

## DiseaseINFOPACK: *Acinetobacter baumannii* (CAT: VADIP005)

<b>Proposal No/#PO</b>	:	<b>[Enter client specific #PO]</b>
<b>Product Name</b>	:	Comprehensive review/analysis of <i>Acinetobacter baumannii</i> disease trends/dynamics
<b>Project Initiation Date</b>	:	n/a
<b>Billable days</b>	:	n/a
<b>Initiator(s)</b>	:	[Enter client name, function and address]
<b>Therapeutic Area</b>	:	<i>Nosocomial pathogens</i>
<b>Product (if applicable)</b>	:	<b>CAT No:</b> VADIP005, published May 2009

## Background

*Acinetobacter* species are ubiquitous in the environment often found in soil and water. In the hospital the bacteria are rare opportunistic pathogens mostly isolated as a cause of ventilator-associated pneumonia (VAP) where patient mortality can range between 30-75%. Of greatest concern is the high intrinsic drug resistance of the most common type *Acinetobacter baumannii* which forces physicians to use older drugs such as polymyxins and colistin with low tolerability profiles. Certain types of *Acinetobacter baumannii* resistant to carbapenem antibiotics have also caused outbreaks in various countries including the United Kingdom. This **DiseaseINFOPACK** report is an expert review of the current literature providing the reader with a full easy-to-read overview of *Acinetobacter* species. The report covers epidemiology, outbreak case studies along with an assessment of current treatment options and future dynamics.

**PRODUCT CONTENTS:**

**Published May 2009 (CAT No: VADIP005)**

Executive Summary  
The Pathogen  
*Acinetobacter* Species Breakdown (UK)  
*Acinetobacter* spp. and Resistance  
Classifications of *Acinetobacter*  
Mechanisms of Resistance  
Carbapenem-resistant *Acinetobacter baumannii*  
Transmission  
Outbreaks of *Acinetobacter* (1)  
Outbreaks of *Acinetobacter* (2)  
Virulence and Pathogenesis  
Host Response  
Risk Factors For Infection  
Risk Groups  
Case study: US Military  
Prevention and Control  
Diagnosis - Microbiology  
*Acinetobacter* spp. – Infection Overview  
Clinical Outcome – Symptoms  
Treatment  
Morbidity/Mortality  
Epidemiology – Surveillance (US)  
Epidemiology – Surveillance (UK)  
Epidemiology – Incidence/Prevalence (US)  
Epidemiology – Incidence/Prevalence (UK)  
Key Disease Trends and Dynamics  
Opportunity For New Treatments  
Appendix I – Bibliography  
Appendix II – About VacZine Analytics  
Disclaimer

**PAGES: ~40 MS Powerpoint slides, fully referenced/sourced. Available in .pdf form**

**PROJECT METHODOLOGY:**

**VacZine Analytics** has conducted a comprehensive secondary research to review all available information regarding Chikungunya in major EU/Canada and US markets. Source materials used are literature articles, government websites, medical bodies and associations, conference proceedings etc.

#### PRODUCT PRICE:

**VacZine Analytics** will grant a [enter region] license to [enter client name], for the price of:

- o USD \$1995.00/ GBP £1339.00 (Region license)\*

\*A region is North America, Europe or ROW

For orders in the UK, VAT at 15% will be added to final invoice total

#### HOW TO ORDER:

To order please contact your region account manager or order direct at [orders@vaczine-analytics.com](mailto:orders@vaczine-analytics.com)  
This report can also be purchased on-line. Please review the **TERMS and CONDITIONS** of purchase.



