

The 2013 Stevens Conference

The 2nd Conference on Bacteria-Material Interactions

Wednesday, 5 June, 2013

Time	Abs #	Title	Presenter	Affiliation
8:15-9:00		Registration and Continental Breakfast		
Session 1		session chair = Matthew Libera (Stevens)		
9:00-9:15		Welcome and Overview	Matthew Libera	Stevens
9:15-9:45	1	Invited: Impact and implications of bacterial infection following total joint replacement	Brian Evans	Georgetown
9:45-10:15	2	Invited: Key-players and key-factors in biomaterial-associated infections – toward changing paradigms	Henk Busscher	Groningen
10:15-10:20	P1	RF: Silver Doped Titania – Siloxane Hybrids: Novel Coatings for Improving Antibacterial Property of Polyether Ether Ketone	John Jarrell	BioIntraface

10:20-10:25	P2	RF: Antibiofilm activity of ulvan polysaccharides covalently immobilized onto titanium surface	Virginie Gadenne	CNRS, Normandy Univ.
10:25-10:30	P3	RF: AMPs: Design of a novel antimicrobial titanium surface	Todd Alexander	Worcester Polytechnic
10:30-10:35	P4	RF: Conditions of Lateral Surface Confinement that Favor Tissue-Cell Integration over Biofilm Growth	Eva Wang	Stevens
10:35-10:40	P5	RF: Influence of Nanoparticles on Bacterial Phagocytosis by Macrophages	Joanna da Silva Domingues	Groningen
10:40-11:15		break and posters		
Session 2		session chair = Scott Phillips (FDA)		
11:15-11:30	3	Label-free Characterization of Extracellular Polymeric Substance in Streptococcus mutans Biofilms	Nancy Lin	NIST
11:30-11:45	4	Natural products: the future in the development of antibiofilm surfaces?	Pascal Thebault	CNRS, Univ. de Rouen
11:45-12:00	5	Modeling and Simulation of Bifunctional Antibacterial Surfaces	Adriana Compagnoni	Stevens
12:00-12:05	P6	RF: New approach for antimicrobial biopolymers by grafting of antimicrobial peptides	Isabelle Lequeux	CNRS, Univ. de Rouen
12:05-12:10	P7	RF: Novel Antimicrobial biocompatible PETA composite scaffolds for orthopaedic implants	Mollie Smoak	LSU

12:10-12:15	P8	RF: Intelligent Antibacterial Coating for Indwelling Devices	Christian Traba	Stevens
12:15-1:15		working lunch		
Session 3		session chair = Joe Zitelli (Zimmer)		
1:15-1:45	6	Invited: Animal Models of Orthopedic Implant Infections	Tom Schaer	UPenn
1:45-2:15	7	Invited: 3D Microphysiological Human Tissue Reconstruction	Woo Lee	Stevens
2:15-2:30	8	Paradoxical” resistance associated with antimicrobial biomaterials	Roger Bayston	Nottingham
2:30-2:45	9	Stress relaxation analysis facilitates a quantitative approach towards antimicrobial penetration into biofilms	Henny van der Mei	Groningen
2:45-2:50	P9	RF: Building an antimicrobial surface? Choose your test wisely.	Lauren De Stefano	Orthobond
2:50-2:55	P10	RF: Gold Nanoparticles as Photothermal Agents: Potential Toward New Methods for Killing Bacteria	Tabbitha Dobbins	Rowan University
2:55-3:00	P11	RF: Examination of periodontal pocket biofilm growth and effects of PDT for perio-infection control	Stephen Rogers	SUNY Buffalo
3:00-3:30		break and posters		

Session 4		session chair = Svetlana Sukishvili (Stevens)		
3:30-4:00	10	Invited: "Closed Access" Sterile Drainage: It works for Peritoneal Dialysis-It Should Work for the Urinary Bladder	Don Griffith	Baylor
4:00-4:15	11	Fighting catheter-associated biofilms by antibiotic locks and surface treatment	Christophe Beloin	Institut Pasteur, Paris
4:15-4:30	12	Modification of Silicone Surfaces to Promote Stable High Coverage Benign E. coli Biofilms against Pathogen Colonization	Chengzhi Cai	Univeristy of Houston
4:30-4:45	13	Correlation of silver release and antimicrobial effect of silver-containing wound dressing in-vitro	Kristina Hamberg	Molnlycke Health Care
4:45-5:00	14	Efficacy of Silver Thin Films as Antimicrobial Surfaces	Gregory Caputo	Rowan University
5:00-6:00		Break		

6:00-7:00		Reception at W Hotel		
7:00-9:30		Conference Banquet		
		Michael Graziano "Resistance ... or; Social Microbialism, The Diffusion of Responsibility, and The Difficulty of Public Science		
		<p><u>Overview:</u> I will offer brief remarks about the challenge of translating an essentially technical subject - antimicrobial resistance to antibiotics - into a film for a general audience. I will touch on the structure of the film itself, some lessons learned in the process so far, and where the film is headed. I will show a variety of clips from interviews and other pieces of the film.</p>		<p>Bio: Michael Graziano is a founding partner of Uji Films. He has worked on a variety of independent and commissioned film and TV productions. His work has appeared on Al Jazeera, ABC News, HGTV, CNN and elsewhere. Michael has also created commercial work for clients including WIRED, The Tribune Co., Applegate Farms, GenART and more.</p>

