# Product Information Sheet for NR-52715

## *Candida auris*, Strain AKU-2019-111

## Catalog No. NR-52715

## For research use only. Not for use in humans.

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### Manufacturer:
BEI Resources

### Product Description:
Classification: Mitosporic *Saccharomycetales, Candida*
Species: *Candida auris*
Strain: AKU-2019-111
Original Source: *Candida auris (C. auris)*, strain AKU-2019-111 was isolated in 2019 from the bloodstream of a human with nosocomial fungemia in Karachi, Pakistan.[1]
Comment: Strain AKU-2019-111 was deposited as resistant to fluconazole and susceptible to amphotericin and anidulafungin.[1]

*C. auris* is an emerging multidrug-resistant pathogenic yeast, which causes invasive infections and outbreaks in nosocomial settings, resulting in high mortality. Since it was first described in 2009, *C. auris* has been isolated in over 30 countries on 6 continents, with the earliest known isolate from 1996 discovered during a retrospective review of unidentified yeasts.[2] *C. auris* is unique among disease-causing yeasts in that it behaves more like transmissible multidrug-resistant bacteria in healthcare settings, capable of transmission between patients through shedding and requiring specific control measures.[2,3] Infections primarily affect patients with underlying medical conditions or who have had recent surgery. *C. auris* is capable of colonizing patients in both sterile and non-sterile sites such as skin, and is known to colonize and persist in the environment, including on healthcare surfaces and equipment, such as catheters, attributed to biofilm formation.[4,5] Misidentification by commercial biochemical tests, often as closely related *C. haemulonii*, delays treatment and implementation of control measures.[4,5]

*C. auris* has a strong phylogeographic structure comprising four distinct clades, South Asia, East Asia, South Africa and South America, separated by tens of thousands of SNPs, with smaller clusters identified in some clades.[3] This high level of relatedness and low genetic diversity within clades suggests clades emerged independently and near-simultaneously in four distinct locations rather than a single spread.[2,3,4]

### Material Provided:
Each vial contains approximately 0.5 mL of yeast culture in 20% glycerol.

### Packaging/Storage:
NR-52715 was packaged aseptically in cryovials. The product is provided frozen and should be stored at -60°C or colder immediately upon arrival. For long-term storage, the vapor phase of a liquid nitrogen freezer is recommended. Freeze-thaw cycles should be avoided.

### Growth Conditions:
Media:
Sabouraud Dextrose broth or Yeast Mold broth or equivalent
Sabouraud Dextrose agar or Yeast Mold agar or equivalent
Incubation:
Temperature: 25°C to 30°C
Atmosphere: Aerobic
Propagation:
1. Keep vial frozen until ready for use; thaw rapidly in a waterbath at 25°C to 30°C. Typically, this takes less than 5 minutes.
2. Immediately after thawing, inoculate an agar plate with approximately 50 µL of thawed culture and/or transfer the entire thawed aliquot into a single tube of broth.
3. Incubate the plate and/or tube at 25°C to 30°C for 2 to 4 days.

### Citation:
Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: *Candida auris*, Strain AKU-2019-111, NR-52715."

### Biosafety Level: 2
Appropriate safety procedures should always be used with this material. Laboratory safety is discussed in the following publication: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, and National Institutes of Health. Biosafety in Microbiological and Biomedical Laboratories (BMBL). 6th ed. Washington, DC: U.S. Government Printing Office, 2020.

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## References:

1. Farooqi, J., Personal Communication.
2. Forsberg, K., et al. "*Candida auris*: The Recent Emergence of a Multidrug-Resistant Fungal Pathogen." Med. Mycol. 57 (2019): 1-12. PubMed: 30085270.
3. Lockhart, S. R., et al. "Simultaneous Emergence of Multidrug-Resistant *Candida auris* on 3 Continents Confirmed by Whole-Genome Sequencing and Epidemiological Analyses." Clin. Infect. Dis. 64 (2017): 134-140. PubMed: 27988485.
4. Tsay, S., et al. "Approach to the Investigation and Management of Patients with *Candida auris*, an Emerging Multidrug-Resistant Yeast." Clin. Infect. Dis. 66 (2018): 306-311. PubMed: 29020224.
5. Spivak, E. S. and K. E. Hanson. "*Candida auris*: An Emerging Fungal Pathogen." J. Clin. Microbiol. 56 (2018): e01588-17. PubMed: 29167291.



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