

CV: Jonathan Otter, PhD FRCPath

EDUCATION

Fellow of the Royal College of Pathologists (FRCPath) (2014).

PhD, King's College London, UK (part-time) (2005-2011). '*The molecular epidemiology of community-associated MRSA at a London Teaching Hospital*'.

BSc (Hons) Microbiology (1st), University of Nottingham, UK (1998-2001).

EMPLOYMENT

Oct 15 – present: Imperial College London

I am an Honorary Senior Lecturer in the National Institute for Health Research Health Protection Research Unit (NIHR HPRU) in Healthcare Associated Infections and Antimicrobial Resistance at Imperial College London, which is situated with the Department of Medicine. Research interests include the epidemiology of MRSA, *C. difficile* and multidrug-resistant Gram-negatives, antibiotic and antiseptic resistance, the role of contaminated surfaces in transmission, and molecular typing methods including some recent dabbling in whole genome sequencing.

Apr 15 – present: Imperial College Healthcare NHS Trust, London

I am currently a senior manager for the Infection Prevention and Control Service. I lead a multidisciplinary team of 25 expert doctors, nurses, data scientists, technical experts, and administrators to deliver an Infection Prevention and Control service across a group of five hospitals in central London. Also tasked with implementing the findings of an ambitious research programme at Imperial College London in conjunction with Public Health England to improve clinical practice.

Mar 10 – Mar 15: Centre for Clinical Infection and Diagnostics Research (CIDR) (King's College London / Guy's and St. Thomas' NHS Foundation Trust, London) (part-time)

I was a Research Fellow investigating the epidemiology of key healthcare-associated pathogens including MRSA, *C. difficile*, and resistant Gram-negatives.

Dec 02 – Mar 15: Bioquell UK Ltd, Andover, Hampshire, UK (part-time since 2005)

I was the Scientific Director of Bioquell's Healthcare division, responsible for delivering a high-quality research programme evaluating the impact of Bioquell's products in the healthcare setting.

May – Oct 07: Johns Hopkins Hospital, USA (secondment)

During this secondment I initiated a high-profile study, which demonstrated that Bioquell's HPV product mitigates the increased risk from the prior room occupant (Passaretti *et al. Clin Infect Dis* 2013; 56:27-35).

May – Oct 05: Yale-New Haven Hospital, St. Raphael Campus, USA (secondment)

I was seconded to initiate a successful high-profile research project investigating the environmental and clinical impact of regular decontamination using Bioquell's HPV product (Boyce *et al. Infect Cont Hosp Epidemiol* 2008;29:723-729).

Mar – Sept 03: St. Thomas' Hospital, Department of Infection, London (secondment)

I was seconded to conduct an intervention study to investigate and compare the impact of conventional cleaning with Bioquell's HPV product (French *et al. J Hosp Infect* 2004;57:31-37).

PROFESSIONAL ACTIVITY

- Visiting Professor at the Tokyo Healthcare University, Japan.
- Assistant Editor for the Journal of Hospital Infection.
- Member of the Infection Prevention Society (IPS) Scientific Programme Committee (2010-2015).
- Member of the Healthcare Infection Society (HIS) Scientific Programme Committee (2015-present)

- IPS representative on the British Society for Antimicrobial Chemotherapy (BSAC) multiresistant Gram-negative bacterial infection Working Group.
- British Standards Institute (BSI) representative on a working group developing a European testing standard for airborne disinfection.
- Peer-reviewer for the Lancet, Lancet Infectious Diseases, British Medical Journal, Journal of Hospital Infection, Infection Control and Hospital Epidemiology, American Journal of Infection Control, Journal of Infection Prevention, Clinical Microbiology and Infection and the European Journal of Clinical Microbiology and Infectious Diseases.
- Member of the Healthcare Infection Society (HIS), Infection Prevention Society (IPS), Society for Healthcare Epidemiologists of America (SHEA) and the Association for Professionals in Infection Control (APIC).
- Author for EIDO Healthcare (patient information leaflets).
- Member of the expert panel for the International Scientific Forum on Home Hygiene (IFH).

GRANTS / AWARDS

- *'Enhanced carbapenem-resistant organism surveillance.'* Guy's and St. Thomas' Charity. Primary Investigator. £130k. 2014-2015.
- *'Evaluation of community-based prevalence and transmission of antibiotic resistant Gram-negative bacteria.'* Guy's and St. Thomas' Charity. Co-applicant. £100k. 2014-2015.
- *'Epidemiology and virulence of CA-MRSA'*. Pfizer Europe Aspire 2010 Investigator Award in Antibacterial Research. Primary Investigator. £67k. 2011-2012.
- *'Characterisation, molecular epidemiology and control of evolving strains of MRSA in a London Teaching Hospital and its local community.'* Guy's and St. Thomas' Charity Co-applicant. £294k. 2009-2011.
- Royal Commission for the Exhibition of 1851 PhD Fellowship. Primary Investigator. 80k. 2005-2009.

PAPERS

Keward J, Bradshaw P, **Otter JA**. Reducing the number of missed isolation days in a paediatric high-dependency unit using semi-permanent pods. *J Infect Prevent* accepted.

Otter JA, Burgess P, Davies F, Mookerjee S, Gilchrist M, Parsons D, Brannigan ET, Robotham JV, Holmes AH. Counting the cost of an outbreak of carbapenemase-producing Enterobacteriaceae: an economic evaluation from a hospital perspective. *Clin Microbiol Infect* accepted.

Boakes E, Marbach H, Lynham S, Ward M, Edgeworth JD, **Otter JA**. A comparative analysis of Phenol Soluble Modulin production and *G. mellonella* killing by community-associated and healthcare-associated MRSA strains. *J Med Microbiol* 2016;65:1429-1433.

Otter JA, Dyakova E, Bisnauthsing K, Querol-Rubiera A, Patel A, Ahanonu C, Tosas August O, Edgeworth J, Goldenberg S. Universal hospital admission screening for carbapenemase-producing organisms in a low prevalence setting. *J Antimicrobial Chemother* 2016;71:3556-3561.

Otter JA. Interpreting the guidelines for cleaning up after carbapenemase-producing organisms: the devil's in the dilution. *J Hosp Infect* in press.

McCord J, Prewitt M, Dyakova E, Mookerjee S, **Otter JA**. Reduction in *Clostridium difficile* infection (CDI) associated with the introduction of hydrogen peroxide vapor (HPV) automated room disinfection. *J Hosp Infect* in press.

