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Poster Overview

Nr.	Title	Presenter	Authors
P268	ROLE OF STAPHYLOCOCCUS AUREUS EXTRACELLULAR ADHESION PROTEIN (EAP) AND INTERCELLULAR ADHESION MOLECULE 1 (ICAM-1) IN S. AUREUS INTERNALIZATION INTO NON-PROFESSIONAL PHAGOCYTIC CELLS	Mohamed Fedy Morgene	Mohamed Fedy Morgene | Josselin Rigaill | Florence Grattard | Frederic Laurent | Philippe Berthelot | Bruno Pozzetto | Elisabeth Botelho-Nevers | Paul Verhoeven
P269	Emergence of non-wild-type populations towards biocides in Staphylococcus epidermidis colonizing veterinary staff	Sofia Santos Costa	Sofia Santos Costa | Mafalda Rosa | Frederico Holtreman | Ana Catarina Rodrigues | Miguel Viveiros | Maria Constança Pomba | Isabel Couto
P270	Frequent biofilm production by Staphylococcus epidermidis causing infection in pets or colonizing veterinary staff	Sofia Santos Costa	Sofia Santos Costa | Cláudia Mineiro Santos | Miguel Viveiros | Maria Constança Pomba | Isabel Couto
P271	USING MALDI-TOF MASS SPECTROMETRY TO IDENTIFY AND DIFFERENTIATE STAPHYLOCOCCUS ARGENTEUS FROM STAPHYLOCOCCUS AUREUS IN ROUTINE DIAGNOSTIC MICROBIOLOGY	Cecilia Li	Cecilia Li | Trang Nguyen | Marc Ramsperger | Genevieve McKew | Emma Goeman | Sebastiaan Van Hal | Steven YC Tong | Phillip Giffard | Matthew O'Sullivan
P272	The Epidome - A species-specific targeted-sequencing method for detection and differentiation of S. epidermidis isolates	Amalie Rendboe	Amalie Rendboe | Søren Iversen | Thor Bech Johannesen | Bo Söderquist | Emeli Månsson | Paal Skytt Andersen | Marc Stegger
P273	Naturally truncated GdpP protein results in β-lactam resistance and impaired growth in clinical mec gene negative Staphylococcus aureus	Xiaoliang Ba	Xiaoliang Ba | Ewan Harrison | Nazreen Hadjirin | Heidrun Kerschner | Petra Apfalter | Gavin Paterson | Mark Holmes
P274	Characterization of the Atl-mediated staphylococcal internalization mechanism	Christine Heilmann	Tim Schlesier | Michaela Pöter | Georg Peters | Ursula Rescher | Christine Heilmann
P275	Molecular and antibiotic resistance profiles of Methicillin-resistant staphylococcus aureus isolated from clinical samples in Saudi arabis	Mateq Alreshidi	Mateq Alreshidi
P276	THE EVOLUTION AND RELATEDNESS OF THE MRSA CLONE t304/ ST6 IN FIVE EUROPEAN COUNTRIES	Mette Damkjaer Bartels	Mette Damkjaer Bartels | Leif Percival Andersen | Michele Bes | Hege Enger | Christina Gabrielsen | Thomas Arn Hansen | Barbara Juliane Holzknecht | Sara Hæggman | Angela Kearns | Kjersti Wik Larssen | Frederic Laurent | Barbro Makitalo | Bruno Pichon | olov Svartström | Peder Worning | Henrik Westh

[P270] FREQUENT BIOFILM PRODUCTION BY STAPHYLOCOCCUS EPIDERMIDIS CAUSING INFECTION IN PETS OR COLONIZING VETERINARY STAFF

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Aim: To characterize biofilm production by *Staphylococcus epidermidis* isolates causing infection in pets or colonizing veterinary staff.

Methods: The study collection comprised 129 *S. epidermidis* isolates, from nasal colonization of veterinary staff (n = 112) and causing infection in cats and dogs (n = 17). The capacity to produce biofilm was evaluated by the Crystal Violet (CV) method, performed in flat-bottom 96-well polystyrene plates and biofilm production was categorized (as strong, moderate or weak) according to specific ranges of 570 nm optical density. The biofilm producer *S. epidermidis* RP62A was used as control in each assay. Biofilm-associated genes *icaAD* and *aap* were screened by PCR.

Results: Amongst the human commensal isolates, the CV method enabled the identification of 66/112 (58.9 %) biofilm producers, of which 34/66 (51.5 %) were strong or moderate producers. In the group of pet infection isolates, 16/17 isolates (94.1 %) produced biofilm, of which 12/16 (75.0%) were strong or moderate producers. The majority of the isolates carried *icaAD* and/or *aap* genes. The genotype $icaAD^{-}aap^{-}$ was associated with non-biofilm production whereas genotype $icaAD^{+}aap^{+}$ was linked to strong biofilm production. No correlation was found between any biofilm producing phenotype and the genotypes $icaAD^{+}aap^{-}$ $icaAD^{-}aap^{+}$.

Conclusion: These results evidence a high frequency of biofilm production by *S. epidermidis* either causing infection in pets or colonizing humans in close contact with them. The findings also highlight the importance of biofilm-associated genes other than *ica* in the biofilm phenotype.

These results were partially presented at ECCMID2018 (Madrid, Spain, April 21-24 2018).