



État des lieux sur les principales levures en 2025

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Déclaration d'intérêt de 2015 à 2025

- Intérêts financiers : Mundipharma
- Liens durables ou permanents : NA
- Interventions ponctuelles : Pfizer
- Intérêts indirects : NA

Mycmac et nomenclature

MALDI-TOF mass spectrometry results



Data bases
Bruker et MSI

170-52 G E01	Plot	A	27.86	Nakaseomyces glabratus	<i>Candida glabrata</i>
A3 (+++)(A)	148-79G (Échantillon standard)	Meyerozyma guilliermondii	2.00		<i>Candida guilliermondii</i>
A1 (+++)(A)	148-79P (Échantillon standard)	Clavispora lusitaniae	2.01		<i>Candida lusitaniae</i>
E1 (+++)(A)	142-021 c (Échantillon standard)	Pichia kudriavzevii	2.23		<i>Candida krusei</i>
D9 (+++)(A)	170-20 G ROSE (Échantillon standard)	Kluyveromyces marxianus	2.10		<i>Candida kefyr</i>



In 20 years: two-thirds of fungal species have changed names

Mycmac et nomenclature



LETTER TO THE EDITOR



New Names for Fungi of Medical Importance: Can We Have Our Cake and Eat It Too?

Sarah E. Kidd,^{a*} Catriona L. Halliday,^b Brendan McMullan,^{c,d} Sharon C.-A. Chen,^b Juliet Elvy^{e,f}



Journal of Clinical Microbiology | Comment Letter



Fungal nomenclature risk further confusion

Sarah E. Kidd,^{1,2} Ferry Hagen,^{1,3} Catriona L. Halliday,⁴ Alireza Abdolrasouli,^{1,5} Teun Boekhout,⁶ Pedro W. Crous,^{1,15,17} David H. Ellis,² Juliet Elvy,¹⁷ Graeme N. Forrest,¹⁷ Marizeth Groenewald,² Rosane C. Hahn,^{14,15} Jos Houbraken,² Anderson M. Rodrigues,¹⁶ James Scott,^{17,18} Tania C. Sorrell,¹⁷ Richard C. Summerbell,^{17,18} Clement K. M. Tsui,^{20,21} Andrey Yurkov,¹⁷ Sharon C.-A. Chen⁶

Sarah E. Kidd, Catriona L. Halliday, Brendan McMullan, Sharon C.-A. Chen, Juliet Elvy

is the Name

Open Forum Infectious Diseases

CORRESPONDENCE



LETTER TO THE EDITOR
April 2024 Volume 62 Issue 4 e01625-23
<https://doi.org/10.1128/jcm.01625-23>

Reply to Kidd et al., “Inconsistencies within the proposed framework for stabilizing fungal nomenclature risk further confusion”

**Fungal Nomenclature:
Managing Change Is the Name
of the Game**

David W. Denning¹⁵

Sybre de Hoog^{1,2,3,4,5,6}, Thomas J. Walsh^{6,7,8,9,10,11,12,13,14,15}, Sarah A. Ahmed^{1,2,6}, Ana



Mycmac et nomenclature



Exemples of results reports

Examen mycologique

Nature : Prélèvement rectal

Culture

Examen mycologique (suite)

Nature : Gorge

Présence de *Pichia cactophila* (ex *Candida inconspicua*)