Vella V, Moore LSP, Robotham J, Davies F, Birgand GJC, **Otter JA**, Brannigan E, Dyakova E, Knight GM, Mookerjee S, Holmes AH. Vella V, Moore LSP, Robotham J, Davies F, Birgand GJC, **Otter JA**, Brannigan E, Dyakova E, Knight GM, Mookerjee S, Holmes AH. Demand and capacity for carbapenemase-producing Enterobacteriaceae screening in a West London hospital network. *J Hosp Infect* in press.

Brown C, Livermore DM, **Otter JA**, Warren RE, Jenks P, Enoch DA, Newsholme W, Oppenheim B, Leanord A, McNulty C, Tanner G, Bennett S, Cann M, Bostock J, Collins E, Peckitt S, Ritchie L, Fry C, Hawkey P, Wilson AP. Multidrug-resistant (MDR) Gram-negative bacteria information leaflets. *J Hosp Infect* 2016;92:86-87.

Tosas August O, Betley J, Patel A, Marbach H, Stabler R, Hern P, Ayree A, **Otter JA**, Goldenberg SD, Desai N, Karadag T, Grundy C, Gaunt M, Cooper B, Edgeworth J, Kypraios T. Evidence for community transmission of community-associated but not health-care-associated methicillin-resistant *Staphylococcus aureus* strains linked to social and material deprivation: spatial analysis of cross-sectional data. *Plos Med* 2016;13:e1001944.

Horn K, **Otter JA**. Hydrogen peroxide vapor room disinfection and hand hygiene improvements reduce *Clostridium difficile* infection, MRSA, VRE and ESBL by 47%. *Am J Infect Control* 2015;43:1354-1356.

Wilson APR, Livermore DM, **Otter JA**, Warren RE, Jenks P, Enoch DA, Newsholme, Oppenheim B, Leanord A, McNulty C, Tanner G, Bennett S, Cann M, Bostock J, Collins E, Peckitt S, Ritchie L, Fry C, Hawkey PM. Prevention and control of multiresistant Gram-negative bacteria – 2 recommendations from a Joint Working Party. *J Hosp Infect* 2016 Jan;Suppl 1:S1-S44.

Hughes J, Goldenberg SD, Tosas O, Edgeworth JD, **Otter JA**. Recent emergence of carbapenem-resistant organisms in a low prevalence UK setting in London. *J Infect Prevent* 2016;17:130-134.

Otter JA. Reflections from Infection Prevention 2015: beating the bugs, improving the systems and thinking outside the box. *J Infect Prevent* 2016;17:37-41.

Otter JA, Donskey CJ, Yezli S, Douthwaite S, Goldenberg SD, Weber DJ. Transmission of SARS and MERS coronaviruses and influenza virus in healthcare settings: the possible role of dry surface contamination. *J Hosp Infect* 2016;92:235-250.

Otter JA, Mepham S, Athan B, Mack D, Smith R, Jacobs M, Hopkins S. Terminal decontamination of the Royal Free London High Level Isolation Unit (HLIU) following a case of Ebola virus disease using hydrogen peroxide vapour. *Am J Infect Control* 2016;44:233-235.

Fisher D, Long P, Salmon S, Teo C, Cook A, **Otter JA**. Where's all the VRE gone? A successful VRE bundle at a Singapore hospital. *Infect Control Hosp Epidemiol* 2016;37:107-109.

Otter JA, Mutters N, Tacconelli E, Gikas A, Holmes AH. Controversies in guidelines for the control of multidrug-resistant Gram-negative bacteria in EU countries. *Clin Microbiol Infect* 2015;21:1057-1066.

Otter JA. Biofilms mean that the 'environmentome' of hospital surfaces is teeming with life. *J Hosp Infect* 2015;91:218-219.

Otter JA. The inaugural Healthcare Infection Society Middle East Summit: 'No action today. No cure tomorrow. *J Hosp Infect* 2015;91:199-201.

Hughes J, Stabler R, Karadag T, Desai N, Patel A, **Otter JA**, Edgeworth JD, Tosas August O. Clonal variation in high- and low-level phenotypic and genotypic mupirocin resistance of MRSA isolates in South East London. *J Antimicrobial Chemother* 2015;70:3191-3199.

Biswas J, Patel A, **Otter JA**, van Kleef E, Goldenberg SD. Significant contamination of the hospital environment from potential *Clostridium difficile* excretors. *Infect Control Hosp Epidemiol* 2015;36:975-977.

Biswas J, Patel A, **Otter JA**, Wade P, Newsholme W, Goldenberg SD. Reduction in *Clostridium difficile* environmental contamination in hospitalised patients treated with fidaxomicin. *J Hosp Infect* 2015;90:267-270.

Otter JA. What's trending in the infection prevention and control literature? From HIS 2012 to HIS 2014, and beyond. *J Hosp Infection* 2015;89:229-236.

Lemmen S, Scheithauer S, Häfner H, Yezli S, Mohr M, **Otter JA**. Evaluation of hydrogen peroxide vapour for the inactivation of nosocomial pathogens on porous and non-porous surfaces. *Am J Infect Control* 2015;43:82-85.

Otter JA, Vickery K, Walker J, deLancey-Pulcini E, Stoodley P, Salkeld JA, Chewins J, Yezli S, Edgeworth JD. Surface-attached cells, biofilms and biocide susceptibility: implications for hospital cleaning and disinfection. *J Hosp Infect* 2015;89:16-27.

Yezli S, **Otter JA**. Does the inanimate environment play a role in the transmission of pathogens in operating room? *Surg Infect* 2014;15:694-699.

Curran E, **Otter JA**. How to prevent and control outbreaks of carbapenem-resistant Enterobacteriaceae. *J Infect Prevent* 2014;15:193-198.

Otter JA, Tosas O, Herdman MT, Williams B, Tucker D, Edgeworth JD, French GL. Implications of targeted versus universal admission screening for methicillin-resistant *Staphylococcus aureus* carriage in a London hospital. *J Hosp Infect* 2014;87:171-174.

O'Halloran PD, Winter PK, **Otter JA**, Adams NMT, Chewins J. Aqueous oxygen peroxide treatment of venous leg ulcers is associated with improved wound healing in a primary care based randomised, double-blind, placebo-controlled trial. *J Wound Care* 2014;23:176-190.

Goyal SM, Chander Y, Yezli S, **Otter JA**. Evaluating the virucidal efficacy of hydrogen peroxide vapor (HPV). *J Hosp Infect* 2014;86:255-259.

