

Identification of *Photobacterium asymbiotica* in cases of human infection

John G Gerrard,¹ Renu Vohra,² Graeme R Nimmo³

Photobacterium asymbiotica is a potential cause of severe soft tissue and systemic infection in Australia. The clinical and laboratory features have been described in a recent publication.¹ Recognition of this unusual pathogen presents a challenge for clinical microbiology laboratories. It is a bioluminescent gram-negative bacillus and is a member of the *Enterobacteriaceae*. It produces a thin zone of annular haemolysis on tryptic soy agar containing either 5 per cent sheep or horse blood and tends to swarm.

Some isolates produce a yellow pigment and all are faintly luminescent in total darkness. This species is not yet included in the databases of commercial bacterial identification systems. Use of the MicroScan Walkaway (Dade Behring Inc., Sacramento, CA), Vitek (bioMérieux, Hazelwood, MO) or API 20E (bioMérieux, Marcy l'Etoile, France) will result in incorrect identification. The results obtained with these three systems for six Australian isolates of *P. asymbiotica* are shown in the Table.

It is possible that infection due to this species is under-reported due to incorrect laboratory identification. Knowledge of the epidemiology of infection due to *P. asymbiotica* is incomplete. For example, it has only ever been isolated from clinical specimens and no reservoir or source has been identified. We wish to raise awareness of this infection among clinicians and laboratory workers in the hope of improving case identification. We would be grateful to receive information and isolates from other cases of this condition.

Reference

1. Gerrard JG, McNevin S, Alfredson D, Forgan-Smith R, Fraser N. *Photobacterium* species: bioluminescent bacteria as emerging human pathogens? *Emerg Infect Dis* 2003;9:251-254.

1. Director of Medicine, Department of Medicine, Gold Coast Hospital, Southport, Queensland
2. Consultant Microbiologist, Queensland Health Pathology Service, Gold Coast Hospital and Princess Alexandra Hospital, Queensland
3. Director of Microbiology, Queensland Health Pathology Service, Princess Alexandra Hospital, Woolloongabba, Queensland

Corresponding author: Dr John G. Gerrard, Director of Medicine, Department of Medicine, Gold Coast Hospital, Southport, QLD 4215. Telephone: +61 7 5571 8211. Facsimile: +61 7 5571 8996. Email: John_Gerrard@health.qld.gov.au

Table. Misidentification of Australian isolates of *P. asymbiotica* by commercial Vitek GNI, Microscan Walkaway Neg BP combo 11, Microscan Walkaway Rap Neg BP 5A and API 20E panels

Year	Location	Vitek GNI		Microscan Walkaway Neg BP combo 11		Microscan Walkaway Rap Neg BP 5A		API 20E	
		Bionumber	Misidentification	Bionumber	Misidentification	Bionumber	Misidentification	Bionumber	Misidentification
1998	Melbourne	6022100020	Unidentified	0004060-0	<i>P. oryzihabitans</i>	011377142202-000	<i>S. putrefaciens</i>	000000045	Non fermenter spp.
1998	Wangaratta	6002000020	<i>Providencia stuartii</i>	0000060-0	<i>P. oryzihabitans</i>	011377162222-400	<i>P. aeruginosa</i>	000000045	Non fermenter spp.
1998	Murwillumbah	6002100020	<i>Shigella dysenteriae</i>	0000064-0	<i>A. lwoffii</i>	011377142222-400	<i>S. putrefaciens</i>	000000045	Non fermenter spp.
1999	Gold Coast	60221000000	<i>Flavobacterium</i> spp.	0000060-0	<i>P. oryzihabitans</i>	011377102202-000	<i>S. putrefaciens</i>	000000045	Non fermenter spp.
2001	Gladstone	60201000000	<i>Flavobacterium</i> spp.	4000000-2	<i>Shigella</i> sp.	011377100002-000	<i>S. putrefaciens</i>	000000045	Non fermenter spp.
2003	Beautesert	60221000000	<i>Flavobacterium</i> spp.	0004060-0	<i>P. oryzihabitans</i>	011377102202-000	<i>S. putrefaciens</i>	000000045	Non fermenter spp.