**VacZine Analytics (R)** is a trading division of Assay Advantage Ltd, UK Company Number: 5807728

**VacZine Analytics (R)** and the “spiral logo” are UK Registered Trademarks, 2009

#### BIBLIOGRAPHY:

1. Al-Koja., MS et al. The skin as a source of *Acinetobacter* and Moraxella species occurring in blood cultures. J Clin Pathol. 1979;32:497-499Centers for Disease Control and Prevention (CDC). Drug-resistant *Acinetobacter* Infections in Healthcare Settings. Available at: CDC website ([www.cdc.gov](http://www.cdc.gov)) Accessed: October 2007.
2. Centers for Disease Control and Prevention (CDC). Drug-resistant *Acinetobacter* Infections in Healthcare Settings. CDC website ([www.cdc.gov](http://www.cdc.gov)) Accessed October 2007
3. Health Protection Agency UK (HPA). *Acinetobacter* spp bacteraemia, England, Wales and Northern Ireland: 2001 to 2005. Available at: [http://www.hpa.org.uk/infections/topics\\_az/acinetobacter\\_b/acineto06/species.htm](http://www.hpa.org.uk/infections/topics_az/acinetobacter_b/acineto06/species.htm). Accessed:October 2007
4. Cunha., BA et al. *Acinetobacter*. eMedicine ([www.emedicine.com](http://www.emedicine.com)). Updated 8 May 2007. Accessed October: 2007
5. Jellison TK., et al. Epidemiology, Resistance and Outcomes of *Acinetobacter baumannii* bacteremia treated with Imipenem-Cilastin or Ampicillin-Sulbactam Pharmacotherapy. 2001; 21:142-148
6. Vahaboglu., et al. Clinical importance of extended spectrum  $\beta$ -lactamase (PER-1-type) producing *Acinetobacter* spp and *P.aureginosa* strains. J Med Microbial. 2001; 50: 642-5
7. Paton., RH et al. B-lactamase-mediated imipenem resistance in *Acinetobacter baumannii*. Int J Antimicrob Agents 1993;2:81-88
8. Corbella., X et al. Emergence and rapid spread of carbapenem resistant during a large and sustained hospital outbreak of multiresistant *Acinetobacter baumannii*. J Clin Microbiol 2000;38: 4086-4095
9. Maragakis., et al. L. Multidrug-resistant (MDR) *Acinetobacter*. John Hopkins Medicine website. Available at: <http://www.hopkinsmedicine.org/heic/ID/mdr>. Accessed: October 2007
10. Villegas., MV et al. *Acinetobacter* outbreaks, 1977-2000. Infect Control Hosp Epidemiol. 2003; 24: 284-295
11. Manikal VM et al. Endemic Carbapenem-Resistant *Acinetobacter* Species in Brooklyn, New York: Citywide Prevalence, Interinstitutional Spread, and Relation to antibiotic Usage. Clin Inf Dis. 2000; 31:101-6
12. Sader HS et al. Use of macrorestriction analysis to demonstrate interhospital spread of multiresistant *Acinetobacter baumannii* in Sao Paulo, Brazil. Clin Infect Dis 1996; 23:631-4

13. Henwood CJ et al. Antibiotic resistance among clinical isolates of *Acinetobacter* in the United Kingdom and in-vitro evaluation of tigecycline (GAR-936) J.Antimicrob.Chemother. 2002; 49:479-487
14. Davis KA., et al. Multidrug-resistant *Acinetobacter* Extremity Infections in Soldiers. Emerg Infect Dis. 2005; 11(8)
15. Jolly-Guillou ., M et al. Clinical impact and pathogenicity of *Acinetobacter*. Clin Microbial Infect. 2005;11:868-873
16. Fagon., JY et al. Mortality due to ventilator-associated pneumonia or colonization with *Pseudomonas* or *Acinetobacter* species: assessment by Quantitative culture of samples obtained by a protected specimen brush. Clin Infect Dis. 1996; 23: 538-542
17. Abbo A., et al. Multidrug-resistant *Acinetobacter baumannii*. Emer Inf Dis. 2005; 11: 22-29
18. Tong., MJ et al. Septic complications of war wounds. JAMA. 1992; 219: 1044-7
19. US Centers For Disease Control and Prevention. *Acinetobacter baumannii* Infections among patients at Military Medical Facilities Treating Injured US Service Members 2002-2004
20. Wisplinghoff ., H et al. Nosocomial Infections in US Hospitals: analysis of 24,179 cases from a prospective nationwide surveillance study. Clin Infect Dis 2004; 39: 309-17
21. Rello., J. et al. *Acinetobacter baumannii* infections in the ICU: Customization is the key. Chest. 1999; 115: 1226-1229
22. NCCLS. Performance standards for antimicrobial disk susceptibility tests. Approved standard M2-A8. Wayne (PA): The committee; 2003.
23. Urban., et al C. Considerations in control and treatment of nosocomial infections due to multi-drug resistant *Acinetobacter baumannii*. Clin Infect Dis. 2003; 36:1268-74
24. Kwa AL et al. Nebulized colistin in the treatment of pneumonia due to multidrug resistant *Acinetobacter baumannii* and *Pseudomonas aureginosa*. Clin. Infect. Dis. 2005; 41: 754-757
25. Bergogne-Berezin., E et al. *Acinetobacter* species as nosocomial pathogens: microbiological, clinical and epidemiological features. Clin Microbial Rev 1996;9:148-65
26. Wisplinghoff ., H et al. Nosocomial bloodstream infections caused by *Acinetobacter* species in the US hospitals: clinical features, molecular epidemiology, And antimicrobial susceptibility. Clin Infect Dis. 2000;31:690-7
27. Valles., J et al. Nosocomial bacteremia in critically ill patients: a multicenter study evaluating epidemiology and prognosis. Clin Infect Dis. 1997;24:387-95
28. Mcdonald., LC et al. Seasonal variation of *Acinetobacter* infections: 1987-1996. Cin Inf Dis. 1999;29:1133-7
29. Rhomberg., PR et al. Comtemporary activity of meropenem and comparator broad-spectrum agents: MYSTIC program report from the US component.Diagn Microbio Infect Dis. 2007; 57(2):207-15
30. Wisplinghoff .,H et al. Nosocomial bloodstream infections in US hospital: analysis of 254,179 cases from a prospective nationwide surveillance study. Clin Inf Dis. 2004; 39(3):309-317
31. Health Protection Agency UK. *Acinetobacter* spp bacteraemias, England, Wales, and Northern Ireland: 2001 to 2005. Available at: [http://www.hpa.org.uk/Infections/topics\\_az/acinetobacter\\_b/acineto06/trends.htm](http://www.hpa.org.uk/Infections/topics_az/acinetobacter_b/acineto06/trends.htm). Accessed October: 2007
32. Gaynes., R. Overview of nosocomial infections caused by Gram-negative bacilli. Clin Infect Dis. 2005;41:848-854
33. Fagon., JY et al. Nosocomial pneumonia in patients receiving continuous mechanical ventilation: prospective analysis of 52 episodes with protected specimen brush and quantitative culture techniques. Am Rev Respir Dis 1989;139:877-884
34. Rello J., et al. Impact of previous antimicrobial therapy on the etiology and outcome of ventilator-associated pneumonia. Chest 1993;104:1230-1235
35. Kollef., MH et al. The effect of late-onset ventilator-associated pneumonia determining patient mortality. Chest 1995;1655-1662
36. Coelho., JM et al. Occurrence of Carbapenem-resistant *Acinetobacter baumannii* Clones at Multiple hospitals in London and Southeast England. J Clin Microbial. 2006; 44: 3623-3627
37. Hartzell., JD et al. *Acinetobacter* pneumonia: A Review. Medscape General Medicine. 2007;9(3); 4. Posted 07/05/2007