Otter JA, Davies B, Menson E, Klein JL, Watts TL, Kearns AM, Pichon B, Edgeworth JD, French GL. Identification and control of a gentamicin-resistant, methicillin-susceptible *Staphylococcus aureus* outbreak on a neonatal unit. *J Infect Prevent* 2014;15:104-109.

Havill NL, Boyce JM, **Otter JA**. Extended survival of carbapenem-resistant Enterobacteriaceae on dry surfaces. *Infect Control Hosp Epidemiol* 2014;35:445-447.

Otter JA. Infection Prevention 2013 – a potted overview. *J Infect Prevent* 2014;15:9.

Otter JA, Yezli S, Perl TM, Barbut F, French GL. A request for an alliance in the battle for clean and safe hospital surfaces. *J Hosp Infect* 2013;84:341-342.

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Otter JA, Yezli S, Salkeld JAG, French GL. Evidence that contaminated surfaces contribute to the transmission of hospital pathogens and an overview of strategies to address contaminated surfaces in hospital settings. *Am J Infect Control* 2013;41:S6-S11.

Barbut F, Yezli S, **Otter JA**. Hydrogen peroxide room disinfection: there is no elephant in the room but there's plenty of evidence in the trunk. *J Hosp Infect* 2013;83:355-356.

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Otter JA, Herdman MT, Williams B, Tosas O, Edgeworth JD, French GL. Low prevalence of methicillin-resistant *Staphylococcus aureus* carriage at hospital admission: implications for risk factor based vs. universal screening. *J Hosp Infect* 2013;83:114-121.

Otter JA. How do we tackle contaminated hospital surfaces? *Healthcare Infect* 2013;18:42-44.

Otter JA, Yezli S, Perl TM, Barbut F, French GL. The role of 'no-touch' automated room disinfection systems in infection prevention and control. *J Hosp Infect* 2013;83:1-13.

Passaretti CL, **Otter JA**, Reich NG, Myers J, Shepard J, Howard T, Carroll KC, Lipsett P, Perl TM. Environmental decontamination with hydrogen peroxide vapor reduces the risk of patient acquisition of multidrug-resistant organisms. *Clin Infect Dis* 2013;56:27-35.

Barbut F, Yezli S, Mimoun M, Pham J, Chaouat M, **Otter JA**. Reducing the spread of *Acinetobacter baumannii* and methicillin-resistant *Staphylococcus aureus* on a burns unit through the intervention of an infection control bundle. *Burns* 2013;39:395-403.

Otter JA. Hospital infection control in 2012: new solutions for old and resurgent problems. *J Healthcare Associated Infect* 2012;5:68-72.

Otter JA, Yezli S, French GL. The impact of the suspending medium on the susceptibility of methicillin-resistant *Staphylococcus aureus* to hydrogen peroxide vapour (HPV) decontamination. *J Hosp Infect* 2012;82:213-215.

Yezli S, **Otter JA**. Does the discovery of biofilms on dry hospital environmental surfaces change the way we think about hospital disinfection? *J Hosp Infect* 2012;81:293-294.

Otter JA, French GL. Community-associated methicillin-resistant *Staphylococcus aureus*: the case for a genotypic definition. *J Hosp Infect* 2012;81:143-8. [Selected as one of the top 10 papers of the year by the editor: <http://www.journalofhospitalinfection.com/content/editors-choice>]

Otter JA, Yezli S. Are commercially available *Geobacillus stearothermophilus* biological indicators an appropriate standard for hydrogen peroxide vapour systems in hospitals? *J Hosp Infect* 2012;80:272-273.

Miller CE, Batra R, Copper BS, Patel AK, Klein J, **Otter JA**, Kypraios T, French GL, Tosas O, Edgeworth JD. An association between bacterial genotype combined with a high-vancomycin minimum inhibitory concentration and risk of endocarditis in methicillin-resistant *Staphylococcus aureus* bloodstream infection. *Clin Infect Dis* 2012;54:591-600.

Barbut F, Yezli S, **Otter JA**. The *in vitro* activity of hydrogen peroxide vapour (HPV) against *Clostridium difficile* spores. *J Hosp Infect* 2012;80:85-87.

Otter JA, French GL. Community-associated methicillin-resistant *Staphylococcus aureus* strains as a cause of healthcare-associated infection. *J Hosp Infect* 2011;79:189-193.

Yezli S, **Otter JA**. Minimum infective dose of the major human respiratory and enteric viruses transmitted through food and the environment: a review. *Food Environ Virol* 2011;3:1-30.

Otter JA, Yezli S, French GL. The role of contaminated surfaces in the transmission of nosocomial pathogens. *Infect Control Hosp Epidemiol* 2011;32:687-699.

Berrie E, Andrews L, Yezli S, **Otter JA**. Hydrogen peroxide vapour (HPV) inactivation of adenovirus. *Lett Applied Micro* 2011;52:555-558.

Cooper T, O'Leary M, Yezli S, **Otter JA**. The impact of environmental decontamination using hydrogen peroxide vapour on the incidence of *Clostridium difficile* infection in one hospital trust. *J Hosp Infect* 2011;78:238-240.

Otter JA, French GL. Utility of antimicrobial susceptibility based algorithms for the presumptive identification of genotypically-defined community-associated methicillin-resistant *Staphylococcus aureus* at a London teaching hospital. *Eur J Clin Microbiol Infect Dis* 2011;30:459-463.

Otter JA, Yezli S. A call for clarity when discussing hydrogen peroxide vapour and aerosol systems. *J Hosp Infect* 2011;77:83-84.

Otter JA, Passaretti CL, Ross T, Carroll KC, French GL, Perl TM. Low frequency of environmental contamination with methicillin-resistant *Staphylococcus aureus* in an inner city emergency department and an HIV outpatient clinic. *Am J Infect Control* 2011;39:151-153.

Otter JA, Havill NL, Boyce JM. Hydrogen peroxide vapor is not the same as aerosolized hydrogen peroxide. *Infect Control Hosp Epidemiol* 2010;11:1201-1202.

Otter JA, Yezli S, Schouten MA, van Zanten ARH, Houmes-Zielman G, Nohlmans-Paulssen. Hydrogen peroxide vapor (HPV) decontamination of an intensive care unit to remove environmental reservoirs of multidrug-resistant Gram-negative rods during an outbreak. *Am J Infect Control* 2010;38:754-756.

Otter JA, Yezli S. Cycle times for hydrogen peroxide vapour decontamination. *Can J Microbiol* 2010;56:356-257.