Identification par spectrométrie de masse MALDI-TOF Bruker Biotyper

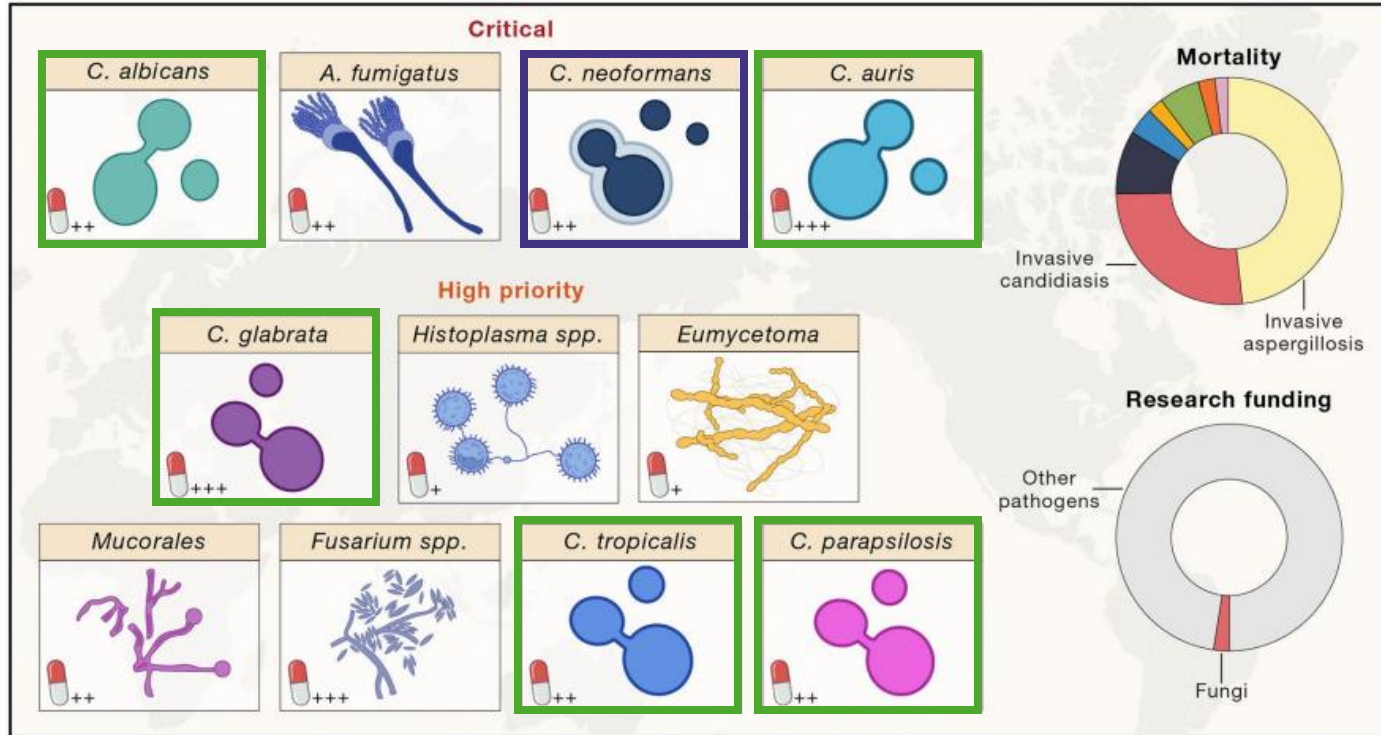
Présence de *Kluyveromyces marxianus* (ex *Candida kefyr*)

Identification par spectrométrie de masse MALDI-TOF Bruker Biotyper

Présence de *Candida tropicalis*

Identification par spectrométrie de masse MALDI-TOF Bruker Biotyper

Principales levures en 2025, plusieurs *Candida*



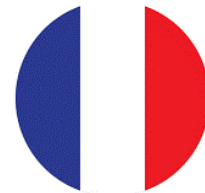
WHO fungal priority
pathogens list 2022



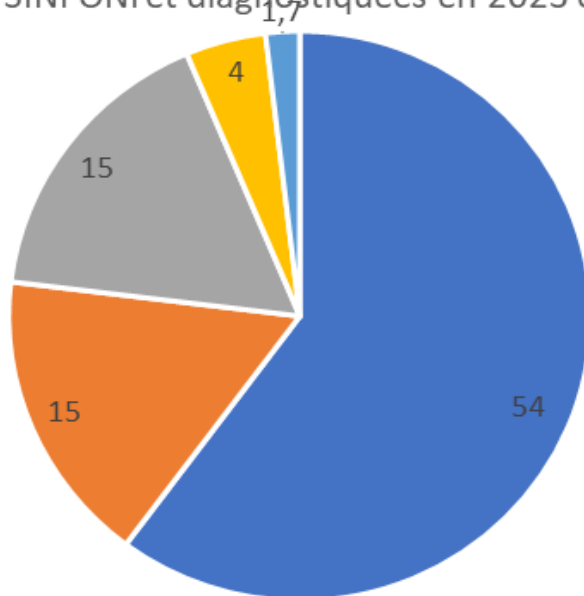
Principales levures en 2025, plusieurs *Candida*

CNR des Mycoses invasives et antifongiques

Répartition (%) des principales infections fongiques invasives déclarées dans SINFONI et diagnostiquées en 2023 en France



Rapport 2024



■ Fongémie (n=1991)

■ PCP (n=567)

■ Aspergillose (n=541)

■ Mucormycose (n=142)

■ Cryptococcose (n=64)

