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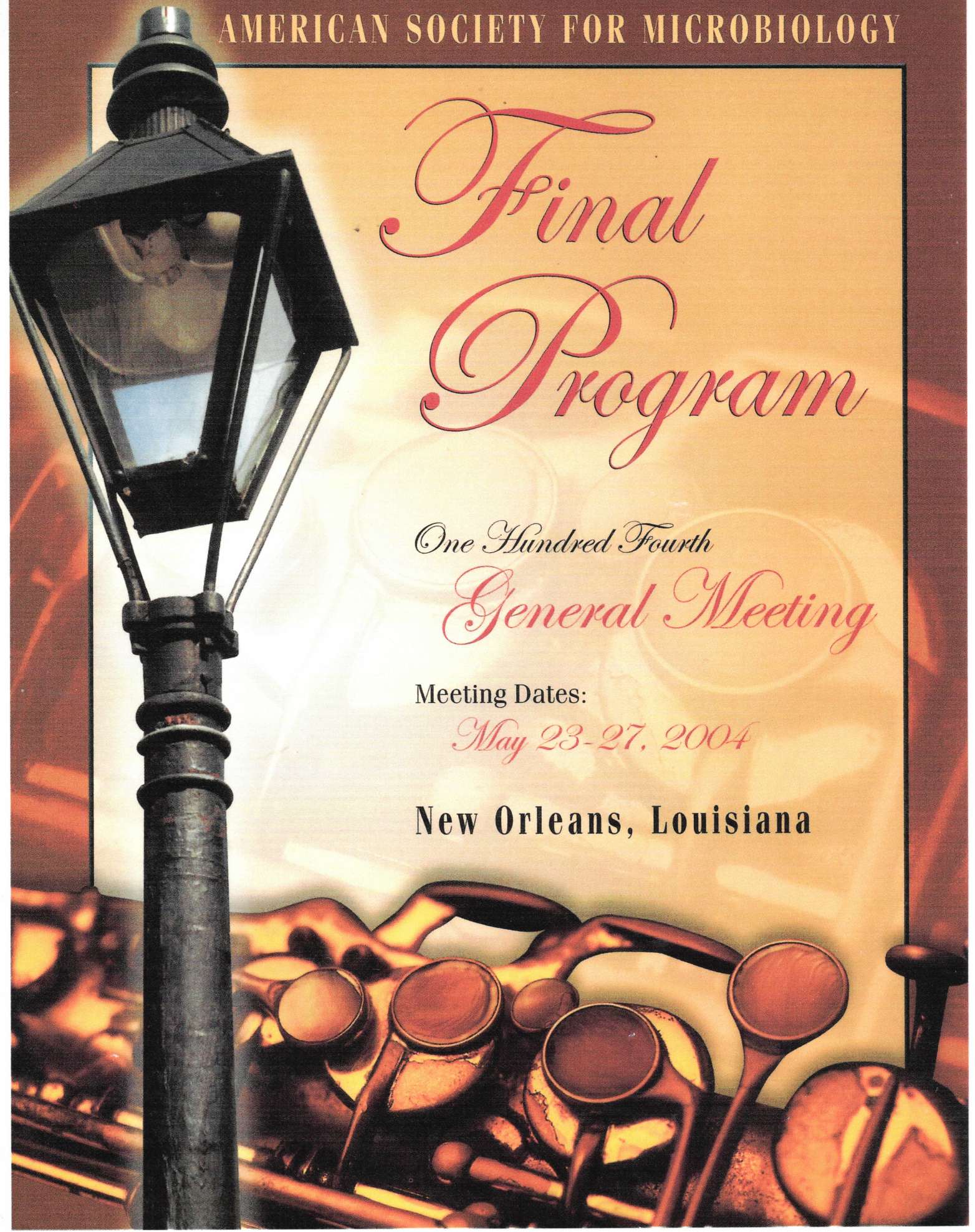
One Hundred Fourth

General Meeting

Meeting Dates:

May 23-27, 2004

New Orleans, Louisiana



*One Hundred Fourth
General Meeting*

New Orleans, Louisiana • May 23-27, 2004



*Final
Program*



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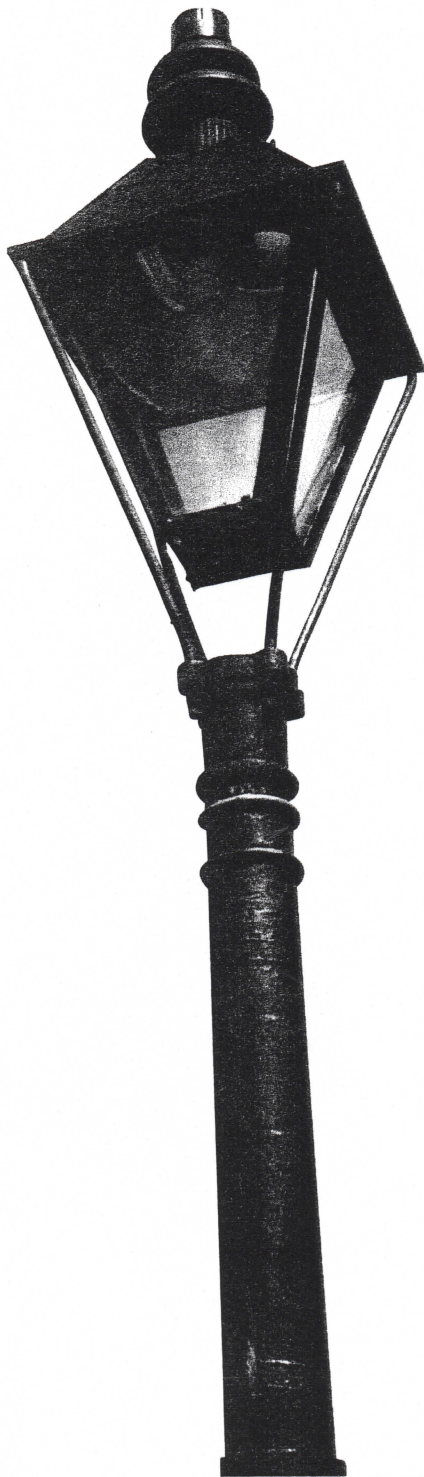
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Q-418 Comparison of Real-time PCR and NASBA for the Detection and Quantification of Norovirus Genogroup II

S. S. Patterson¹, M. Smith², L. Stark², D. Huffman¹, J. H. Paul, III¹;

¹Univ. of South Florida, St. Petersburg, FL, ²Florida Department of Health, Tampa, FL

Q-419 Transmission of Adenoviruses by Drinking Water: A Risk Assessment

N. Nwachuku¹, C. P. Gerba², K. D. Mena³;

¹Environmental Protection Agency, Washington, DC, ²Univ. of Arizona, Tucson, AZ, ³Univ. of Texas, Sch. of Public Health, El Paso, TX

Q-420 Molecular Detection of Waterborne Enteric Viruses in the Coastal Reaches of the Altamaha River

T. Fong, E. K. Lipp;

Univ. of GA, Athens, GA

Q-421 Application of Real-Time PCR and Tissue Culture Assay for Adenovirus Detection in Two Southern California Urban Rivers

S. B. Choi, W. Chu, J. Han, J. He, S. Jiang;

Univ. of California, Irvine, Irvine, CA

Q-422 Norovirus Concentration and Detection Using Monoclonal Antibody Immunomagnetic Capture and Carbohydrate Affinity Capture RT-PCR

F. H. Neill, A. M. Hutson, M. K. Estes, R. L. Atmar;

Baylor College of Medicine, Houston, TX

Q-423 Real-Time PCR Quantification of Human Adenoviruses and Enterococcus in Environmental Water Samples

J. He, S. Jiang;

Univ. California, Irvine, CA

Q-424 Comparison of Four Tissue Culture Cell Lines for Detection of Human Adenoviruses in Environmental Samples

S. Jiang, J. He, M. Han;

Univ. California, Irvine, CA

Q-425 Conventional and Quantitative Reverse Transcription-PCR Detection and Enumeration of Human Enteric RNA Viruses Seeded into Environmental Samples

J. Bae, K. J. Schwab;

Johns Hopkins Univ, Baltimore, MD

285/Q Groundwater Microbiology and Subsurface Transport
1:00 pm - 4:00 pm

Poster Hall

Q-426 Distribution of Tetracycline Resistance Genes in Groundwater Underlying Swine Production Facilities: A Three Year Study

S. Koike¹, I. J. Krapac², J. C. Chee-Sanford³, R. I. Aminov⁴, R. I. Mackie¹;

¹Univ. of Illinois at Urbana-Champaign, Urbana, IL, ²Illinois State Geological Survey, Champaign, IL, ³USDA-Agricultural Research Service, Urbana, IL, ⁴Rowett Research Institute, Aberdeen, UNITED KINGDOM