Otter JA, Barnicoat M, Down J, Smyth D, Yezli S, Jeanes A. Hydrogen peroxide vapour (HPV) decontamination of an intensive care unit room used to treat a patient with Lassa fever. *J Hosp Infect* 2010;75:335-337.

Otter JA, French GL. The molecular epidemiology of community-associated methicillin-resistant *Staphylococcus aureus* in Europe. *Lancet Infect Dis* 2010;10:227-239.

Otter JA, Kearns AM, French GL, Ellington MJ. Panton-Valentine leukocidin encoding bacteriophage and gene sequence variation in community-associated methicillin-resistant *Staphylococcus aureus*. *Clin Microbiol Infect* 2010;16:68-73.

Otter JA, French GL. Bacterial contamination on touch surfaces in the public transport system and in public areas of a hospital in London. *Lett Appl Microbiol* 2009;49:803-805.

Otter JA, Havill NL, Adams NMT, Cooper TC, Tauman A, Boyce JM. Environmental sampling for *Clostridium difficile*: swabs or sponges? *Am J Infect Control* 2009;37:517-518.

Otter JA, Puchowicz M, Ryan D, Salkeld JA, Cooper TA, Havill NL, Tuozzo K, Boyce JM. Feasibility of routinely using hydrogen peroxide vapor to decontaminate rooms in a busy United States hospital. *Infect Control Hosp Epidemiol* 2009;30:574-547.

Otter JA, Budde-Niekkel A. Hydrogen peroxide vapor: a novel method for the environmental control of lactococcal bacteriophages. *J Food Prot* 2009;72:412-414.

Otter JA, Havill NL, Boyce JM, French GL. Comparison of community-associated methicillin-resistant *Staphylococcus aureus* from teaching hospitals in London and the USA, 2004-2006: where is USA300 in the UK? *Eur J Clin Microbiol Infect Dis* 2009;28:835-839.

Otter JA, French GL. Survival of nosocomial bacteria and spores on surfaces and inactivation by hydrogen peroxide vapour (HPV). *J Clin Microbiol* 2009;47:205-207.

Boyce JM, Havill NL, **Otter JA**, McDonald LC, Adams NM, Thompson A, Wiggs L, Noble-Wang J. Impact of hydrogen peroxide vapor room decontamination on *Clostridium difficile* environmental contamination and transmission in a healthcare setting. *Infect Cont Hosp Epidemiol* 2008;29:723-729.

Otter JA, French GL. The emergence of community-associated methicillin-resistant *Staphylococcus aureus* (CA-MRSA) at a London Teaching Hospital, 2000-2006. *Clin Microbiol Infect* 2008;14:670-676.

Otter JA, French GL. Community-associated methicillin-resistant *Staphylococcus aureus* in injecting drug users and the homeless in south London. *J Hosp Infect* 2008;69:198-200.

Dryden M, Parnaby R, Dailly S, Lewis T, Davis-Blues K, **Otter JA**, Kearns AM. Hydrogen peroxide vapor (HPV) decontamination in the control of a polyclonal MRSA outbreak on a surgical ward. *J Hosp Infect* 2008;68:190-192.

Hall L, **Otter JA**, Chewins J, Wengenack NL. Deactivation of the dimorphic fungi *Histoplasma capsulatum*, *Blastomyces dermatitidis* and *Coccidioides immitis* using hydrogen peroxide vapor. *Med Mycol* 2008;46:189-191.

Otter JA, Chewins J, Windsor D, Windsor H. Microbial contamination in cell culture: a potential role for hydrogen peroxide vapour (HPV)? *Cell Biol Int* 2008;32:326-327.

Otter JA, Klein J, Watts T, Kearns AM, French GL. Identification and control of an outbreak of ciprofloxacin-susceptible EMRSA-15 on a neonatal unit. *J Hosp Infect* 2007;67:232-239.

Otter JA, Cummins M, Ahmad F, van Tonder C, Drabu YJ. Assessing the biological efficacy and rate of recontamination following hydrogen peroxide vapour decontamination. *J Hosp Infect* 2007;67:182-188.

Boyce JM, Havill NL, **Otter JA**, Adams NM. Widespread environmental contamination associated with patients with diarrhea and methicillin-resistant *Staphylococcus aureus* colonization of the gastrointestinal tract. *Infect Control Hosp Epidemiol* 2007; 28:1142-1147.

Otter JA, Havill NL, Boyce JM. Evaluation of real-time polymerase chain reaction for detection of methicillin-resistant *Staphylococcus aureus* on environmental surfaces. *Infect Cont Hosp Epidemiol* 2007;28:1003-1005.

Hall L, **Otter JA**, Chewins J, Wengenack NL. Use of hydrogen peroxide vapour for deactivation of *Mycobacterium tuberculosis* in a biological safety cabinet and a room. *J Clin Microbiol* 2007;45:810-815.

Otter JA, French GL. Nosocomial transmission of community-associated methicillin-resistant *Staphylococcus aureus*: an emerging threat. *Lancet Infect Dis* 2006;6:753-755.

Otter JA, French GL, Adams NM, Watling D, Parks MJ. Hydrogen peroxide vapour decontamination in an overcrowded tertiary care referral centre: some practical answers. *J Hosp Infect* 2006;62:384-385.

Otter JA. Bio-deactivation of hospital pathogens. *Health Estate* 2005;59:41-44.

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French GL, **Otter JA**, Shannon KP, Adams NM, Watling D, Parks MJ. Tackling contamination of the hospital environment by methicillin-resistant *Staphylococcus aureus* (MRSA): a comparison between conventional terminal cleaning and hydrogen peroxide vapour decontamination. *J Hosp Infect* 2004;57:31-37.

In preparation / submitted

Otter JA, Doumith M, Davies F, Mookerjee S, Gilchrist M, Brannigan E, Bamford K, Donaldson H, Ellington M, Hill R, Turton J, Hopkins K, Woodford N, Holmes A. Emergence and clonal spread of colistin resistance during an outbreak of NDM-producing *Klebsiella pneumoniae* in London. Submitted.

Otter JA, Burgess P, Davies F, Mookerjee S, Gilchrist M, Parsons D, Brannigan ET, Robotham JV, Holmes AH. Counting the cost of an outbreak of carbapenemase-producing Enterobacteriaceae: an economic evaluation from a hospital perspective. Submitted.

Otter JA, Mookerjee S, Davies F, Brannigan E, Hopkins KL, Woodford N, Holmes AH. Comparing the epidemiology of multidrug-resistant Enterobacteriaceae and non-fermenting Gram-negative rods: clinical and infection control implications. Submitted.