Principales levures en 2025, plusieurs *Candida*

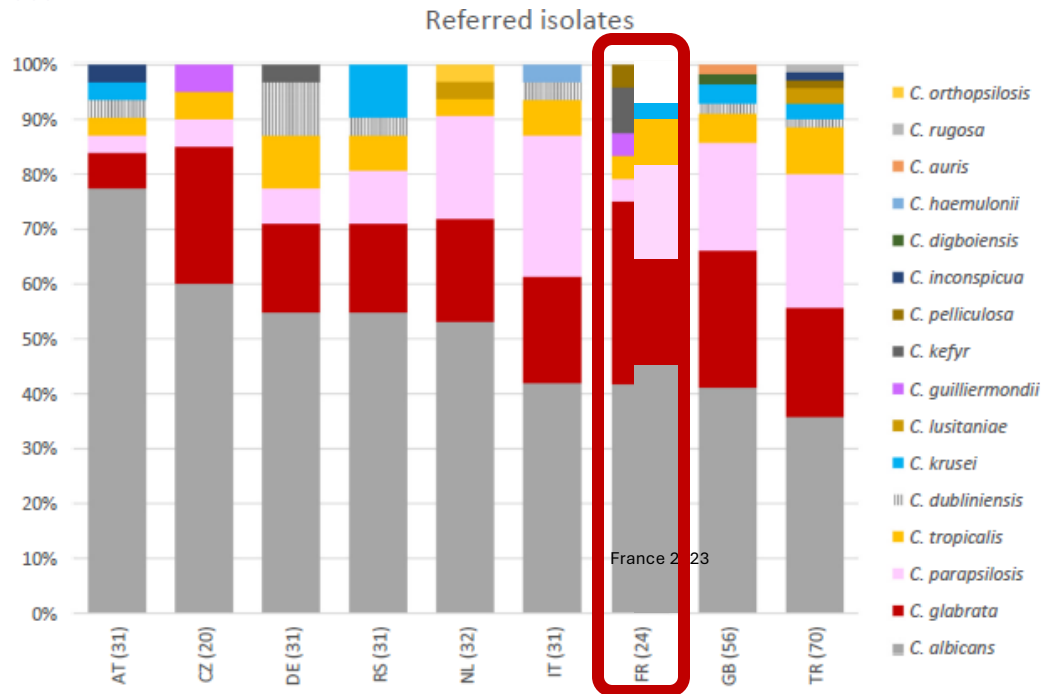
Results from the ECMM Candida III



European multicentre
observational study

2018-2022

399 isolates (candidemia)



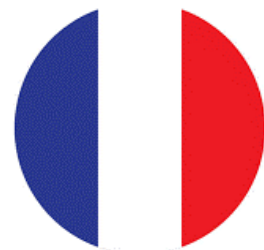
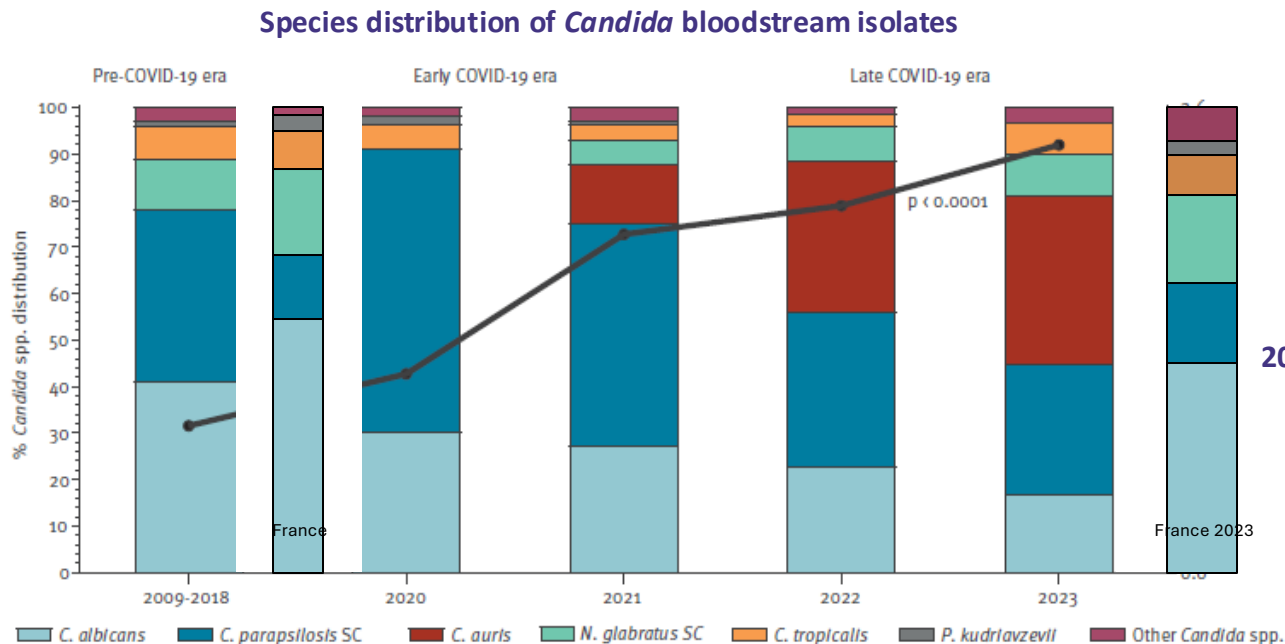
Principales levures en 2025, plusieurs *Candida*

Data from Hôpital Attikon (Grèce), CNRMA (France)