Thursday, 6 June, 2013

8:15 - 9:00		Registration and Continental Breakfast		
Session 5		session chair = Henny van der Mei (Groningen)		
9:00-9:30	15	Invited: Designing Antibacterial Coatings: A Multi-Directional Approach	Svetlana Sukhishvili	Stevens
9:30-9:45	16	A new class of contact active antimicrobial polymer and coating	Peng Li	Nanyang Tech. Univ. Singapore
9:45-10:00	17	Phosphonate self-assembled monolayers on biomaterial surfaces to inhibit bacterial adhesion and biofilm formation	Carmen-Mihaela Tilmaciu	Montpellier, France
10:00-10:15	18	Reducing Bacterial Colonization of Tissue Scaffolds by Hierarchical Assembly of Microgels and Antimicrobials	Qichen Wang	Stevens
10:15-10:20	P12	RF: Guanylated Polymethacrylates: a class of potent antimicrobial polymers with low toxicity	Katherine Locock	CSIRO
10:20-10:25	P13	RF: Functional DNase I coating to prevent bacterial adhesion and biofilm formation	Jan Swartjes	Groningen
10:25-10:30	P14	RF: Impact of different immobilization parameters on Dhvar5 antibacterial activity	Fabiola Costa	University of Porto

10:30-11:00		break and posters		
Session 6		session chair = Joseph Zitelli (Zimmer)		
11:00-11:30	19	Invited: Infection Associated with Orthopaedic Trauma	Michael Suk	Geisinger Health
11:30-11:45	20	Provox ActiValve and Biofilm formation	Bernard van der Laan	Groningen
11:45-12:00	21	Evaluation of pro-inflammatory mediators around Ti and ZrO ₂ dental implant abutments after 6 months of clinical function	Christopher Barwacz	University of Iowa
12:00-12:05	P15	RF: Silicon Nitride – A Unique Antibacterial Bioceramic	Sonny Bal	University of Missouri
12:05-12:10	P16	RF: Zirconium nitride/silver nanocomposites used in the design of antimicrobial external fixation pin coatings	David Wickens	Manchester
12:10-12:15	P17	RF: Improving the performance of silver-containing films for bactericidal applications	Jeffrey Hettinger	Rowan University
12:15-1:15		working lunch		
Session 7		session chair = Matthew Libera (Stevens)		
1:15-1:45	22	Invited: The Effects of Surface Topography on Bacterial Adhesion	Anthony Brennan	University of Florida

1:45-2:00	23	Bacterial Adhesion Inhibition by Submicron Textured Biomaterial Surfaces	Li-Chong Xu	Penn State Hershey
2:00-2:15	24	Understanding the infection mechanisms of silver nanoparticle-based antibacterial coatings	Lydie Ploux	CNRS, Mulhouse
2:15-2:45	25	Invited: Challenges for Regulating Biofilm-Associated Medical Devices	Michael Waters	FDA
2:45-3:00		break		
		Panel Discussion. Matthew Libera (moderator)		
3:00-4:00		How Can We More Quickly Bring New Materials-Based Infection-Control Strategies to Clinical Practice?	Peter Tolia	Stevens
			Marie Marlow	M Squared Associates
			Sonny Bal	University of Missouri
			Scott Phillips	FDA
4:00		Conference closure		

POSTERS

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	P18	Bacterial ability to sense chemical heterogeneities	Lydie Ploux	CNRS, Mulhouse
	P19	Mechanical prevention of bacterial colonization upon surface tethering of vesicular structures through hybridization	Lydie Ploux	CNRS, Mulhouse
	P20	Mechanically responsive and antibacterial coating for textile biomaterials	Lydie Ploux	CNRS, Mulhouse
	P21	Antimicrobial loading and release from PEG-based hydrogels	Yong Wu	Stevens
	P22	Effects of hBD-3 on Staphylococcus aureus biofilm formation regulating genes <i>dltB</i> and <i>icaA</i> genes	Jun Fei	Daping Hospital
	P23	Evaluation of Surgical Instrument Handling on Polypropylene mesh using Scanned Electron Microscopy (SEM)	Laura Cornwell	University of Louisville
	P24	Combining Miniaturized Soil Quantification and Biofilm Analysis for Medical Device Testing	Scott Phillips	FDA
		Posters with Rapid Fire Presentation		
	P1	Silver Doped Titania – Siloxane Hybrids: Novel Coatings for Improving Antibacterial Property of Polyether Ether Ketone	John Jarrell	BioIntraface
	P2	Antibiofilm activity of ulvan polysaccharides covalently immobilized onto titanium surface	Virginie Gadenne	CNRS, Normandy Univ.

	P3	AMPs: Design of a novel antimicrobial titanium surface	Todd Alexander	Worcester Polytechnic
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	P7	Novel Antimicrobial biocompatible PETA composite scaffolds for orthopaedic implants	Mollie Smoak	LSU
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