Keward J, Bradshaw P, **Otter JA**. Reducing the number of missed isolation days in a paediatric high-dependency unit using semi-permanent pods. Submitted.

Boakes E, Marbach H, Lynham S, Ward M, Edgeworth JD, **Otter JA**. A comparative analysis of Phenol Soluble Modulin production and *G. melonella* killing by community-associated and healthcare-associated MRSA strains. Submitted.

Otter JA. An analysis of the options for antimicrobial hard surfaces in hospitals. In preparation.

Marbach H, Boakes E, Lynham S, Ward M, **Otter JA**, Edgeworth JD. Phenotypic assessment of CC22 and CC30 MRSA isolates reveals functional differences in CC22 MRSA isolates with elevated vancomycin MIC. In preparation.

BOOK CHAPTERS

Otter JA, Yezli S, Perl TM, Barbut F, French GL. A guide to “no-touch” automated room disinfection systems. In [‘Decontamination in Hospitals and Healthcare’](#). Edited by Dr J.T. Walker. Woodhead Publishing, Cambridge, 2014.

Otter JA, Yezli S, French GL. The role of contaminated surfaces in the transmission of nosocomial pathogens. In [‘Biocidal surfaces for reduction of healthcare-associated infections’](#). Edited by Dr G. Borkow. Springer, London, 2014.

Otter JA. An overview of options for hard surfaces with antimicrobial activity in healthcare. In [‘Biocidal surfaces for reduction of healthcare-associated infections’](#). Edited by Dr G. Borkow. Springer, London, 2014.

CONFERENCE ABSTRACTS

* = presenting author.

ORAL PRESENTATIONS

Otter JA*, Burgess P, Davies F, Mookerjee S, Gilchrist M, Parsons D, Brannigan ET, Robotham JV, Holmes AH. Counting the cost of an outbreak of carbapenemase-producing Enterobacteriaceae: an economic evaluation from a hospital perspective. Healthcare Infection Society (HIS), Edinburgh, Scotland, 6-8 November 2016.

Mookerjee S*, Dyakova E, Davies F, Bamford K, Galletly T, Brannigan E, Holmes AH, **Otter JA**. Managing repeated screening for known CPE carriers: once positive always positive? Infection Prevention Society (IPS) Annual Meeting. Harrogate, UK, 26-28 September 2016.

Mookerjee S, Dyakova E, Davies F, Bamford K, Brannigan E, Holmes A, **Otter JA***. [Screening for CPE: sensitivity of multiple admission screens](#). European Congress of Clinical Microbiology and Infectious Diseases (ECCMID), Amsterdam, The Netherlands, 9-12 April 2016.

Brannigan E*, **Otter JA**, Davies F, Mookerjee S, Dyakova E, Bamford K, Donaldson H, Nelson D, Galletly T, Gilchrist M, Holmes A. Responding to an outbreak of CPE: learning points from the front line. Federation of Infection Sciences (FIS) Annual Meeting. Glasgow, Scotland, 21-23 Nov 2015.

Otter JA*, Dyakova E, Bisnauthsing K, Querol-Rubiera A, Patel A, Ahanonu C, Tosas August O, Edgeworth J, Goldenberg S. [Who’s carrying CRE? Universal admission screening in London](#). Infection Prevention Society (IPS) Annual Meeting. Liverpool, UK, 28-30 September 2015.

Dyakova E*, Bisnauthsing K, Querol-Rubiera A, Patel A, Ahanonu C, Tosas August O, Edgeworth J, Goldenberg S, **Otter JA**. [“Can I swab your rectum, please?”: Improving compliance with rectal screening for CRE](#). Infection Prevention Society (IPS) Annual Meeting. Liverpool, UK, 28-30 September 2015.

Mookerjee S*, Sullivan J, Davies F, Donaldson H, Brannigan E, Holmes A, **Otter JA**. [Risk factors for patients with carbapenemase-producing Enterobacteriaceae \(CPE\) in a Northwest London hospital Trust, 2014 – 2015](#). Infection Prevention Society (IPS) Annual Meeting. Liverpool, UK, 28-30 September 2015.

Fisher D*, Pang L, Salmon S, Teo C, Cook A, **Otter JA**. Where’s all the VRE gone? A successful VRE bundle at a Singapore hospital. International Congress of the Asia Pacific Society of Infection Control. Taipei, Taiwan, 26-29 March 2015.

O’Halloran P, **Otter JA**, Adams NMT, Chewins J*. Improvements in pain, odour, sleep and social activities for patients with chronic wounds using novel aqueous oxygen peroxide (AOP) technology. Infection Prevention Society (IPS) Annual Meeting. Glasgow, Scotland, 29 September – 1 October 2014.

Keward J*, Bradshaw P, **Otter JA**. Reducing the number of missed isolation days in the Alder Hey High Dependency Unit using the Bioquell Pod. Infection Prevention Society (IPS) Annual Meeting. Glasgow, Scotland, 29 September – 1 October 2014.

Hughes J*, Stabler R, Karadag T, Desai N, Patel A, **Otter JA**, Edgeworth JD, Tosas-Auguet O. Selection of low-level mupirocin resistance in hospital but not community MRSA clones. European Congress of Clinical Microbiology and Infectious Diseases (ECCMID), Barcelona, Spain, 10-13 May 2014

Marbach H, Boakes E, Lynham S, Ward M, **Otter JA***, Edgeworth JD. Identification of a distinctive virulence phenotype for endocarditis-associated clonal complex 22 MRSA isolates with reduced vancomycin susceptibility. ID Week, San Francisco, California, USA, 2-6 October 2013.

Otter JA*, Tosas O, Herdman MT, Williams B, Tucker D, Edgeworth JD, French GL. Targeted MRSA admission screening would fail to identify almost half of carriers in a London Hospital. Infection Prevention Society (IPS) Annual Meeting. London, UK, 30 September – 2 October 2013.

Batra R, Halligan E, Cliff P, **Otter JA**, Edgeworth JD*. Selection of *qacA* carriage in MRSA clonal complex 22 but not 30 during a successful infection control programme incorporating chlorhexidine-based decolonisation. 21st Annual Meeting of the European Congress of Clinical Microbiology and Infectious Diseases (ECCMID), Milan, Italy, 7-10 May 2011.

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POSTERS

Sullivan J, Dyakova E, Mookerjee S, Davies F, Galletly T, Brannigan E, Gilchrist M, Holmes AH, **Otter JA***. How much do we Trust epidemiological definitions of healthcare-associated *C. difficile* infection? Healthcare Infection Society (HIS), Edinburgh, Scotland, 6-8 November 2016.