Grec monocentric
observational study

365 isolates

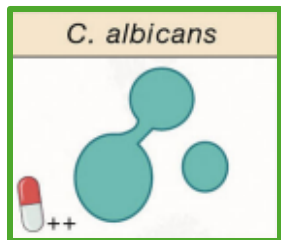


Données CNRMA

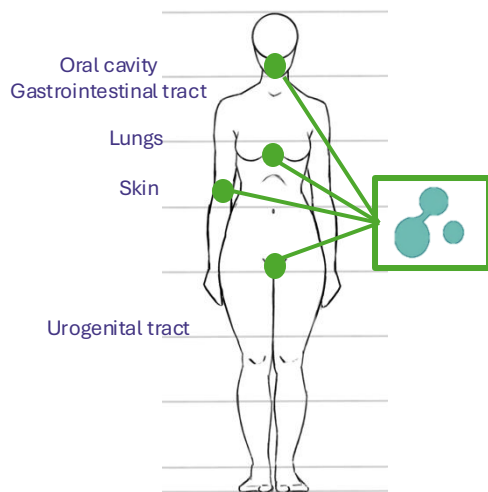
2012-2018 : 5444 isolates

2023 : 1991 isolates

Principales levures en 2025, plusieurs *Candida*



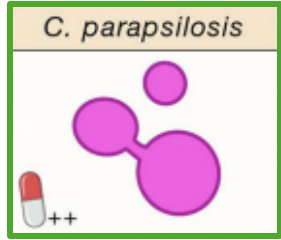
Sensitive
species



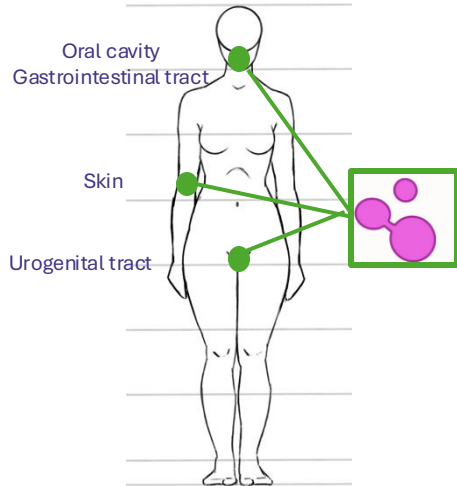
Systematic review : 9 studies reported azoles resistance



Principales levures en 2025, plusieurs *Candida*

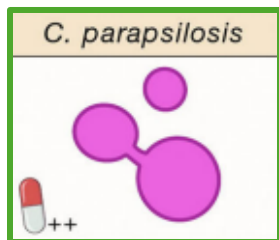


(24)
inv



Characteristic	Invasive infections due to fluconazole-susceptible isolates	Invasive infections due to fluconazole-resistant isolates	P value
No. of patients	67	11	
Mean age (median [IQR]) (yrs)	59.4 (62 [51–72])	59.6 (65 [56–65.5])	0.78
Sex (no. male/no. female)	52/15	9/2	1
Clinical presentation [no. (%)]			
Candidemia	55 (82.1)	9/11 (81.8)	1
Mediastinitis	3 (4.5)	2/11 (18.2)	0.14
Others	9 (13.4)	0	0.34
Hospital ward [no. (%)]			
ICU	34 (50.7)	10 (90.9)	0.019
Non-ICU	22 (32.8)	0	0.028
Chirurgical unit	11 (16.4)	1 (9.1)	1
Immunosuppression [no. (%)] ^a	25/60 (41.7)	3/11 (27.3)	0.5
Presence of catheter and/or external devices [no. (%)]	46/53 (86.8)	11/11 (100)	0.34
Recent chirurgical intervention (last 30 days) [no. (%)]	42/57 (73.7)	10/11 (90.9)	0.44
Preexposition to antifungal drugs (last 3 mo) [no. (%)]	8/47 (17)	2/10 (20)	1
Targeted antifungal therapy [no. (%)]	36/39 (92.3)	8/10 (80)	0.27
Echinocandin based	12/36 (33.3)	5/8 (62.5)	0.22
Fluconazole based	21/36 (58.3)	1/8 (12.5)	0.046
Other	3/36 (8.3)	2/8 (25)	0.22
All-cause mortality [no. (%)]			
All patients			
Day 30	15/67 (22.4)	5/11 (45.5)	0.082
Day 90	19/64 (29.7)	6/11 (54.5)	0.12
ICU patients			
Day 30	9/34 (26.5)	4/10 (40)	0.40
Day 90	11/31 (35.5)	5/10 (50)	0.46

