

Dr Barbara Bolgiano

Complete list of publications and contributions to non-authored technical publications

1. Gao F, Lockyer K, Burkin K, Crane DT, Bolgiano B. (2014) A physico-chemical assessment of the thermal stability of pneumococcal conjugate vaccine components. *Human Vaccines & Immunotherapeutics*, in press.
2. Xing D, Asokanathan C, Xu YH, Bolgiano B, Douglas-Bardsley, Zhang S, Wang J, Corbel M. Relationship of immunogenicity to protective potency in acellular pertussis vaccines. *Human Vaccines & Immunotherapeutics* 2014; 10: 1-8.
3. Bristow AF, Bird C, Bolgiano B, Thorpe R. Regulatory requirements for therapeutic proteins: the relationship between the conformation and biological activity of filgrastim. *Pharmeuropa Bio & Scientific Notes*, October 2012: 103-17.
4. Xie O, Bolgiano B, Gao F, Lockyer F, Swann, C, Jones C, Selrieu, Njanpop-Lafourcade B-M, Tamekloe TA, Pollard AJ, Norheim G. Characterisation of size, structure and purity of a serogroup X *Neisseria meningitidis* polysaccharide, and development of an assay for quantification of human antibodies. *Vaccine* 2012; 30: 5812-23.
5. Vipond C, Mulloy B, Rigsby P, Burkin K, Bolgiano B and the MenC IS Working Group. Evaluation of a candidate International Standard for Meningococcal Group C polysaccharide. *Biologicals* 2012; 40: 353-63.
6. Martino A, Magagnoli C, De Conciliis G, D'Ascenzi S, Forster MJ, Allen L, Brookes C, Taylor S, Bai X, Findlow J, Feavers IM, Rodger A, Bolgiano B. Structural characterization, stability and antibody recognition of chimeric NHBA-GNA1030: An investigational vaccine component against *Neisseria meningitidis*. *Vaccine* 2012; 30: 1330-42.
7. Xu Y, Zhang S, Bolgiano B, Tan Y, Asokanathan C, Zhang H, Xing D, Wang J. Comparison of recombinant and native pertactin of *Bordetella pertussis*. *Vaccine* 2011; 24: 1974-80.
8. Saydam M, Burkin K, Care R, Rigsby P, Bolgiano B, Mawas F. Immunogenicity and thermal stability of a combined vaccine against *Haemophilus influenzae* type b and *Neisseria meningitidis* serogroup C diseases. *Vaccine* 2010; 28: 6228-34.
9. Otto RBD, Crane DT & Bolgiano B. A study of physico-chemical interactions between *Haemophilus influenzae* type b and meningococcus group C conjugate vaccines. *African Health Sciences* 2007; 7: 190-6.
10. Bolgiano B, Mawas F, Burkin K, Crane DT, Saydam M, Rigsby P & Corbel MJ. A retrospective study on the quality of *Haemophilus influenzae* type b vaccines used in the U.K. between 1996 and 2004. *Human Vaccines* 2007; 3: 176-82.
11. Mawas F, Bolgiano B, Rigsby P, Crane D, Belgrave D & Corbel MJ. Evaluation of the saccharide content and stability of the first WHO International Standard for *Haemophilus*