Mookerjee S, Martin K, Atucha-Zambrano I, Corbin N, Galletly T, Brannigan E, Holmes AH, **Otter JA***. Measuring and improving compliance with risk-factor based CPE admission screening. Infection Prevention Society (IPS) Annual Meeting. Harrogate, UK, 26-28 September 2016.

Galletly T, Brannigan E, Mookerjee S, Davies F, Holmes AH, **Otter JA***. Detecting and managing CPE outbreaks: seek and you shall find. Infection Prevention Society (IPS) Annual Meeting. Harrogate, UK, 26-28 September 2016.

Alexander M, Ghazy A, Bamford K, Brannigan E, Donaldson H, Bishop H, **Otter JA***. Reducing SSI risk from water heater/coolers units in cardiothoracic surgery. Infection Prevention Society (IPS) Annual Meeting. Harrogate, UK, 26-28 September 2016.

Otter JA*, Gilchrist M, Brannigan E, Davies F, Donaldson H, Bamford KB, Hill R, Doumith M, Turton J, Hopkins K, Woodford M, Holmes AH. [Emergence and clonal spread of colistin resistance during an outbreak of CPE in London](#). European Congress of Clinical Microbiology and Infectious Diseases (ECCMID), Amsterdam, The Netherlands, 9-12 April 2016.

Moore LSP*, Freeman R, Charlett A, **Otter JA**, Donaldson H, Holmes AH. [Refining national surveillance algorithms to facilitate local outbreak detection of carbapenem-resistant organisms](#). European Congress of Clinical Microbiology and Infectious Diseases (ECCMID), Amsterdam, The Netherlands, 9-12 April 2016.

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Eades C, Davies F, Donaldson H, Ghazy A, Kadhani T, **Otter JA**, Brannigan E, Hopkins K, Hill R, Turton J, Pavlu J, Mookherjee S, Woodford N, Holmes AH. [Outbreak of GES-5 carbapenemase-producing *Klebsiella oxytoca* in a London haematology unit](#). European Congress of Clinical Microbiology and Infectious Diseases (ECCMID), Amsterdam, The Netherlands, 9-12 April 2016.

Moore LSP*, Freeman R, Charlett A, **Otter JA**, Donaldson H, Holmes AH. Real-time antimicrobial resistance surveillance in critical care: identifying outbreaks of carbapenem-resistant Gram-negative bacteria from routinely collected data. International Congress on Infectious Diseases (ICID), Hyderabad, India, 2-5 March 2016.

Batten L, Holmes A, **Otter JA***, Castro-Sanchez E. [Estimating the isolation burden if overseas residents are pre-emptively isolated during CRE admission screening](#). Infection Prevention Society (IPS) Annual Meeting. Liverpool, UK, 28-30 September 2015.

Mookerjee S, Sullivan J, Davies F, Donaldson H, Brannigan E, Holmes A, **Otter JA***. [Real-time surveillance of carbapenem-resistant Enterobacteriaceae \(CRE\) using live microbiology culture data in a North-West London Hospital Trust, 2014–2015](#). Infection Prevention Society (IPS) Annual Meeting. Liverpool, UK, 28-30 September 2015.

Alexander M, Mookerjee S, Nelson D, Holmes A, **Otter JA***. [An audit of single room capacity for isolation at a London hospital Trust](#). Infection Prevention Society (IPS) Annual Meeting. Liverpool, UK, 28-30 September 2015.

Galletly T, Bateman A, Brannigan E, Holmes A, **Otter JA***. [Thematic analysis of post 48-hour bloodstream infections: What did we learn?](#) Infection Prevention Society (IPS) Annual Meeting. Liverpool, UK, 28-30 September 2015.

Acharya A , Samarasinghe D , Singleton J, Brannigan E, Galletly T, Donaldson H, Holmes A, **Otter JA***. Pilot evaluation of environmental hygiene using fluorescent markers and microbiological cultures. Infection Prevention Society (IPS) Annual Meeting. Liverpool, UK, 28-30 September 2015.

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O'Halloran P, **Otter JA***, Adams NMT, Chewins J. Evaluating the reduction in wound bioburden using aqueous oxygen peroxide technology. Healthcare Infection Society (HIS) Conference, Lyon, France, 16-18 November 2014.

Otter JA*, Mephram S, Athan B, Mack D, Smith R, Jacobs M, Hopkins S. Terminal decontamination of the Royal Free London High Level Isolation Unit (HLIU) following a case of Ebola virus disease using hydrogen peroxide vapour. Healthcare Infection Society (HIS) Conference, Lyon, France, 16-18 November 2014.

Lemmen S, Scheithauer S, Häfner H, Yezli S, Mohr M, **Otter JA***. Evaluation of hydrogen peroxide vapour for the inactivation of nosocomial pathogens on porous and non-porous surfaces. Healthcare Infection Society (HIS) Conference, Lyon, France, 16-18 November 2014.

Otter JA*, Tucker D. Does converting a ward to single rooms reduce rates of infection? A systematic review. Infection Prevention Society (IPS) Annual Meeting, Glasgow, Scotland, 29 September – 1 October 2014.

Otter JA*, Donskey C, Weber D. How long do SARS and MERS coronaviruses, and influenza survive on dry surfaces. Infection Prevention Society (IPS) Annual Meeting, Glasgow, Scotland, 29 September – 1 October 2014.

Kearns AM, Vickers A, Pichon B, Ganner M, Johnson A, Charlett A, Hill R on behalf of the Community Skin Infection (CSI) Study Group. Community staphylococcal pyogenic skin infections in England: PVL, MRSA & clonal diversity. European Congress of Clinical Microbiology and Infectious Diseases (ECCMID), Barcelona, Spain, 10-13 May 2014.

Boakes E, Marbach H, Lynham S, Ward M, Edgeworth JD, **Otter JA***. Community-associated MRSA strains are no more virulent than healthcare-associated MRSA strains in a range of laboratory assays. European Congress of Clinical Microbiology and Infectious Diseases (ECCMID), Barcelona, Spain, 10-13 May 2014.

Hughes J*, Goldenberg SD, Tosas O, Edgeworth JD, **Otter JA**. Recent emergence of carbapenem-resistant organisms in a low prevalence UK setting in London. Federation of Infection Sciences (FIS), Birmingham, UK, 11-13 November 2013.

Havill NL, Boyce JM, **Otter JA***. Extended survival of carbapenem-resistant Enterobacteriaceae (CRE) on dry surfaces. ID Week, San Francisco, California, USA, 2-6 October 2013.