Principales levures en 2025, plusieurs *Candida*



Results from the ECMM Candida III



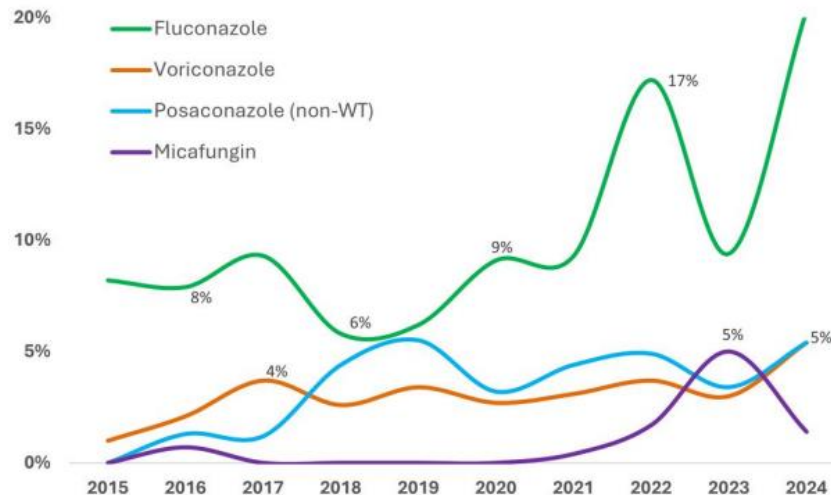
European multicentre
ANRMA data
observational study

2023: 338 isolates
From 07-2018 to 03-2022

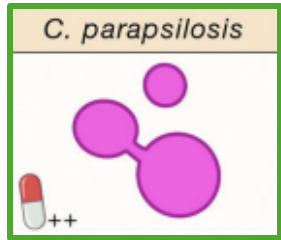
1740 isolates
599 isolates

Fluconazole resistance

Fluconazole resistance : 14,8% on 2023
Temporal susceptibility trends for
Candida parapsilosis complex



Principales levures en 2025, plusieurs *Candida*



**Antifungal heteroresistance causes prophylaxis fail
facilitates breakthrough *Candida parapsilosis* infecti**

Bing Zhai^{1,2,3,17}, Chen Liao^{4,17}, Siddharth Jaggavarapu^{5,6,7,8,17}, Yuanyuan
Rolling^{2,3}, Yating Ning^{9,10}, Tianshu Sun^{10,11}, Sean A. Bergin^{1,2}, Mergim Gj
Miranda¹³, N. Esther Babady^{2,13}, Oliver Bader¹⁴, Ying Taur^{2,15}, Geraldine
Zhang^{9,10}, Joao B. Xavier⁴, David S. Weiss^{5,6,7,8}, Tobias M. Hohl^{2,15,16}

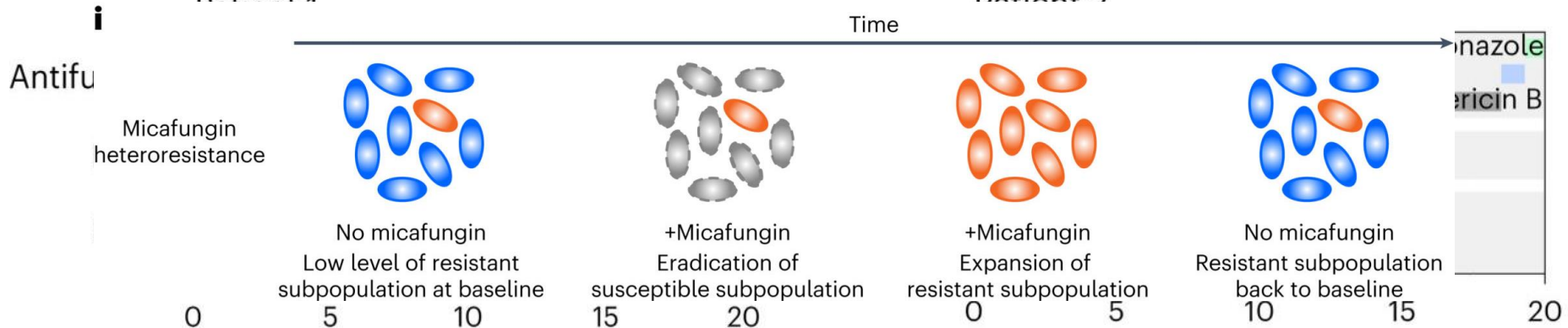
Shen Institute of Synthetic Biology



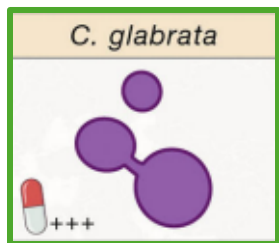
American study

2016-2020

952 patients allo-HCTs



Principales levures en 2025, plusieurs *Candida*



Results from the ECMM Candida III



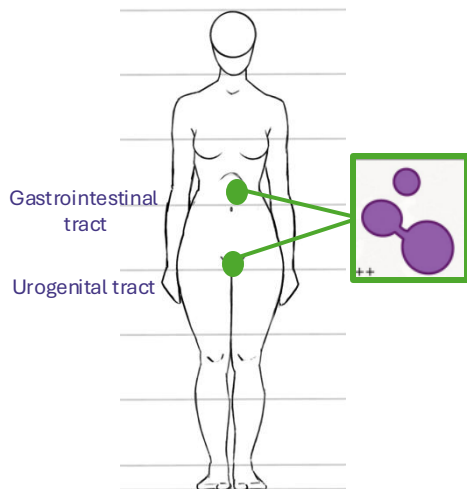
European multicentre
CNRMA data
observational study

