

# Pan-drug-resistant and biofilm-producing strain of *Burkholderia pseudomallei*: first report of melioidosis from a diabetic patient in Yogyakarta, Indonesia [Letter]

This article was published in the following Dove Press journal:  
International Medical Case Reports Journal

David AB Dance<sup>1</sup>  
Vanaporn Wuthiekanun<sup>2</sup>  
Derek Sarovich<sup>3</sup>  
Erin P Price<sup>3</sup>  
Direk Limmathurotsakul<sup>4</sup>  
Bart J Currie<sup>5</sup>  
Trinh Thanh Trung<sup>6</sup>

<sup>1</sup>Lao-Oxford-Mahosot Hospital-Wellcome Trust Research Unit, Vientiane, Lao PDR; <sup>2</sup>Mahidol-Oxford Tropical Medicine Research Unit, Bangkok, Thailand; <sup>3</sup>University of the Sunshine Coast, Sippy Downs, QLD, Australia; <sup>4</sup>Microbiology, Mahidol-Oxford Tropical Medicine Research Unit, Bangkok, Thailand; <sup>5</sup>Infectious Diseases, Menzies School of Health Research, Darwin, NT, Australia; <sup>6</sup>Vietnam National University, Hanoi, Vietnam

## Dear Editor

We are writing, on behalf of the International Melioidosis Society Committee, as a group of researchers and clinicians with longstanding experience of melioidosis and *Burkholderia pseudomallei* as we have some concerns about the above paper that was published in your journal recently.<sup>1</sup>

Although we believe that melioidosis is undoubtedly being under-diagnosed in Indonesia,<sup>2,3</sup> we are not convinced that the isolate in this case is *B.pseudomallei* based on the information provided by the authors. Although it is difficult to be certain from the photographs in Figure 2, the colonies do not appear typical of the species to the microbiologists amongst us, who have seen several thousand isolates of *B.pseudomallei* over the past 30 years. Furthermore, the authors do not report whether the isolate was oxidase positive or negative. We believe that more comprehensive methods of confirming the identity, particularly genomic analysis, should have been undertaken before publishing the case.<sup>4</sup> Unfortunately, the post-amplification 16s analysis described in the paper might not have been able to distinguish between *B.pseudomallei* and other *Burkholderia* species (particularly *B.thailandensis* and several as-yet-uncharacterized *Burkholderia* spp.), and we would have recommended additional testing, for example, multilocus sequence typing and PCR for the TTS1 gene at least.

Furthermore, the resistance pattern reported, particularly to carbapenems and ceftazidime, would be extremely unusual, especially in a patient who had not previously received these antibiotics. Ideally, this should have been confirmed by a reference laboratory or by measuring minimum inhibitory concentrations (eg, by broth dilution or gradient diffusion). There are as yet no internationally accepted criteria for interpreting zone diameters for *B.pseudomallei* and, in our experience, whilst disk diffusion methods are reliable for determining the susceptibility of *B.pseudomallei* to most agents except co-trimoxazole,<sup>5</sup> they require very careful quality control. Thus, even if this isolate is indeed *B.pseudomallei*, it remains possible that methodological issues may have resulted in misinterpretation of the susceptibility results. Determination of the genetic basis for the resistance would also be valuable.

Correspondence: David AB Dance  
Lao-Oxford-Mahosot Hospital-Wellcome Trust Research Unit, Vientiane, Lao PDR  
Email david.d@tropmedres.ac

If indeed this was a case of melioidosis caused by a multidrug-resistant isolate, then it is important that as much information as possible about it is made available to the scientific community. We have offered to help the authors to achieve this, but have not received a response. We, therefore, feel that we have a duty to the scientific community to raise our concerns.

## Disclosure

The authors report no conflicts of interest in this communication.

## References

1. Nuryastuti T, Umaroh N, Asdie RH, Sari IP, Musthafa A. Pan-drug-resistant and biofilm-producing strain of *Burkholderia pseudomallei*: first report of melioidosis from a diabetic patient in Yogyakarta, Indonesia. *Int Med Case Rep J*. 2018;11:319–323. doi:10.2147/IMCRJ.S173461
2. Tauran PM, Wahyunie S, Saad F, et al. Emergence of melioidosis in Indonesia and today's challenges. *Trop Med Infect Dis*. 2018;3:1.
3. Wiersinga WJ, Virk HS, Torres AG, et al. Melioidosis. *Nature Rev Dis Primers*. 2018;4:17107. doi:10.1038/nrdp.2017.107
4. Hoffmaster AR, AuCoin D, Baccam P, et al. Melioidosis diagnostic workshop, 2013. *Emerg Infect Dis*. 2015;21(2). doi:10.3201/eid2101.140256.
5. Saiprom N, Amornchai P, Wuthiekanun V, et al. Trimethoprim/sulfamethoxazole resistance in clinical isolates of *Burkholderia pseudomallei* from Thailand. *Int J Antimicrob Agents*. 2015;45(5):557–559. doi:10.1016/j.ijantimicag.2015.01.006

Dove Medical Press encourages responsible, free and frank academic debate. The content of the International Medical Case Reports Journal 'letters to the editor' section does not necessarily represent the views of Dove Medical Press, its officers, agents, employees, related entities or the International Medical Case Reports Journal editors. While all reasonable steps have been taken to confirm the content of each letter, Dove Medical Press accepts no liability in respect of the content of any letter, nor is it responsible for the content and accuracy of any letter to the editor.

### International Medical Case Reports Journal

Dovepress

### Publish your work in this journal

The International Medical Case Reports Journal is an international, peer-reviewed open-access journal publishing original case reports from all medical specialties. Previously unpublished medical posters are also accepted relating to any area of clinical or preclinical science. Submissions should not normally exceed 2,000 words or 4

published pages including figures, diagrams and references. The manuscript management system is completely online and includes a very quick and fair peer-review system, which is all easy to use. Visit <http://www.dovepress.com/testimonials.php> to read real quotes from published authors.

Submit your manuscript here: <https://www.dovepress.com/international-medical-case-reports-journal-journal>