Tucker D, Chappell J, Millward L, **Otter JA***. An overview of hydrogen peroxide vapour (HPV) room disinfection at a London Hospital, 2011-2013. Infection Prevention Society (IPS) Annual Meeting. London, UK, 30 September – 1 October 2013.

Yezli S*, Bissell D, **Otter JA**. The Infection Control Enclosure (ICE)-pod: meeting the need for more single rooms. Asia Pacific Society of Infection Control, Shanghai, China, 10-13 April 2013.

O'Halloran P*, Winter P, Chewins J, **Otter JA**. Randomised, double-blind, placebo controlled trial of aqueous oxygen peroxide (AOP) in the treatment of venous leg ulcers in a primary care based setting. Wounds UK Annual Conference. Harrogate, UK, 2012.

Passaretti CL, **Otter JA***, Reich NG, Myers J, Shepard J, Ross T, Carroll KC, Lipsett P, Perl TM. An evaluation of environmental decontamination with hydrogen peroxide vapor for reducing the risk of patient acquisition of multidrug-resistant organisms. 8th International Healthcare Infection Society (HIS) Conference and Federation of Infection Societies (FIS) Annual Conference. Liverpool, UK, 19-21 November 2012.

Virata MD, **Otter JA***, Havill NL, Monecke S, Sakoulas G. DNA microarray-based genotyping of methicillin-resistant *Staphylococcus aureus* isolates in patients with bacteremia and evidence of antimicrobial resistance from 1998-2008. ID Week, San Diego, USA, 17-21 October 2012. Poster 392.

Otter JA*, Nowakowski E, Salkeld JAG, Duclos M, Yezli S, Passaretti CL, Ross T, Carroll KC, Perl TM. Decontamination of unused medical supply packaging using hydrogen peroxide vapour. Infection Prevention Society (IPS) Annual Meeting. Liverpool, UK, 1-3 October 2012. Abstract 81.

Virata MD*, **Otter JA**, Havill NL, Sakoulas G. Comparing *Staphylococcus aureus* staphyloxanthin pigment production among bloodstream isolates with vancomycin MICs and clone type from a community hospital. American Society for Microbiology (ASM), San Francisco, California, USA. June 2012.

Boakes E, Marbach H, Lynham S, Ward M, Edgeworth JD, **Otter JA***. Production of phenol soluble modulins by community- and hospital-associated MRSA strains correlates with in vivo virulence in a *Galleria mellonella* (caterpillar) model. European Congress of Clinical Microbiology and Infectious Diseases (ECCMID), London, UK. 31 March – 3 April 2012.

Otter JA*, Havill NL, Virata MD. Vancomycin MIC and clone type are independent predictors of persistent MRSA bacteraemia at a USA hospital. European Congress of Clinical Microbiology and Infectious Diseases (ECCMID), London, UK. 31 March – 3 April 2012.

Otter JA*, Goyal S, Chander Y, Yezli S. Hydrogen peroxide vapour (HPV) inactivation of feline calicivirus, a surrogate for norovirus: an update. Infection Prevention Society (IPS) Annual Meeting. Bournemouth, 19-21 September 2011. Abstract 57.

Otter JA*, Murdoch L, Stone J. Successful reduction in the burden of *C. difficile* at a large NHS Trust through a bundle of interventions. Infection Prevention Society (IPS) Annual Meeting. Bournemouth, 19-21 September 2011. Abstract 57.

Miller C*, Tosas O, Batra R, **Otter JA**, French GL, Edgeworth JD. An interaction between clone type and vancomycin MIC influence risk of endocarditis associated with MRSA bloodstream infection. European Congress of Clinical Microbiology and Infectious Diseases (ECCMID), Milan, Italy, 7-10 May 2011.

Otter JA*, Edgeworth J, Miller C, French GL. The changing molecular epidemiology of methicillin-resistant *Staphylococcus aureus* bacteraemia at a London teaching hospital, 1999-2009. European Congress of Clinical Microbiology and Infectious Diseases (ECCMID), Milan, Italy, 7-10 May 2011.

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an infection control bundle including hydrogen peroxide vapour decontamination. European Congress of Clinical Microbiology and Infectious Diseases (ECCMID), Milan, Italy, 7-10 May 2011.

Barbut F, Yezli S, **Otter JA***. The *in vitro* activity of hydrogen peroxide vapour against epidemic strains of *Clostridium difficile* spores. European Congress of Clinical Microbiology and Infectious Diseases (ECCMID), Milan, Italy, 7-10 May 2011.

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Otter JA, Yezli S, Bissell D*. Hydrogen peroxide vapour (HPV) decontamination: a novel technology for the control of hospital acquired infections. Australian Infection Control Association Conference, 4-6 October 2010, Perth, Australia.

Adams NMT*, Yezli S, **Otter JA**. Hydrogen peroxide vapour decontamination: a versatile method to tackle biological warfare agents and pathogens associated with hospital-acquired infections. International Symposium on Protection Against Chemical and Biological Warfare Agents, 8-11 June 2010, Stockholm, Sweden.

Yezli S, Millward L, Salkeld JAG, Parks MJ, **Otter JA***. Routine use of hydrogen peroxide vapour decontamination in the NHS. Infection Prevention Society (IPS) Annual Meeting. Harrogate, 2009. Abstract 15.

Otter JA*, French GL. Validation of antimicrobial resistance based phenotypic markers for the presumptive identification of community-associated MRSA at a London Teaching Hospital. Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC). San Francisco, CA, USA, 2009. [Poster*] (14th International Symposium on Staphylococci and Staphylococcal Infection (ISSI), Bath, UK, September 2010.)

Passaretti CL*, **Otter JA**, Lipsett P, Shangraw A, Myers J, Ross T, Carroll K, Perl TM. Adherence to Hydrogen Peroxide Vapor (HPV) decontamination reduces VRE acquisition in high-risk units. Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC) and the Infectious Diseases Society of America (IDSA). Washington DC, USA, 2008. Abstract K4124b.

Passaretti CL*, Lipsett P, **Otter JA**, Speck K, Lee A, Ryan D, Salkeld JAG, Adams NMT, Ristaino P, Maragakis L, Ross T, Carroll K, Perl TM. Does hydrogen peroxide vapor (HPV) enhance decontamination for multidrug-resistant organisms (MDROs) in intensive care units (ICUs)? Society for Healthcare Epidemiology of America (SHEA), Orlando, Florida, 2008. Abstract 177.

