

Anaerobe 2010

The 10th Biennial Congress of the
Anaerobe Society of the Americas

Philadelphia, PA USA • July 7-10, 2010

SESSION VI: DIAGNOSTIC METHODS & MICROBIOLOGY

Is Sequencing the Solution?	3
<i>Limbago, B.*</i>	
Identification of Gram-Positive Anaerobic Cocci by Matrix Assisted Laser Desorption and Ionization Time-of-Flight Mass Spectrometry	4
<i>Wildeboer-Veloo, A.C.M.*; Erhard, M.; Welker, M.; Welling, G.W.; Degener, J.E.</i>	
Tests to Detect <i>Clostridium difficile</i> : The Next Generation	5
<i>Carroll, K.C.*</i>	
<i>Bacteroides fragilis</i> Fibrinogen Interactions	6
<i>Houston, S.; Blakely, G.W.; McDowell, A.; Martin, L.; Patrick, S.*</i>	
Collagen Adhesins and Proteases of South African Clinical Strains of <i>Bacteroides fragilis</i>	7
<i>Galvão, B.P.G.V.*; Rafudeen, M.S.; Ferreira, E.O.; Patrick, S.; Abratt, V.R.</i>	
Comparison of the BD GeneOhm™ <i>Cdiff</i> Assay to a Three-step Algorithm to Detect Toxigenic <i>Clostridium Difficile</i> in Fecal Samples	8
<i>Allen, S.D.*; Wood, C.K.; Fuller, D.; Villanueva, R.E.; Davis, T.E.; Blue, D.E.</i>	
Extensive Comparison of the Eswab (Liquid Amies Transport System) with the Port-A-Cul Swab Transport System for Maintaining Clinically Important Anaerobes at Room Temperature and Refrigeration Temperature	9
<i>Allen, S.D.*; Kedra, J.N.; Villanueva, R.E.; Siders, J.A.</i>	
Comparison of Real Time PCR and Conventional Methods for Detection of <i>Clostridium difficile</i>	10
<i>Buchner, P.A.*; Baron, E.J.; Banaei, N.</i>	
Effect of Storage Conditions on Stability of Free and Encapsulated In Plain- or Cysteine-Supplemented Alginate, <i>Bifidobacterium animalis</i> BB-12®	11
<i>Sousa, S.C.; Costa, E.A.*; Gomes, A.M.; Pintado, M.M.; Malcata, F.X.; Silva, J.P.; Sousa Lobo, J.M.; Costa, P.; Amaral, M.H.; Bahia, M.F.; Rocha-Santos, T.; Rodrigues, D.; Freitas, A.C.</i>	
Broth Pre-Amplification Enhances Sensitivity of Real Time PCR for Detection of <i>Clostridium Difficile</i> from Peri-Rectal Swabs and Stool Specimens	12
<i>Curry, S.R.*; Henderson, T.K.; Gee, J.L.; Marsh, J.W.; Pasculle, A.W.; Muto, C.A.; Harrison, L.H.</i>	
The Transcriptional Regulator <i>OxyR</i> and Catalase Affects <i>Bacteroides fragilis</i> and Other <i>Bacteroides</i> ssp Survival Within Peritoneal Macrophages	13
<i>Dias, M.F.; Ferreira, L.Q.; Vommaro, R.C.; Santos-Filho, J.; Domingues, R.M.C.P.*</i>	
<i>Clostridiales bacterium</i> CD3:22—An Anaerobic Spore-forming Bacterium Isolated from Small Intestine in a Celiac Disease Patient	14
<i>Hedberg, M.*; Hammarström, M.-L.; Hernell, O.; Baranov, V.; Wai, S.N.; Moore, E.R.B.; Hammarström, S.</i>	
The Use of Stable Isotope Technology to Determine a Bioremediation Strategy for a Decommissioned Chemical Manufacturing Facility	15
<i>Jennings, E.M.*; Mack, E.E.; Klei, H.; Butler, P.B.; Donohoe, L.; Stille, T.E.; Clark, D.</i>	
Comparative Study of Enzyme Immunoassays: Techlab Toxins A & B, C. Diff Quik Check for Glutamate Dehydrogenase (GDH); PCR-BD GeneOhm® and Cytotoxin Assay (CTA) for the Detection of <i>Clostridium Difficile</i> Toxin in Adult Stool Specimens	16
<i>Kafka, J.E.*; Yamamura, D.L.; Jissam, A.; McCaffery, W.; Ahmed, B.; Main, C.; Lee, C.H.</i>	