2023 : 378 isolates
From 07-2018 to 03-2022

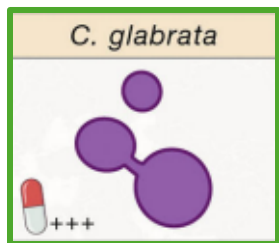
Fluconazole resistance

Fluconazole resistance : 17 % en 2023

	<i>C. glabrata</i>	
	R	Total
Sweden	1	3
UK	1	14
Belgium	2	6
Czech Republic	3	5
Italy	1	6
Greece	0	0
Turkey	3	14
Combined	11	48



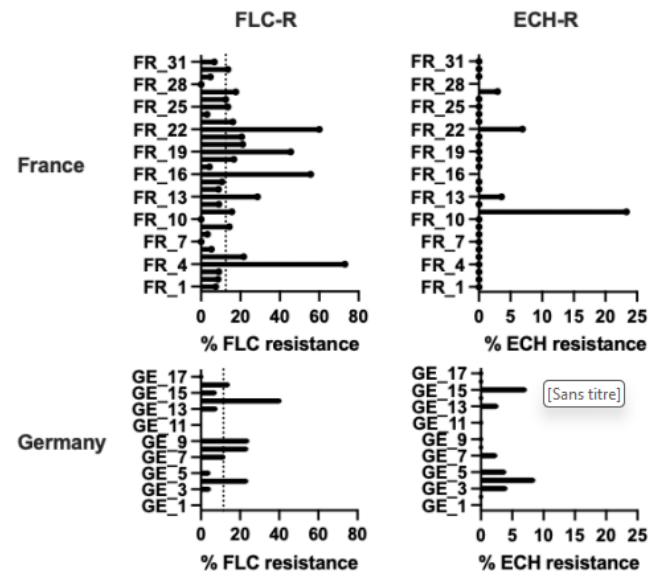
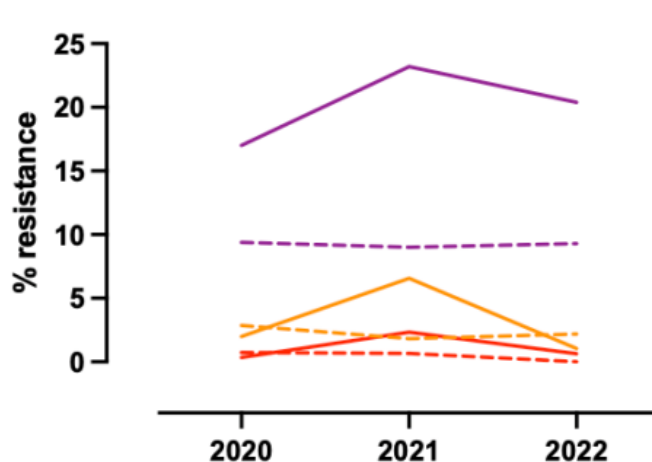
Principales levures en 2025, plusieurs *Candida*



Antifungal Resistance from
Surveillance to Treatment
AReST

2020-2022

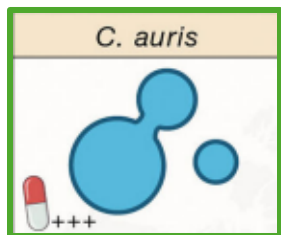
1770 isolates



Rahimli, Denis, Dupont, Persat, Bru, Lefranc, Botterel, Cornely, Salmanton
García, Alanio on behalf of the AReST epidemiological working group –