Puchowicz M, Ryan D, **Otter JA***, Salkeld JAG, Cooper TA, Havill NL, Tuozzo K, Boyce JM. Feasibility of ongoing use of hydrogen peroxide vapor (HPV) technology to decontaminate rooms vacated by patients with multidrug-resistant organisms. Society for Healthcare Epidemiology of America (SHEA), Orlando, Florida, 2008.

Dryden M, Parnaby R, Dailly S, Lewis T, Davis-Blues K, **Otter JA***, Kearns AM. Environmental decontamination with hydrogen peroxide vapor (HPV) in the control of an MRSA outbreak. Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC). September 2007, Chicago.

Otter JA*, Klein J, Watts T, Kearns AM, French GL. P1324. Control of an outbreak of an unusual ciprofloxacin-susceptible variant of methicillin-resistant *Staphylococcus aureus* EMRSA-15 on a neonatal unit. *Int J Antimicrob Agents* 2007;29 Suppl. 2:S366. (European Congress of Clinical Microbiology and Infectious Disease (ECCMID)).

Otter JA*, French GL. P1587 The molecular epidemiology of community-associated methicillin-resistant *Staphylococcus aureus* at a London teaching hospital. *Int J Antimicrob Agents* 2007;**29** Suppl. 2:S445-446. (European Congress of Clinical Microbiology and Infectious Disease (ECCMID)).

Schouten M, **Otter JA***, van Zanten A, Houmes-Zielman G, Nohlmans-Paulssen M. P1692 Environmental decontamination of an intensive care unit to control outbreaks of multidrug-resistant Gram-negative rods using hydrogen peroxide vapour. *Int J Antimicrob Agents* 2007;**29** Suppl. 2:S479. (European Congress of Clinical Microbiology and Infectious Disease (ECCMID)).

Hall L*, **Otter JA**, Chewins J, Wengenack NL. Use of hydrogen peroxide vapour for deactivation of *Mycobacterium tuberculosis* in a biological safety cabinet and a room. American Society for Microbiology (ASM), Orlando, Florida, 2006.

Hall L*, **Otter JA**, Chewins J, Wengenack NL. Deactivation of dimorphic fungi using HPV. International Society of Human and Animal Mycology (ISHAM), Paris, France, 2006.

French GL, Shannon KP, **Otter JA***. Survival of nosocomial bacteria dried in air and killing by hydrogen peroxide vapour (HPV). Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), Washington DC,

INVITED LECTURES

Healthcare Infection Society / Federation of Infection Sciences (HIS/FIS) 2016. '[Gastrointestinal infections and the hospital environment](#)'. Edinburgh, Scotland, November 2016.

Patient First, Infection Prevention and Control. '[The growing dangers around CPE](#)'. London, UK, November 2016.

Infection control and innovation (Center for Innovative Medical Technology, Denmark). '[Disinfection of rooms and surfaces – what are the global trends and latest scientific discoveries when it comes to technology and materials?](#)' Odense, Denmark, October 2016.

Infection Prevention Society (IPS) 2016. '[A topical reflection on infection prevention – chosen by you!](#)' Harrogate, UK, September 2016.

Infection Prevention Society (IPS) 2016. '[Meet the expert: Using the PHE Toolkit to build a CPE Policy](#).' Harrogate, UK, September 2016.

Healthcare Infection Society (HIS) Spring Meeting 2016. Debate with Peter Hoffman. '[The healthcare environment: automated disinfection provides more effective infection prevention than manual disinfection](#).' Birmingham, UK, May 2016.

European Congress of Clinical Microbiology and Infectious Diseases (ECCMID) 2016. '[Selling your work to colleagues and society: how to use social media](#)'. Amsterdam, The Netherlands, April 2016.

International Federation of Infection Control (IFIC) 2016. '[CRE/CPE/CRO – demystifying the microbiology and opportunities for genome sequencing](#)'. Vienna, Austria, March 2016.

International Federation of Infection Control (IFIC) 2016. '[My favourite papers on...environmental decontamination](#)'. Vienna, Austria, March 2016.

Infection Prevention Society (IPS) 2015. '[How to assess scientific posters: a practical guide](#)'. Liverpool, UK, September 2015.

Healthcare Infection Society (HIS) Middle East Infection Prevention Summit 2015. '[European approaches to prevention and control of MDR Gram-negatives](#)'. Dubai, June 2015.

20th Infection and Sepsis Symposium 2015. '[The English MRSA Miracle](#)'. Portugal, March 2015.

20th Infection and Sepsis Symposium 2015. '[Containing CRE spread](#)'. Portugal, March 2015.

Healthcare Environment & Infrastructure (HEI) London 2014. '[Ebola: coming to a hospital near you? Infection, prevention, control and preparedness considerations](#).' London, UK, November 2014.

Healthcare Infection Society (HIS) 2014. '[What's trending in the infection prevention and control literature?](#)' Lyon, France, November 2014.

Healthcare Estates 2014. '[What do emerging microbial threats mean to hospital cleaning and disinfection: from MRSA to MERS to multidrug-resistant Gram-negative bacteria](#)'. Manchester, UK, October 2014.

Infection Prevention Society (IPS) 2014. Pro-Con Debate with Dr Ian Gould: '[Universal vs. targeted interventions in infection prevention and control: the case for a targeted strategy](#)'. Glasgow, Scotland, September 2014.

Infection Prevention Society (IPS) 2014. '[How to assess scientific posters: a practical guide](#)'. Glasgow, Scotland, September 2014.

Healthcare Infection Society (HIS) & Infection Prevention Society (IPS) Joint Meeting 2014. 'Dissecting the epidemiology of resistant Enterobacteriaceae and non-fermenters'. Birmingham, UK, April 2014.

World Forum for Hospital Sterile Supply (WFHSS) and Japanese Society of Medical Instrumentation (JSMI) Annual Conference 2012. 'Is there a role for hydrogen peroxide vapour disinfection in the prevention of healthcare-associated infection?' Osaka, Japan, November 2012.

Association for Professionals in Infection Control and Epidemiology (APIC) 2012. 'The role of environmental surfaces in disease transmission.' San Antonio, Texas, USA, June 2012.

Japanese Society for Environmental Infection (JSEI) Annual Meeting 2012. 'The bed location lottery: the MDRO status of the prior bed occupant affects the risk of acquisition.' Fukouka, Japan, February 2012.

Infection Prevention Society (IPS) Annual Meeting 2011. 'CA-MRSA: coming to an A&E near you?' Bournemouth, UK, September 2011.