Q-427 Lipopolysaccharide Characterization for Two *Pseudomonads* Grown with Different Carbon Sources

M. Chen, A. Crandall, L. Luck, S. Grimberg;

Clarkson Univ., Potsdam, NY

Q-428 Transport and Attenuation of Bacteria, Bacteriophages, and Chemical Tracers in an 8 m Column of Saturated Pea Gravel

L. W. Sinton¹, L. Pang¹, M. E. Close¹, R. R. Braithwaite¹, C. H. Hall¹, M. J. Noonan²;

¹Institute of Environmental Science and Research (ESR), Christchurch, NEW ZEALAND, ²Lincoln Univ., Canterbury, NEW ZEALAND

Q-429 Microbial Diversity of Iron-Reducing Microorganisms at Minerotrophic Wetland

S. Todorova, A. M. Costello;

Syracuse Univ., Syracuse, NY

Q-430 Mineral-based Biobarriers to Attenuate *E. coli* Transport: Effect of Mineral and Cell Surface Chemistry

J. B. Morrow^{1,2}, K. Reinauer², K. Wright², H. Yang¹, D. Grasso², B. Smets¹;

¹Univ. of Connecticut, Storrs, CT, ²Smith College, Northampton, MA

Q-431 Correlating Potential Denitrification Rates with the Spatial Distribution of Denitrifying Organisms in Cobb Mill Creek Sediments

J. M. Battistelli, H. S. Galavotti, A. L. Mills;

Univ. of Virginia, Charlottesville, VA

Q-432 Dissimilatory Reduction of Natural Fe(III) (Hydr)oxide-Coated Sands: Comparison to Synthetic Fe (Hydr)oxides

C. M. Hansel, S. Fendorf;

Stanford Univ., Stanford, CA

286/Q General Environmental Microbiology - II

1:00 pm - 4:00 pm

Poster Hall

Q-433 Prokaryotic Microbial Community Profiling of a Chihuahuan Desert Spring using Denaturing Gradient Gel Electrophoresis (DGGE)

R. L. Sink¹, M. Barnes², R. McLean², **P. K. Hathorn¹**;

¹Rutgers Univ., New Brunswick, NJ, ²Texas State Univ., San Marcos, TX

Q-434 Investigation of a Single-Pass "Bubbling" Bioaerosol Generator

G. Mainelis¹, R. Jaeger², K. DeVoe³, M. Yao¹;

¹Rutgers Univ., New Brunswick, NJ, ²CH Technologies, Inc., Westwood, NJ, ³BGI Inc., Waltham, MA

Q-435 Screening Diverse Microorganisms for Anaerobic Growth and Biosurfactant Production

N. H. Youssef, K. E. Duncan, D. P. Nagle, M. J. McInerney;

Univ. of Oklahoma, Norman, OK

Q-436 Oxidation of Arsenite in Bioreactors by *Agrobacterium albertimagni* strain AOL-15

G. N. Lowe, R. A. Barco, R. Y. Mendoza, C. S. Khachikian, T. M. Salmassi;

California State Univ., Los Angeles, Los Angeles, CA

Q-437 Structural Characterization of a Siderophore Produced by the Halo-alkaliphilic Bacterium *Halomonas campisalis* strain 4A

A. M. Aiken¹, B. M. Peyton¹, A. K. Camper², J. N. Petersen¹, W. A. Apel³;

¹Washington State Univ., Pullman, WA, ²Montana State Univ., Bozeman, MT, ³Idaho National Engineering and Environmental Laboratory, Idaho Falls, ID

Q-438 Distribution of Luminescent *V. cholerae* in the Chesapeake Bay

C. J. Grim, N. Choopun, Y. Zo, A. Huq, R. R. Colwell;

Ctr. of Marine Biotechnology, Baltimore, MD

Q-439 Evaluation of Treated Zeolite in Pilot Filters for Removal and Inactivation of Microorganisms

P. Monteiro¹, A. Alum¹, R. Ouwens¹, H. Ryu¹, M. Abbaszadegan^{1,2};

¹Arizona State Univ., Tempe, AZ, ²National Science Foundation Water Quality Ctr., Tempe, AZ

Q-440 Bacterial Population Dynamics and Community Structure in a Pharmaceutical Manufacturing Water Supply System