- influenzae* b capsular polysaccharide. *Biologics* 2007; 35: 235-45.
12. Ho MM, Bolgiano B & Corbel MJ. Response to letter. Don't shoot the [Carrier]. *Human Vaccines* 2007; 3: 41.
 13. Qazi O, Bolgiano B, Crane D, Svergun DI, Konarev PV, Yao Z-P, Robinson CV, Brown KA & Fairweather N. The H_c fragment of tetanus toxin forms stable, concentration-dependent dimers via an intermolecular disulfide bond. *J Mol Biol* 2007; 365: 123-34.
 14. Qazi O, Sesardic D, Tierney R, Soderback Z, Crane D, Bolgiano B & Fairweather N. Reduction of ganglioside binding activity of tetanus toxin Hc fragment destroys immunogenicity: implications for development of novel tetanus vaccines. *Infection and Immunity* 2006; 74: 4884-91.
 15. Ho MM, Bolgiano B, Martino A, Kairo SK, Corbel MJ. Preclinical laboratory evaluation of a bivalent *Staphylococcus aureus* saccharide exotoxin A protein conjugate vaccine. *Human Vaccines* 2006; 2: 89-98.
 16. Suker J, Feavers IM, Corbel MJ, Jones C & Bolgiano B. Control and lot release of meningococcal group C conjugate vaccines. *Expert Rev. Vaccines* 2004; 3: 533-40.
 17. Jeffs SA, Goriup S, Kebble B, Crane D, Bolgiano B, Sattentau Q, Jones S & Holmes H. Expression and characterisation of recombinant oligomeric envelope glycoproteins derived from primary isolates of HIV-1. *Vaccine* 2004; 22: 1032-46.
 18. Fowler S, Xing D K-L, Bolgiano B, Yuen CT, Corbel, MJ. Modification of the catalytic and binding subunits of pertussis toxin by formaldehyde: effects on toxicity and immunogenicity. *Vaccine* 2003; 21: 2329-37.
 19. Fowler S, Byron O, Jumel K, Xing D, Corbel MJ, Bolgiano B. Novel configurations of high molecular weight species of pertussis toxin vaccine component. *Vaccine* 2003; 21, 2678-88.
 20. Ho MM, Mawas F, Bolgiano B, Lemercinier X, Crane D, Huskisson R, Corbel M. Physico-chemical and immunological examination of the thermal stability of tetanus toxoid conjugate vaccines. *Vaccine* 2002; 20: 3509-22.
 21. Jumel K, Ho MM, Bolgiano B. Evaluation of Meningococcal C oligosaccharide conjugate vaccines by size exclusion chromatography/multi-angle laser light scattering. *Biotechnology Applied Biochemistry* 2002; 36: 219-26.
 22. Bolgiano B, Mawas F, Yost SE, Crane DT, Lemercinier X, Corbel MJ. Effect of physico-chemical modification on the immunogenicity of *Haemophilus influenzae* type b oligosaccharide-CRM₁₉₇ conjugate vaccines. *Vaccine* 2001; 19: 3189-200.
 23. Ho MM, Lemercinier X, Bolgiano B, Crane DT, Corbel MJ. Conformational stability of the subunit components of meningococcal oligosaccharide C-CRM₁₉₇ conjugate vaccines. *Biotechnology Applied Biochemistry* 2001; 33: 91-8.
 24. Bolgiano B, Fowler S, Turner K, Sesardic D, Xing DK-L, Crane DT, Corbel MJ. Monitoring of protein vaccine components by circular dichroism, fluorescence spectroscopy and size-exclusion chromatography: diphtheria, pertussis and tetanus toxoids. *Developments in Biologicals* 2000; 103: 51-9.
 25. Fowler S, Bolgiano B, Byron O, Xing D, Corbel MJ. Pertussis toxin: effects of formaldehyde on structural properties. *Intl J Med Micro*, 2000; 290: A63.

26. Frech C, Hilbert AK, Hartmann G, Mayer K, Sauer T, Bolgiano B. Physicochemical analysis of purified diphtheria toxoids: Is toxoided then purified the same as purified then toxoided? *Developments in Biologicals* 2000; 103: 205-15.
27. Ho MM, Bolgiano B, Corbel MJ. Assessment of the stability and immunogenicity of meningococcal oligosaccharide C-CRM₁₉₇ conjugate vaccines. *Vaccine* 2000; 19: 716-25.
28. Ho MM, Lemercinier X, Bolgiano B, Corbel MJ. Monitoring stability of meningococcal group C conjugate vaccines; correlation of physico-chemical methods and immunogenicity assays. *Developments in Biologicals* 2000; 103: 139-50.
29. Jepson M, Crane D, Basak A, Naylor C, Titball RW, Bolgiano B. Structural analysis and calcium binding of the C-domain of *C. perfringens* alpha-toxin. *Intl J Med Micro* 2000: 290.
30. Sasiak AB, Bolgiano B, Crane DT, Hockley DJ, Corbel MJ, Sesardic D. Comparison of in vitro and in vivo methods to study stability of PLGA microencapsulated tetanus toxoid vaccines. *Vaccine* 2000; 19:694-705.
31. Bolgiano B, Crane DT, Xing D, Williams L, Jones C, Corbel MJ. Physico-chemical analysis of *Bordetella pertussis* antigens. *Biologicals* 1999; 27: 155-62.
32. Crane, DT, Bolgiano B, Jones C, Corbel MJ, Sasiak A, Sesardic D, Xing D. Physicochemical methods for testing consistency of production for toxoid and glyco-conjugate vaccines. *Developments in Biological Standardization* 1999; 101:324.
33. Corbel MJ, Xing DK-L, Bolgiano B, Hockley DJ. Approaches to the control of acellular pertussis vaccines. *Biologicals* 1999; 27:133-41.
34. Jeffs S, Jones S, Kebble B, Holmes J, Bolgiano B, Crane D, Stebbings R. Characterisation of oligomeric recombinant envelope glycoproteins from primary isolates of HIV-1. In: *The Fourth European Conference on Experimental AIDS Research*, pp. 195-200, Monduzzi Editore, Bologna; 1999.
35. Jepson M, Howells A, Bullifent HL, Bolgiano B, Crane D, Miller J, Holley J, Jayasekera P, Titball RW. Differences in the carboxy-terminal (putative phospholipid binding) domains of *Clostridium perfringens* and *Clostridium bifermentans* phospholipases C influence the hemolytic and lethal properties of these enzymes. *Infection Immunity* 1999; 67:3297-301.
36. Lemercinier X, Crane D, Gee C, Austin, S, Bolgiano B, Jones C. New methods for the characterization of biopharmaceuticals: Conjugate vaccines against *Haemophilus influenzae* type b. *Developments in Biological Standardization* 1999; 101:177-83.
37. Naylor CE, Jepson M, Crane DT, Titball RW, Miller J, Basak AK, Bolgiano B. Characterisation of the calcium-binding C-terminal domain of *Clostridium perfringens* alpha-toxin. *J Molecular Biology* 1999; 294:757-70.
38. Tarelli E, Mire-Sluis A, Tivnann HA, Bolgiano B, Crane DT, Gee C, Lemercinier X, Athayde ML, Sutcliffe N, Corran PH, Rafferty B. Recombinant human albumin as a stabilizer for biological materials and for the preparation of international reference reagents. *Biologicals* 1998; 26:331-46.
39. Crane DT, Bolgiano B, Jones C. Comparison of the diphtheria mutant toxin, CRM197, with a *Haemophilus influenzae* type-b polysaccharide-CRM197 conjugate by optical spectroscopy. *European Journal of Biochemistry* 1997; 246:320-27.
40. Jones C, Crane DT, Lemercinier X, Bolgiano B, Yost, SE. Physicochemical studies of the structure and stability of polysaccharide-protein conjugate vaccines. *Developments in Biological Standardization* 1996; 87:143-51.

