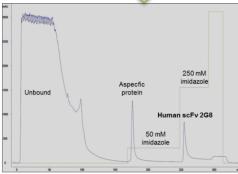
Recombinant human survey

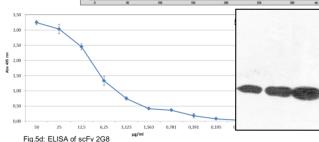
Murine VL 2G

scFv 2G8 expression



Purification







Murine VH 2G8