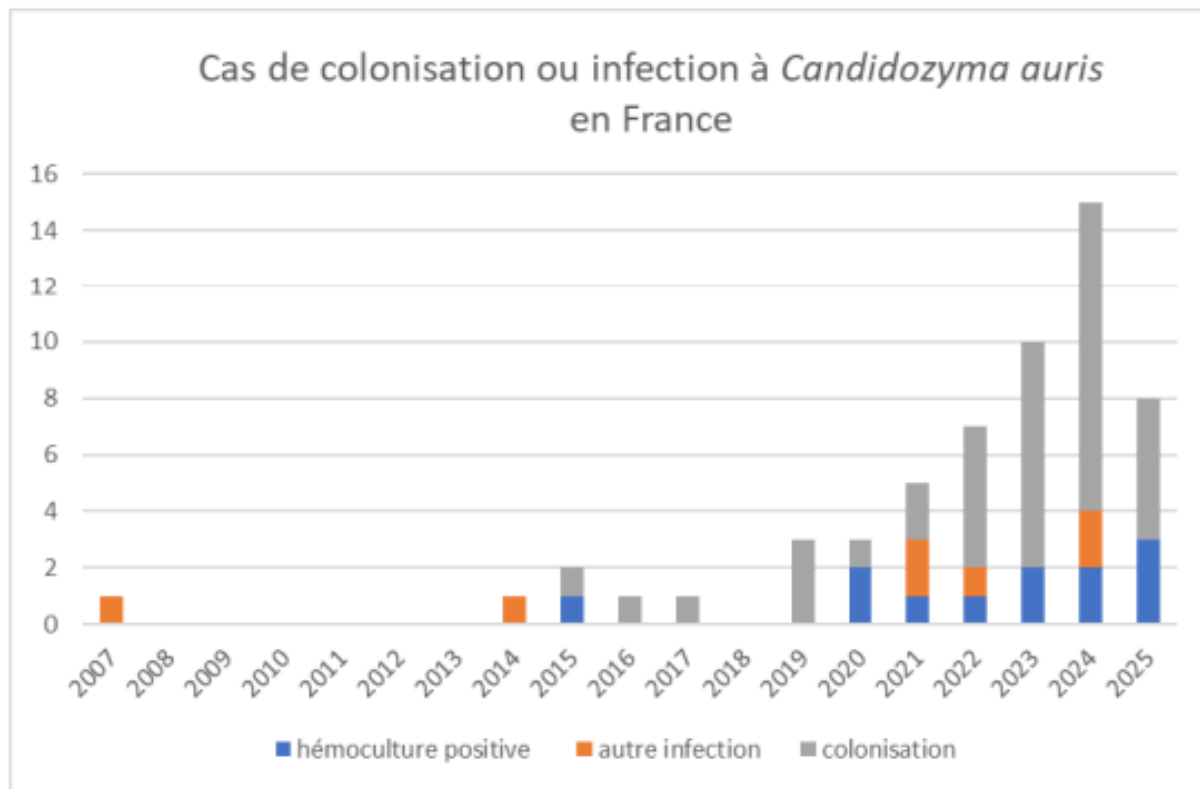
En cours de soumission

Principales levures en 2025, plusieurs *Candida*

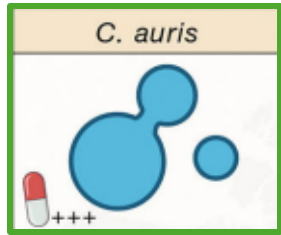


23 hôpitaux

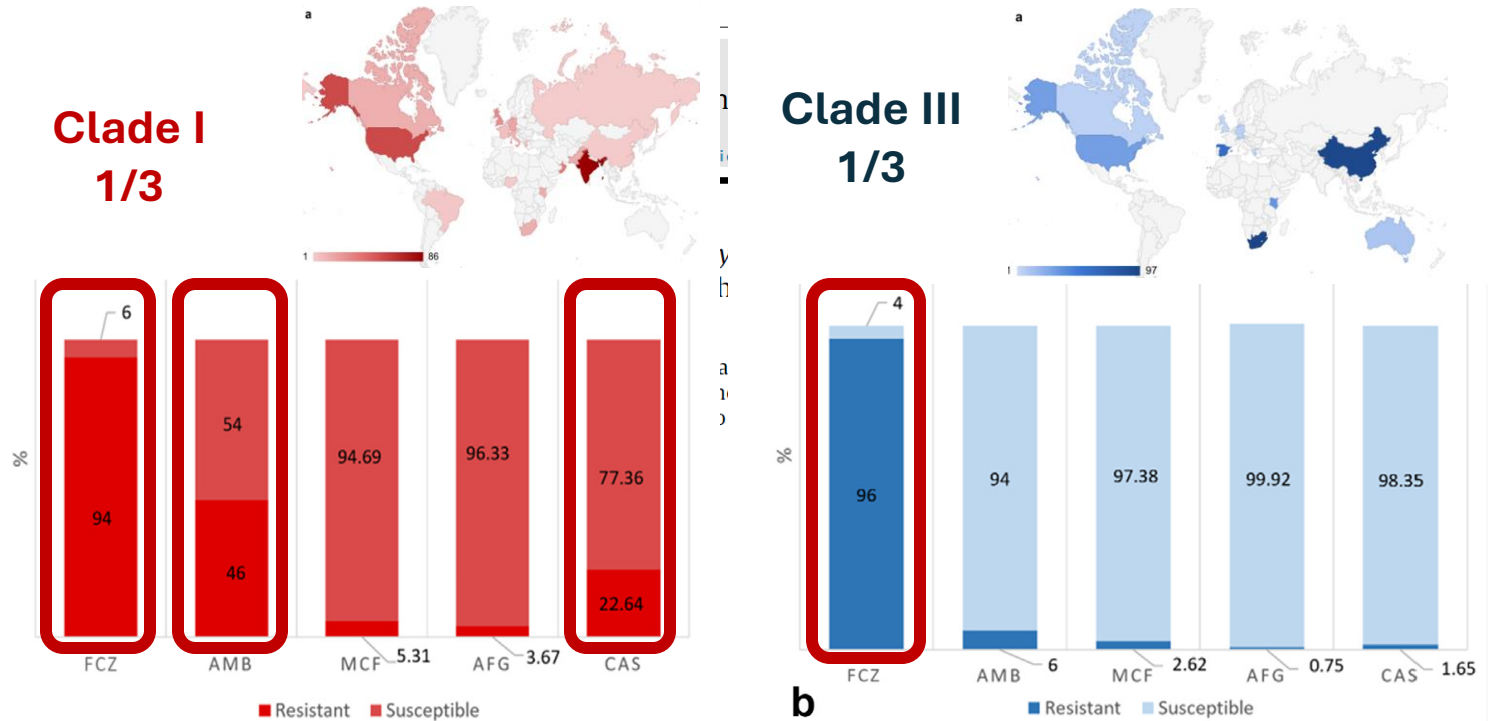
19 infections invasives
38 colonisations