41. Jones C, Bolgiano, B. Applications of circular dichroism and fluorescence spectroscopy to probe protein-protein interactions. *Nanobiology* 1996; 4:1-15.
42. Xing DK-L, Crane DT, Bolgiano B, Corbel MJ, Jones C, Sesardic D. Physicochemical and immunological studies on the stability of free and microsphere-encapsulated tetanus toxoid *in vitro*. *Vaccine* 1996; 14:1205-13.
43. Crane DT, Bolgiano B, Jones C, Edgell TA, Pring JB, Gaffney, PJ. Stability of the glycoenzyme tissue plasminogen activator studied by circular dichroism. *Biochemical Society Transactions* 1994; 22:105S.
44. Bourne Y, Bolgiano B, Liao D-I, Strecker G, Cantau P, Herzberg O, Feizi T Cambillau C. X-ray crystallography reveals cross-linking of mammalian lectin (Galectin-1) by biantennary-type saccharides. *Nature Structural Biology* 1994; 1:863-70.
45. Bourne Y, Bolgiano B, Nesa M-P, Penfold P, Johnson D, Feizi T, Cambillau C. Crystallisation and preliminary X-ray diffraction studies of the soluble 14kDa β -galactoside-binding lectin from bovine heart. *Journal of Molecular Biology* 1994; 235:787-89.
46. Bolgiano B, Salmon I, Poole R. Reactions of the membrane-bound cytochrome *bo* terminal oxidase of *Escherichia coli* with carbon monoxide and oxygen. *Biochim Biophys Acta* 1993; 1141:95-104.
47. Bolgiano B, Davies HC, Poole, RK. Using the bacterium *Paracoccus denitrificans* and other "runaway mitochondria" as classroom models for respiratory electron transport. *Biochemical Society Transactions* 1991; 19:976-81.
48. Bolgiano B, Salmon I, Ingledew WJ, Poole, RK. Redox analysis of the cytochrome *o*-type oxidase of *Escherichia coli* reveals three redox components. *Biochemical Journal* 1991; 274:723-30.
49. Salerno JC, Bolgiano B, Ingledew WJ. Heme-copper and heme-heme interactions in the cytochrome *bo*-containing quinol oxidase of *Escherichia coli*. *J Biol Chem* 1990; 265:4364-68.
50. Bolgiano B, Smith L, Davies, HC. Electron transport reactions in a cytochrome *c*-deficient mutant of *Paracoccus denitrificans*. *Biochimica Biophysica Acta* 1989; 973:227-34.
51. Smith L, Bolgiano B, Davies HC. Kinetics of the interactions of the cytochrome *c* oxidase of *Paracoccus denitrificans* with *Paracoccus* and mitochondrial cytochrome *c*. *Prog. Clin. Biol. Res.* 1988; 274:619-35.
52. Smith L, Bolgiano B, Davies, HC. Kinetics of the interaction of cytochrome *c* oxidase of *Paracoccus denitrificans* with *Paracoccus* and mitochondrial cytochrome *c*. In King, T (ed.) *Oxidases and Related Redox System*. New York: AR Liss; 1988. p 619-35.
53. Bolgiano B, Smith, L, Davies, HC. Kinetics of the interaction of the cytochrome *c* oxidase of *Paracoccus denitrificans* with its own and bovine cytochrome *c*. *Biochimica Biophysica Acta* 1988; 933:341-50.

Contributions to non-authored technical publications

Mawas F, Bolgiano B, Bygrave D, Crane D, Rigsby D, Corbel MJ. *International collaborative study to evaluate a candidate international standard for Haemophilus influenzae type b capsular polysaccharide*. World Health Organization. Technical Report Series no. WHO/BS/05.2018. 2005.
<http://www.who.int/iris/handle/10665/69141> (accessed 28 July 2014).

Vipond C, Mulloy B, Rigsby P, Bolgiano B and the MenC IS Working Group. *Evaluation of a candidate International Standard for Meningococcal Serogroup C polysaccharide*. World Health Organization. Technical Report Series no. WHO/BS/2011.2169. <http://www.who.int/iris/handle/10665/70860> (accessed 28 July 2014).