

## Document details



< Back to results | 1 of 10 Next >

Export Download Print E-mail Save to PDF Add to List More... >

[Full Text](#) View at Publisher

Methods in Molecular Biology  
Volume 1046 2019 Pages 221-228

## Global metabolic analyses of acinetobacter baumannii (Book Chapter)

Mahamad Maifah, M.H.<sup>a,b</sup>, Velkov, T.<sup>c</sup>, Creek, D.J.<sup>b</sup>, Li, J.<sup>d</sup>  

<sup>a</sup>International Institute for Halal Research and Training, International Islamic University Malaysia, Gombak, Selangor, Malaysia

<sup>b</sup>Drug Delivery, Disposition and Dynamics, Monash Institute of Pharmaceutical Sciences, Monash University, Parkville, VIC, Australia

<sup>c</sup>Department of Pharmacology and Therapeutics, The University of Melbourne, Parkville, VIC, Australia

View additional affiliations 

### Abstract

 View references (20)

*Acinetobacter baumannii* is rapidly emerging as a multidrug-resistant pathogen responsible for nosocomial infections including pneumonia, bacteremia, wound infections, urinary tract infections, and meningitis. Metabolomics provides a powerful tool to gain a system-wide snapshot of cellular biochemical networks under defined conditions and has been increasingly applied to bacterial physiology and drug discovery. Here we describe an optimized sample preparation method for untargeted metabolomics studies in *A. baumannii*. Our method provides a significant recovery of intracellular metabolites to demonstrate substantial differences in global metabolic profiles among *A. baumannii* strains. © Springer Science+Business Media, LLC, part of Springer Nature 2019.

### SciVal Topic Prominence

Topic: *Acinetobacter baumannii* | *Acinetobacter* | *Baumannii* clinical

Prominence percentile: 98.862 

### Author keywords

*Acinetobacter baumannii*

Metabolomics

Multidrug-resistant

Polymyxins

ISSN: 10643745

Source Type: Book series

Original language: English

DOI: 10.1007/978-1-4939-9118-1\_28

PubMed ID: 30798566

Document Type: Book Chapter

Publisher: Humana Press Inc.


### References (20)


View in search results format >

All

Export

 Print

 E-mail

 Save to PDF

Create bibliography

### Metrics

0 Citations in Scopus

0 Field-Weighted  
Citation Impact



#### PlumX Metrics

Usage, Captures, Mentions,  
Social Media and Citations  
beyond Scopus.

### Cited by 0 documents

Inform me when this document  
is cited in Scopus:

[Set citation alert >](#)

[Set citation feed >](#)

### Related documents

Synergistic killing of polymyxin B in combination with the antineoplastic drug mitotane against polymyxin-susceptible and -resistant *Acinetobacter baumannii*: A metabolomic study

Tran, T.B., Bergen, P.J., Creek, D.J. (2018) *Frontiers in Pharmacology*

Untargeted metabolomics analysis reveals key pathways responsible for the synergistic killing of colistin and doripenem combination against *Acinetobacter baumannii*

Maifah, M.H.M., Creek, D.J., Nation, R.L. (2017) *Scientific Reports*

Global metabolic analyses identify key differences in metabolite levels between polymyxin-susceptible and polymyxin-resistant *Acinetobacter baumannii*

Maifah, M.H.M., Cheah, S.-E., Johnson, M.D. (2016) *Scientific Reports*

- 1 Boucher, H.W., Talbot, G.H., Bradley, J.S., Edwards Jr., J.E., Gilbert, D., Rice, L.B., Scheld, M., (...), Bartlett, J.  
**Bad bugs, no drugs: No ESKAPE! An update from the Infectious Diseases Society of America** ([Open Access](#))

(2009) *Clinical Infectious Diseases*, 48 (1), pp. 1-12. Cited 2620 times.  
doi: 10.1086/595011

[View at Publisher](#)

Find more related documents in Scopus based on:

[Authors >](#) [Keywords >](#)

- 2 (2017) *Global Priority List of Antibiotic-Resistant Bacteria to Guide Research, Discovery, and Development of New Antibiotics*. Cited 495 times.  
Accessed 10 Dec 2018  
<http://www.who.int/medicines/publications/global-priority-list-antibiotic-resistant-bacteria/en/>

- 3 Fishbain, J., Peleg, A.Y.  
**Treatment of Acinetobacter infections** ([Open Access](#))

(2010) *Clinical Infectious Diseases*, 51 (1), pp. 79-84. Cited 194 times.  
doi: 10.1086/653120

[View at Publisher](#)

- 4 Dijkshoorn, L., Nemec, A., Seifert, H.  
**An increasing threat in hospitals: Multidrug-resistant Acinetobacter baumannii**

(2007) *Nature Reviews Microbiology*, 5 (12), pp. 939-951. Cited 939 times.  
doi: 10.1038/nrmicro1789

[View at Publisher](#)

- 5 Peleg, A.Y., Seifert, H., Paterson, D.L.  
**Acinetobacter baumannii: Emergence of a successful pathogen** ([Open Access](#))

(2008) *Clinical Microbiology Reviews*, 21 (3), pp. 538-582. Cited 1710 times.  
doi: 10.1128/CMR.00058-07

[View at Publisher](#)

- 6 Li, J., Nation, R.L., Turnidge, J.D., Milne, R.W., Coulthard, K., Rayner, C.R., Paterson, D.L.  
**Colistin: the re-emerging antibiotic for multidrug-resistant Gram-negative bacterial infections**

(2006) *Lancet Infectious Diseases*, 6 (9), pp. 589-601. Cited 747 times.  
doi: 10.1016/S1473-3099(06)70580-1

[View at Publisher](#)

- 7 Nation, R.L., Li, J., Cars, O., Couet, W., Dudley, M.N., Kaye, K.S., Mouton, J.W., (...), Turnidge, J.D.  
**Framework for optimisation of the clinical use of colistin and polymyxin B: The Prato polymyxin consensus**

(2015) *The Lancet Infectious Diseases*, 15 (2), pp. 225-234. Cited 138 times.  
<http://www.journals.elsevier.com/the-lancet-infectious-diseases>  
doi: 10.1016/S1473-3099(14)70850-3

[View at Publisher](#)