

The Antimicrobial Resistance Laboratory Network (ARLN)

The Centers for Disease Control and Prevention (CDC) established Antimicrobial Resistance Laboratory Network (ARLN) in 2016 as part of an action plan to combat antibiotic-resistant bacteria. The mission of the ARLN is to track the prevalence of antimicrobial resistant organisms, identify outbreaks, and prevent the spread of these organisms.

Oregon's regional ARLN lab is the Washington State Public Health Laboratory (WSPHL) in Shoreline, Washington. Initial laboratory testing will be conducted at the Oregon State Public Health Laboratory (OSPHL), with additional testing performed at the WSPHL.

What it does:

Provide additional support for state public health labs

Perform additional testing for resistance mechanisms

- Carbapenem-resistant *Enterobacteriaceae* (CRE) and carbapenem-resistant *Pseudomonas aeruginosa* (CR-PA)
 - Confirm questionable or discordant results
 - Support for colonization screening cultures
- Carbapenemase testing on and carbapenem-resistant *Acinetobacter baumannii* (CRAB)
- Test for *MCR1* and *MCR2* resistance genes on *Enterobacteriaceae*
- *Candida* surveillance:
 - Confirm identification and perform susceptibility testing (*Candida auris*)
 - Monitor resistance of *C. glabrata*

Links to additional information about the ARLN:

<https://www.cdc.gov/drugresistance/solutions-initiative/ar-lab-networks.html>

www.doh.wa.gov/Portals/1/Documents/5100/420-002-epitrends2017-01.pdf

Request for Submission of Specific Isolates

We are requesting voluntary submission of specific isolates not currently required by Oregon Administrative Rule (OAR). These are in addition to carbapenem-resistant *Enterobacteriaceae* (CRE) isolates.

What additional isolates are being requested and from which labs?

From **all labs** we request:

1. Any pan-resistant Gram-negative bacilli found to be Intermediate or Resistant to the entire susceptibility panel used.
2. Any suspected *Candida auris*, *C. haemulonii*, and *C. duobushaemulonii*.

Research shows that *C. auris* may be misidentified by some testing instruments. Please see the table for when to suspect *Candida auris*. For more details by method, refer to CDC's algorithm at www.cdc.gov/fungal/diseases/candidiasis/pdf/Testing-algorithm-by-Method-temp.pdf

CDC also has recommendations for when to identify *Candida* to the species level. Please review the information provided at <https://www.cdc.gov/fungal/diseases/candidiasis/recommendations.html>

Identification Method	C. auris can be misidentified as:
Vitek 2 YST	<i>C. haemulonii</i> or <i>C. duobushaemulonii</i>
API 20C	<i>C. sake</i> <i>Rhodotorula glutinis</i> (with no red color)
BD Phoenix YST ID	<i>C. haemulonii</i> <i>C. catenulata</i>
Microscan	<i>C. famata</i> <i>Candida guilliermondii</i> (no hyphae or pseudohyphae on cornmeal agar) <i>Candida lusitanae</i> (no hyphae or pseudohyphae on cornmeal agar) <i>Candida parapsilosis</i> (no hyphae or pseudohyphae on cornmeal agar)

For some isolates, the request varies by Oregon region and recruited laboratory. See below for complete details.

Portland Tri-county area labs participating in the Emerging Infections Program Multi-site resistant Gram-negative Surveillance Initiative (**MuGSI**) and Candidemia study: please **continue sending**

1. Carbapenem-resistant *Pseudomonas aeruginosa* (CP PA) isolates: from all sources except ears and stool (currently reporting and sending)
2. Carbapenem-nonsusceptible *Acinetobacter baumannii* (CRAB) isolates: from urines and sterile sites (currently reporting, new request to send isolates)
3. *Candida* isolates from blood cultures (currently reporting and sending)

Recruited¹ labs outside of Portland Tri-county please send:

¹ Recruited labs are those outside of the Portland metro area who have been asked and have agreed to send CR PA, CRAB and *C. glabrata* isolates to OSPHL.

1. CR PA isolates: from all sources except ears and stool (effective January, 2018)
2. CRAB isolates: from all sources (effective immediately)
3. *Candida glabrata* isolates: from sterile sites (effective immediately)

How to send isolates?

Please submit slants of pure, actively growing cultures along with susceptibility reports from the automated test instrument. TSA slants are preferred. Please complete all required fields on the General Microbiology Test Request Form. Most laboratories have these forms. You can order forms using the OSPHL Stockroom Order Request Form at www.bitly.com/PHLStockOrder.

Transporting isolates

Isolates should be held and transported at ambient temperatures. Avoid extreme heat, and do not freeze specimens.

Please transport isolates to

Oregon State Public Health Laboratory
7202 NW Evergreen Parkway, Suite 100
Hillsboro, OR 97124

Questions?

For questions about what is being requested and which laboratories should send isolates, contact Maureen Cassidy with the Acute and Communicable Disease Prevention Program, maureen.p.cassidy@dhsoha.state.or.us.
For technical questions, contact Karim Morey, karim.e.morey@dhsoha.state.or.us or Kristie Ryder, kristie.ryder@dhsoha.state.or.us at the Oregon State Public Health Laboratory.