M. Kawai¹, J. Yamagishi¹, N. Yamaguchi², K. Tani², M. Nasu²;

¹Dainippon Pharmaceutical Co., Ltd., Osaka, JAPAN, ²Osaka Univ., Osaka, JAPAN

Q-441 FAME Analysis of Wetland Microbial Communities

K. R. Miller¹, J. P. Sumner², D. E. Ressler³;

¹Salisbury Univ., Salisbury, MD, ²North Carolina State Univ., Raleigh, NC, ³Susquehanna Univ., Selinsgrove, PA

Q-442 Mapping the Correlation between Environmental Conditions and Microbial Growth

F. P. J. Vandecasteele, T. F. Hess, R. L. Crawford;

Univ. of Idaho, Moscow, ID

Q-443 Determining the Ratio of Copy Number of the *fdhF*, *hyfB* and *hyfG* Genes from the Formate Dehydrogenase (FHL)-2 System and the Hydrogen Gas Produced by *E. coli* in Anaerobic Sludge Samples Using Real-Time PCR

J. Y. Le, L. Xu, P. Arps, B. H. Olson;

Univ. of California, Irvine, Irvine, CA

Q-444 Reduction of Benzoate to Cyclohexane Carboxylate by *Syntrophus acidotrophicus* with Crotonate as the Electron Donor

H. Mouttaki, M. J. McInerney;

Univ. of Oklahoma, Norman, OK

Q-445 Influence of chloro group on biotransformation and toxicity of polychlorinated biphenyl
A. G. Smith, S. Psaros, S. K. Walia, **G. R. Chaudhry**;
Oakland Univ., Rochester, MI

Q-446 Kinetic Exclusion Assays to Quantify PucA Binding Interactions in Polyurethane
B. Duos, G. T. Howard;
Southeastern Louisiana Univ., Hammond, LA

Q-447 Bottom Sediments as Reservoirs for Surface Water Fecal coliforms and *E. coli*
L. W. Jolley, W. R. English, J. W. Pike;
Clemson Univ., Clemson, SC

Q-448 Use of Integrated Microarray Technologies to Monitor Microbial Communities During the Remediation of a Groundwater System Contaminated with High Levels of Nitrate and Uranium
T. J. Gentry¹, C. W. Schadt¹, W. Wu², C. S. Criddle², J. M. Carley¹, J. D. Istok³, M. Sapp³, S. L. Carroll¹, T. L. Mehlhorn¹, M. A. Bogle¹, R. F. Hickey⁴, D. D. Watson¹, P. M. Jardine¹, J. Zhou¹;
¹Oak Ridge National Laboratory, Oak Ridge, TN, ²Stanford Univ., Palo Alto, CA, ³Oregon State Univ., Corvallis, OR, ⁴Ecovation, Victor, NY

Q-449 Environmental Strains of *Vibrio cholera* from San Luis Potosí, Mexico, Do Not Contain Functional *ctxAB* Genes but Express Multiple Antibiotic Resistance Traits
R. Quezada-Calvillo¹, E. Villegas-Tobias¹, V. Recio¹, J. Tovar-Oviedo¹, R. López-Revilla²;
¹Universidad Autónoma de San Luis Potosí, San Luis Potosí, MEXICO, ²Instituto Potosino de Investigación Científica y Tecnológica, San Luis Potosí, MEXICO

287/Q Biodegradation: Methodology and Miscellaneous
1:00 pm - 4:00 pm
Poster Hall

Q-450 Isolation and Characterization of Microorganisms Contaminating Paint Formulations and Painted Walls and their Cellulolytic Activities
T. C. Okoye;
Kigali Inst. of Sci., Technology and Management, Kigali, RWANDA

Q-451 Using Compound Specific Stable Isotope Analyses to Support Trichloroethene (TCE) and Methyl tert-Butyl Ether (MTBE) Biodegradation in Contaminated Subsurface Environments
K. T. Finneran¹, M. Chartrand², J. McKelvie², P. Chang¹, P. Zeeb¹, B. Sherwood-Lollar²;
¹GeoSyntec Inc., Boxborough, MA, ²Univ. of Toronto, Toronto, ON, CANADA

Q-452 Cometabolism of MTBE by Microorganisms Isolated from a Gasoline Contaminated Soil
J. J. Monreal-Meléndez¹, L. N. Muñoz-Castellanos¹, L. I. Manzanares-Papayanopolous², **G. V. Nevárez-Moorillón**¹;
¹Universidad Autónoma de Chihuahua, Chihuahua, Chih. MEXICO, ²Centro de Investigación en Materiales Avanzados, Chihuahua, Chih. MEXICO

