

Technical Advisory Conference Agenda June 20-22, 2006

Center for Biofilm Engineering

06/19/06

Monday June 19

6:00–7:30 p.m. Pre-registration and welcome reception GranTree Inn North 7th Ave, Bozeman

Tuesday June 20

7:30–8:30 a.m. Registration and continental breakfast Strand Union Building (SUB) Ballrooms B & C

8:30–8:45 Introductory remarks SUB Ballroom D Paul Sturman, CBE Industrial Coordinator

Mel Czechowski, Church & Dwight, TAC Chair Phil Stewart, CBE Director

SESSION 1: Antimicrobial Surfaces

8:45–9:30 Antimicrobial surfaces in

perspective—a review Ross Carlson, Assistant Professor of Chemical and Biological Engineering, CBE

9:30-10:05

N-halamine biocidal coatings

Dave Worley, Professor and Interim Chair, Department of Chemistry, Auburn University, Auburn, Alabama

10:05–10:30 Control of biofilm accumulation on chitosan-coated surfaces

M.M. Taimur Khan, Research Assistant Professor, CBE

10:30-11:00 Break

11:00-11:25

Testing antimicrobial surfaces Garth James, Medical Projects Manager, CBE

11:25–12:00 Textiles and antimicrobial testing Mark Fornalik, Specialty Materials Group, Kodak Research Labs

12:00–1:00 Lunch, catered SUB Ballroom C

SPECIAL PRESENTATION

1:00–1:30 State of the CBE Phil Stewart, CBE Director

<u>SESSION 2:</u> Biofilms in Food and Food Processing

1:30–2:00 Session introduction: Biofilms in the food industry: Friend or foe? Stewart Clark, Ph.D. Candidate, Microbiology, CBE

2:00–2:30 Exploiting competitive microorganisms to control foodborne pathogens at the source Mike Doyle, Director, Center for

Food Safety, University of Georgia, Griffin, Georgia

2:30–2:50 Biofilms on produce and household surfaces: Microscopic imaging and microbial community analysis

Rick Veeh, Senior Research Associate, CBE

2:50–3:20 Biofilms in the food processing environments Amy Wong, Professor of Food

Amy Wong, Professor of Food Microbiology, University of Wisconsin–Madison

3:20-3:50 Break

SESSION 3: Biofilm Methods

3:50–4:15 Session introduction: Darla Goeres, Research Engineer, CBE Log reduction calculations Marty Hamilton, Professor Emeritus, Statistics, CBE

4:15-4:30

Measuring the bias in log reduction calculations that result from cell wash-off during treatment Alex Hilyard, Standard Biofilm Methods (SBM) Intern, CBE

4:30-4:45

Checking the biofilm removal and disaggregation steps: A feasibility study

Kelli Buckingham-Meyer, Research Assistant, CBE

4:45-5:00

A new standard method: The drip flow reactor with Staphylococcus aureus Jackie Whitaker, Standard Biofilm Methods (SBM) Intern, CBE

Poster Session

5:10–6:30 Ballrooms B & C

EPA Feedback Session

6:30–7:30 Ballroom D

Wednesday June 21

7:30–8:30 a.m. Registration and continental breakfast Strand Union Building Ballrooms B & C

<u>SESSION 4:</u> Industrial Water Treatment

8:30–8:40 Session introduction Anne Camper, Professor, Civil Engineering, CBE; Associate Dean for Research and Graduate Studies, MSU

8:40–9:00

Microbially influenced corrosion of copper

Mohammad Shahedur Rahman, Ph.D. Candidate, Civil Engineering, CBE

9:00–9:20 Immobilizing pathogens in a biofilm trap Wes Bauman, M.S. Candidate, Civil Engineering, CBE

9:20–9:50 Inorganic particle transport in biofilms Anne Camper

9:50-10:20 Break

10:20–10:50 Controlling localized corrosion in a complex cooling water system Mike Dorsey, Senior Specialist, DuPont

SESSION 5: Microscopy

10:50–11:10 Session introduction: Recently acquired equipment: The stereo microscope Betsey Pitts, Research Associate/Facilities Manager, Microscopy, CBE

11:10–11:40 Using fluorescent proteins to assess biofilm growth

Ben Klayman, Ph.D. Candidate, Environmental Engineering, CBE

11:40–12:10 Application of AFM to bacterial investigations

Recep Avci, Director, Image and Chemical Analysis Laboratory, Physics Department, MSU

12:10–1:00 Lunch, catered SUB Ballrooms B & C REGULATORY PRESENTATION

1:00–1:40 Regulatory methods: Recommendations for a suitable method for biofilm disinfectants

Stephen Tomasino, Senior Scientist, US EPA—OPP Microbiology Laboratory, Environmental Science Center

3:15–5:15 TAC Business Meeting Springhill Pavilion

6:00–8:00 Dinner, catered Springhill Pavilion

Thursday June 22

7:30–8:30 a.m. Registration and continental breakfast Strand Union Building Ballrooms B & C

<u>SESSION 6:</u> Environmental Biofilms

8:30–8:40 Session introduction Al Cunningham, Professor, Civil Engineering, CBE

8:40-9:15

Transformation of pure-culture and mixed-population biofilms with genes of value for bioremediation

Ron Crawford, Professor of Microbiology, University of Idaho, Moscow, Idaho

9:15-9:45

Selective removal of DNA from dead bacteria and molecular monitoring of disinfection efficacy Andreas Nocker, Research

Andreas Nocker, Research Assistant Professor, CBE

9:45–10:15 Electron transport in engineered biofilms

Robin Gerlach, Research Assistant Professor, CBE

10:15-10:45 Break

10:45–11:10 Determinants of bacterial cell surface physicochemistry and architecture

Andrew Neal, Savannah River Ecology Laboratory, Aiken, South Carolina

11:15-11:50

Bacterial nanowires: Electrically conductive filaments and their implications for energy transformation and distribution in natural and engineered systems Jeffrey McLean, Biological

Sciences Division, Pacific Northwest National Laboratory

11:50–12:00 Session and meeting wrap-up

NEXT TAC February 8–9, 2007