For More Information: www.anaerobe.org

Anaerobe 2010

The 10th Biennial Congress of the
Anaerobe Society of the Americas

Philadelphia, PA USA • July 7-10, 2010

SESSION VI: DIAGNOSTIC METHODS & MICROBIOLOGY

Partial Sequence Comparison of the 16S rRNA, <i>rpoB</i> , and <i>cpn60</i> Genes of Human <i>Campylobacter showae</i> Isolates	17
<i>Kim, K.;</i> * <i>Könönen, E.;</i> <i>Lounatmaa, K.;</i> <i>Summanen, P.;</i> <i>Finegold, S.M.</i>	
Monitoring Gene Expression with Fluorescent Flavin-Binding Protein Under Anaerobic Conditions	18
<i>Lobo, L.A.;</i> * <i>Smith, C.J.;</i> <i>Rocha, E.R.</i>	
Use of Multi-Enzyme Pulsed Field Gel Electro-Phoresis (PFGE) to Differentiate within a Single Cluster of <i>Clostridium difficile</i>	19
<i>MacCannell, D.;</i> * <i>Thompson, A.D.;</i> <i>Songer, J.G.;</i> <i>Limbago, B.M.</i>	
Multilocus Sequence Analysis of <i>Bacteroides fragilis</i> Strains	20
<i>Miranda, K.R.;</i> <i>Boente, R.F.;</i> * <i>Neves, F.P.G.;</i> <i>Oliveira, I.C.M.;</i> <i>Santos-Filho, J.;</i> <i>Oelemann, W.M.R.;</i> <i>Domingues, R.M.C.P.</i>	
Characterization of <i>Leptotrichia</i> Isolates from Human Clinical Specimens and Detection of 3 Possibly Novel Taxon Groups	21
<i>Ng, B.;</i> * <i>Bernard, K.</i>	
Development of a Lightcycler Real-Time PCR Assay for Detection of Toxigenic <i>Clostridium difficile</i> in Animal Fecal Samples	22
<i>Avbersek, J.;</i> <i>Pirs, T.;</i> * <i>Ocepek, M.</i>	
Identification of Aerobic Gram Positive Rods Using <i>Hae</i> III Restriction Enzyme	23
<i>Pollard, R.R.;</i> * <i>Rabe, L.K.;</i> <i>Beamer, M.A.;</i> <i>Austin, M.A.;</i> <i>Hillier, S.L.</i>	
Evaluation of GeneXpert <i>Clostridium difficile</i> Assay, Ridascreen <i>C. difficile</i> Toxin A/B Assay, Tox A/B II Assay, Tissue Culture and Stool Culture in the Diagnosis of <i>C. difficile</i> Infection (CDI)	24
<i>Jamal, W.Y.;</i> <i>Shahin, M.;</i> <i>Rotimi, V.O.*</i>	
<i>Bacteroides</i> , <i>Parabacteroides</i> and Co.: Identification by MALDI-TOF-MS	25
<i>Marschal, M.;</i> <i>Erhard, M.;</i> <i>Autenrieth, I.B.;</i> <i>Schumacher, U.K.*</i>	
Comparison of Conventional Culture, Clone Libraries, and Pyrosequencing for the Analysis of Bacterial Flora Associated with Wound Infection	26
<i>Summanen, P.;</i> * <i>Dowd, S.;</i> <i>Molitoris, D.;</i> <i>Liu, C-X.;</i> <i>Finegold, S.M.</i>	
Survey of Bacterial Diversity in 100 Wound Samples via Culture and Real-time Polymerase Chain Reaction	27
<i>Tong, J.;</i> * <i>Summanen, P.;</i> <i>Rowlinson, MC.;</i> <i>Bennion, R.;</i> <i>Talan, D.;</i> <i>Finegold, S.M.</i>	
<i>Peptoniphilus coxii</i> sp. nov. and <i>Peptoniphilus tyrrelliae</i> sp. nov. Isolated from Human Skin and Soft-Tissue Infections	28
<i>Citron, D.M.;</i> * <i>Tyrrell, K.L.;</i> <i>Leoncio, E.S.;</i> <i>Goldstein, E.J.C.</i>	
Anaerobic Bacteria in Diagnostic Cultures—A Preliminary Experience	29
<i>Vishwanath, S.;</i> * <i>Mukhopadhyay, C.;</i> <i>Bairy, I.</i>	
TraM, Encoded by the Mobile Element BTF-37, is Essential for Conjugation within and from <i>Bacteroides fragilis</i>	30
<i>Nguyen, M.T.;</i> * <i>Hecht, D.W.;</i> <i>Vedantam, G.</i>	
Molecular Characterization of a Plasmatic Fibronectin-Binding Protein in <i>Bacteroides fragilis</i>	31
<i>Pauer, H.;</i> * <i>Santos Filho, J.;</i> <i>Ferreira, E.O.;</i> <i>Domingues, R.M.C.P.</i>	