Q-453 Tools for Assessing the Potential for Bacterial N-nitrosodimethylamine (NDMA) Degradation
J. O. Sharp, L. Alvarez-Cohen;
UC Berkeley, Berkeley, CA

Q-454 Effect of Prior Exposure on Phenol-Degrading Soil Microorganisms at an Agricultural Field Site
E. L. Madsen, **C. M. DeRito**, G. M. Pumphrey;
Cornell Univ., Ithaca, NY

Q-455 Development of Genetic Probes for Aerobic TCE Degradation
S. R. Clingenpeel¹, M. H. Howard², W. K. Keener³, M. E. Watwood²;
¹Idaho State Univ., Pocatello, ID, ²Northern Arizona Univ., Flagstaff, AZ, ³Idaho National Engineering and Environmental Laboratory, Idaho Falls, ID

Q-456 Aerobic Degradation of Fluorinated Alkanes by *Pseudomonas* sp. strain 273
R. Song, **F. Loeffler**;
Georgia Institute of Technology, Atlanta, GA

Q-457 Biotransformation Pathway(s) of the ¹⁴C-labeled Fluorotelomer 8-2 Telomer B Alcohol (8-2 TBA) in Acclimated Bacterial Culture
N. Wang¹, R. Buck², B. Szostek³, P. Folsom¹, V. Capka³, J. Gannon¹;

¹DuPont Central Research and Development, Newark, DE, ²DuPont Chemical Solutions Enterprise, Wilmington, DE, ³DuPont Haskell Laboratory for Health and Environmental Sciences, Newark, DE

Q-458 Microbial Profiling Toxicological Changes During Biotransformation of Munitions in Sediments
T. Johnson;
Columbia Environmental Research Ctr., Columbia, MO

Q-459 Phenol Degradation under Microbial Fuel Cell Conditions
L. Tang, J. Jang, I. Chang, H. Moon, B. Kim;
Korea Institute of Science and Technology, Seoul., REPUBLIC OF KOREA

Q-460 Complete Degradation of Organophosphates by Genetically Engineered *Pseudomonas putida*
M. D. Mattozzi, S. K. Tehara, J. D. Keasling;
Univ. of California, Berkeley, Berkeley, CA

Q-461 Development of a Method to Efficiently Determine Gene Sequences Relevant to Pollutant Biodegradation
S. K. De Long, K. A. Kinney;
Univ. of Texas at Austin, Austin, TX

288/R Bioinformatics and Computational Analyses
1:00 pm - 4:00 pm
Poster Hall

R-053 Identification of Non-coding RNAs in the *Burkholderia cenocepacia* J2315 Genome
T. Coenye¹, D. W. Ussery², P. Vandamme¹;
¹Universiteit Gent, Gent, BELGIUM, ²Technical Univ. of Denmark, Lyngby, DENMARK

R-054 APIS: Automated Phylogenomic Inference System
J. H. Badger;
The Institute for Genomic Research, Rockville, MD

R-055 Accurate Root Neighbor Joining Trees
G. Jackoway, C. S. Arnold;
MIDI Inc., Newark, DE

R-056 Recent Developments in the EcoCyc *Escherichia coli* Model Organism Database
M. B. Arnaud¹, C. Bonavides-Martinez², J. Collado-Vides², S. Gama-Castro², M. E. Hance³, J. Ingraham⁴, S. M. Paley¹, **I. T. Paulsen**³, M. Peralta², J. Pick¹, M. Saier⁵, C. Tran⁵, P. D. Karp¹;
¹SRI Intl., Menlo Park, CA, ²CIFN, National Autonomous Univ. of Mexico, Cuernavaca, Morelos, MEXICO, ³The Institute for Genomic Research, Rockville, MD, ⁴Univ. of California, Davis, Davis, CA, ⁵Univ. of California, San Diego, La Jolla, CA

R-057 Modeling DNA Microarray Performance for Genetic Studies
K. T. Konstantinidis, **J. M. Tiedje**;
Michigan State Univ., East Lansing, MI

R-058 Prediction of Operons and Transcription Regulatory Sites in *Geobacteraceae* Using Comparative Genomics and Microarray Clustering
B. Yan¹, M. V. Coppi², C. Leang², K. P. Nevin², C. Nunez², R. A. O'Neil², G. Reguera², B. A. Methe³, D. R. Lovley², **J. Krushkal**¹;
¹Univ. of Tennessee Health Science Ctr., Memphis, TN, ²Univ. of Massachusetts, Amherst, MA, ³The Institute for Genomic Research, Rockville, MD