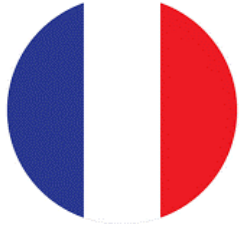
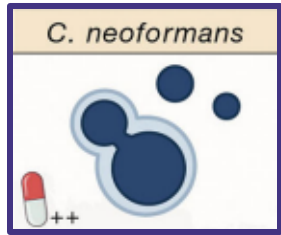
Principales levures en 2025, plusieurs *Candida*



6 clades
1031 strains



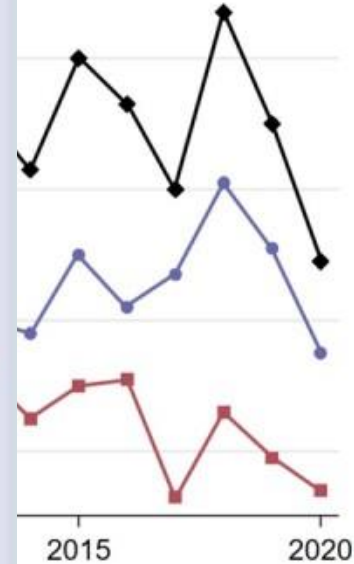
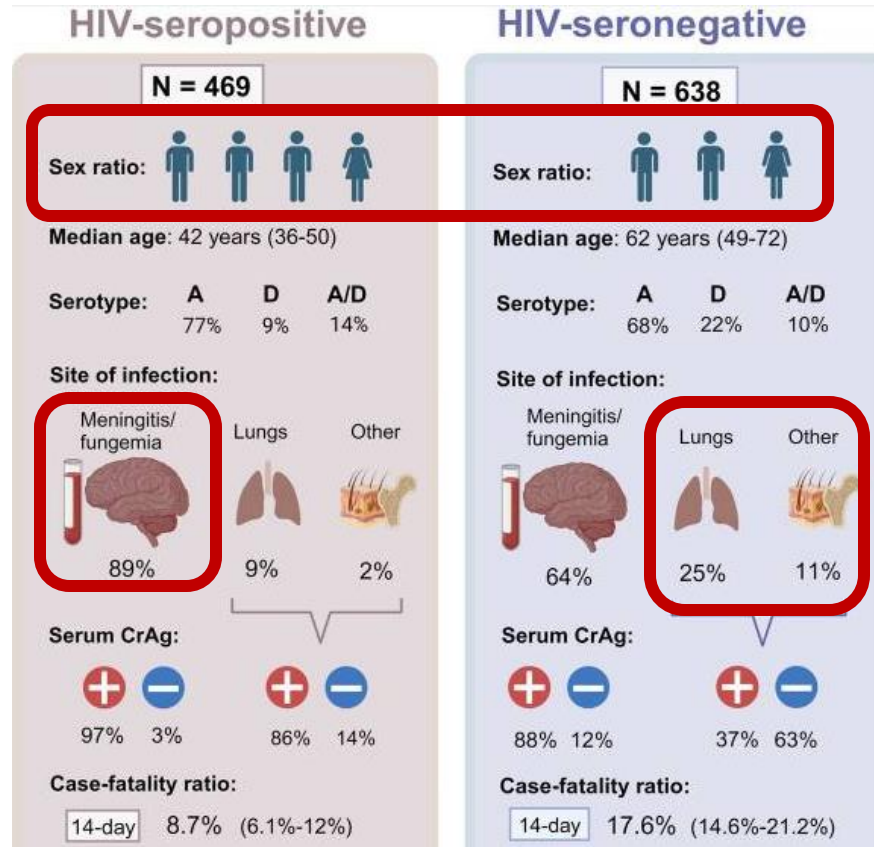
Principales levures en 2025, pas que des *Candida*



CNRMA

2005-2020

1107 cryptococcosis cases





Merci de votre attention.