Anaerobe 2010

The 10th Biennial Congress of the
Anaerobe Society of the Americas

Philadelphia, PA USA • July 7-10, 2010

DIAGNOSTIC METHODS & MICROBIOLOGY

EFFECT OF STORAGE CONDITIONS ON STABILITY OF FREE AND ENCAPSULATED IN PLAIN- OR CYSTEINE-SUPPLEMENTED ALGINATE, *BIFIDOBACTERIUM* *ANIMALIS* BB-12®

Sousa, S.C.;¹ Costa, E.A.;*¹ Gomes, A.M.;¹ Pintado, M.M.;¹ Malcata, F.X.;¹ Silva, J.P.;² Sousa Lobo, J.M.;²
Costa, P.;² Amaral, M.H.;² Bahia, M.F.;² Rocha-Santos, T.;³ Rodrigues, D.;³ Freitas, A.C.³

¹CBQF, Escola Superior de Biotecnologia, Universidade Católica Portuguesa Porto, Portugal

²Faculdade de Farmácia, Universidade do Porto, Porto, Portugal

³ISEIT/ Viseu, Instituto Piaget, Lordosa, Viseu, Portugal

The main objective of this research work was to study the viability of *Bifidobacterium animalis* BB-12® as free and calcium alginate-encapsulated cells, with or without cysteine, throughout storage, at four different temperatures. Extrusion by aerodynamically assisted flow was used to produce alginate and calcium alginate supplemented with L-cysteine-HCl microcapsules, containing *B. animalis* BB-12®. The microcapsules were suspended in Ringer solution in a 1:9 (g/mL) ratio, and stored at 21, 4, -20 and -80 °C throughout six months, respectively. In parallel, the viability of free cells in cell suspension, was subjected to the same storage conditions and the corresponding viability assessed. Results showed that at 21, 4 and -20 °C, the encapsulation did not have a protective effect—free cells maintained their viability throughout longer periods than encapsulated counterparts. At -80 °C, encapsulation protected *B. animalis* BB-12® in comparison to the behavior of free cells. However, this effect was only observed in calcium alginate microcapsules supplemented with L-cysteine.HCl. After 180 days storage at -80 °C, a 2 log cycle difference, in viable cells was observed between microcapsules with or without cysteine. The viable numbers of *B. animalis* BB-12® in microcapsules without cysteine was similar to that of free cells. In conclusion, alginate encapsulation revealed a protective effect on viability of *B. animalis* BB-12® stored at -80 °C when supplemented with L-cysteine.HCl.