**TERMS and CONDITIONS:**

VacZine Analytics – a trading division of Assay Advantage Ltd UK Company Number: 5807728 (Herein referred to as “The Company”). (Herein [enter client name] to as “The Client”).

1. This finished research product is provided is provided as a Service. Any additional Service required by the client will be subject to a new proposal being prepared.
2. The Service will commence after written (e-mail) or Fax confirmation stating the Client’s acceptance of the Service according the description proposed by the Company.
3. **Cancellation policy.** The Company’s cancellation policies are in accordance with the EU Consumer Protection (Distance Selling) Regulations 2000 (DSRs). Prior to acceptance of an order the Company will make available written information regarding Clients cancellation rights. This is posted on the Company website and is available for public review.
4. **Cancellation rights:** For finished documents - a Clients cancellation rights will last for **seven working days** counting from the day that the order was concluded. If the Services i.e. provision of the documents has taken place with the Clients agreement before this period the Client’s cancellation rights have ended.
5. Invoicing will **100%** after submission of deliverables to the Client in a form reasonably acceptable to the Client.
6. If not purchased on-line invoices are payable within **thirty days** of the invoice date.
7. All proposals are quoted in **\$USD dollars or £GBP** and invoices are to be settled in the same currency.
8. The Company agrees not to disclose to any third party confidential information acquired in the course of providing the services listed without the prior written consent of the Client. Exception occurs when the information is already in the public domain or when disclosure is necessary to help the Company’s employees and agents with the performance of the Company’s obligations to achieve satisfactory completion of the project and approved in writing by the Client.
9. **Force Majeure:** The Company will not be liable for any delay or failure to perform any obligation under this Agreement insofar as the performance of such obligation is prevented by an event beyond our reasonable control, included by not limited to, earthquake, fire, flood or any other natural disaster, labour dispute, riot, revolution, terrorism, influenza pandemic, acts of restraint of government or regulatory authorities, failure of computer equipment and failure or delay of sources from which data is obtained.
10. Please also refer to Master **TERMS and CONDITIONS** available upon request or at [www.vacZine-analytics.com](http://www.vacZine-analytics.com)

**VacZine Analytics**

Warren House  
Bells Hill  
Bishops Stortford  
Herts  
CM23 2NN  
United Kingdom  
Tel: +44 (0) 1279 654514 / +44 (0) 7952470582 / Fax: +44 (0) 1279 655926  
E-mail: [info@vacZine-analytics.com](mailto:info@vacZine-analytics.com)

## About VacZine Analytics:

**VacZine Analytics** is a new strategic research agency based in the United Kingdom. Its aim is to provide disease and commercial analysis for the vaccine industry and help build the case for developing new vaccines and biologics.

For more information please visit our website [www.vacZine-analytics.com](http://www.vacZine-analytics.com)

**VacZine Analytics (R)** is a trading division of Assay Advantage Ltd, UK Company Number: 5807728

**VacZine Analytics (R)** and “the spiral logo” are UK Registered Trademarks, 2009



**VacZine Analytics**<sup>®</sup>

Bringing life to vaccine strategy...

Bringing life to vaccine strategy...

[www.vacZine-analytics.com](http://www.vacZine-analytics.com)

Warren House, Bells Hill, Bishops Stortford, Herts CM23 2NN, United Kingdom **Tel.** +44 (0) 1279 654514 **e-mail:** [info@vacZine-analytics.com](mailto:info@vacZine-analytics.com)

