SAFETY: As soon as *Burkholderia* is suspected, perform ALL further work in a Class II Biosafety Cabinet using BSL-3 practices.

Major characteristics of *Burkholderia pseudomallei*:

**Gram stain morphology:** Gram negative rod, straight or slightly curved, may demonstrate bipolar morphology at 24 h and peripheral staining, like endospores, as cultures age

**Colony morphology:** Poor growth at 24 h, good growth of smooth, creamy colonies at 48 h on BAP, may develop wrinkled colonies in time, nonhemolytic. Can demonstrate strong characteristic musty, earthy odor; growth on MAC/EMB in 48 h, no pigment is visible on Mueller-Hinton agar, may have non-violet pigment on BAP.

**Reactions:** Oxidase positive; indole negative

# Yes

Growth on MAC? **No Yes**

# No

Oxidase positive and indole negative?

# Yes

Polymyxin B or colistin; no zone or **No**

growth on *B. cepacia* selective agars

# Yes

**No**

No hemolysis on BAP; no violet pigment

# Yes

Rule out other agents such as

*B. mallei*, *Brucella* and *Francisella*

Not *Burkholderia*

Not *Burkholderia*

Consider *Chromobacterium violaceum*

or indole-negative *Vibrio* spp.

*B. pseudomallei* not ruled out, especially if colonies have musty odor.

*B. pseudomallei* is separated from *B. cepacia* by a susceptible amoxicillin-clavulanate test. Although rare in *B. pseudomallei*, resistance cannot rule out the identification.

Contact your LRN Reference Level Laboratory to refer isolate.

**Report:** Possible *Burkholderia pseudomallei* submitted to LRN Reference Laboratory.

**Additional screening test:** *B. pseudomallei* and *B. mallei* are arginine positive, unlike other

*Burkholderia*. (Test can be in kit identification systems.) Unlike *B. mallei*, *B. pseudomallei* grows at 42°C in 48 h and is motile.

ASM, October 2014