R-059 Relationship between Synonymous Codon Usage Bias and GC Compositions across Unicellular Genomes
X. Wan¹, D. Xu¹, J. Zhou²;
¹Digital Biology Laboratory, Department of Computer Science, Univ. of Missouri, Columbia, Columbia, MO, ²Department of Environmental Sciences, Oak Ridge National Laboratory, Oak Ridge, TN

R-060 Pathogen Information Collection, Display and Query Based on an eXtensible Markup Language
Y. He, R. Lathigra, R. Vines, A. Dickerman, J. D. Eckart, B. W. S. Sobral;
Virginia Bioinformatics Institute, Blacksburg, VA

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Activity : Abstract

Current Date/Time : 12/10/2003 3:40:20 PM

Environmental Strains of *Vibrio cholera* of San Luis Potosi, Mexico, Do Not Contain Functional *ctxAB* Genes but Express Multiple Antibiotic Resistance Traits

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Background: The main pathogenic factor of *Vibrio cholerae* O1 and O139 serotypes, causative agents of cholera, is the production of cholera toxin (CTX) encoded by the phage CTXphi. Other plasmids or integrons capable of horizontal transmission and encoding antimicrobial resistance are frequently found in O1/O139 and environmental non-O1/O139 strains. The last have are belived to constitute reservoirs for pathogenic determinants responsible of the cyclic cholera outbreaks. To identify probable reservoirs of transmissible pathogenicity determinants, we analyzed the presence of *ctxAB* genes and the patterns of antibiotic resistance in environmental isolates of *V. cholerae* obtained in the state of San Luis Potosi, Mexico. **Methods and Results:** The main sources of *V. cholerae* were local urban sewage waters (36.4%) and fresh waters together with derived edible products (34.4%). More than 40 different serotypes were identified, but none corresponded to the O1 or O139. Fourteen biochemical patterns were found clustered into four closely related groups. By PCR analysis two isolates obtained from marine products showed the presence of *ctxAB* amplification bands about 52 bp smaller than those obtained with O1 reference strains. No CTX production was detected in these two environmental strains suggesting the existence of a deletion involving the *ctxA* gene. A high frequency of resistance was observed against amoxicillin / clavulanic acid (73.7%), and erythromycin (30.9%); an intermediate frequency was observed against cefazolin (12.6%), cefapime (13.7%), tetracycline (8.3%) and trimethoprim / sulfamethoxazol (7.4%). Nine isolates displayed strong resistance against four to seven different antibiotics indicating the presence of chromosomal and extrachromosomal determinants of antibiotic resistance. **Conclusion:** Environmental *V. cholerae* in San Luis Potosi do not contain functional *ctxAB* genes; however, transmissible elements containing antibiotic multiresistance determinants are relatively frequent.

Topic (Complete): Q21 General Environmental Microbiology

Keyword (Complete): *Vibrio cholerae* ; environment ; pathogenicity

Membership and Grant Information (Complete):

ASM Member (or who has submitted an application): : Roberto Quezada-Calvillo

I am an ASM Member and I am the presenting author. : True

Status: Complete

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27 February 2004

Roberto Quezada-Calvillo
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Re: Abstract number - 4562

Dear Dr. Quezada-Calvillo

I am pleased to inform you that your abstract has been accepted for a **poster** presentation at the 104th General Meeting, which will be held at the Ernest N. Morial Convention Center, from May 23 through May 27, 2004 in New Orleans, LA.

Following is information pertaining to the above abstract:

Abstract Title: Environmental strains of Vibrio cholera from San Luis Potosi, Mexico, do not contain functional ctxAB genes but express multiple antibiotic resistance traits

Session No.: 286

Room/Day/Time: Poster Hall/May 26, 2004 1:00 PM

Presentation Number (to be included in your poster title): Q-449

Poster Placement: The size of the posterboard is 4 feet tall by 8 feet wide (1.2 m x 2.4 m).

Two poster sessions are scheduled each day (except Thursday). The morning session is from 9:00 a.m. to 12:00 p.m. and the presenter must stand at the poster from 10:30 a.m. until 12:00 p.m. The afternoon session is from 1:00 p.m. to 4:00 p.m. and the presenter must stand at the poster from 1:00 p.m. until 2:30 p.m. The period between 12:00 and 1:00 p.m. is reserved for removing the morning posters and placing the afternoon posters. The poster area of the Exhibit Hall is only open to the public from 9:00 a.m. to 4:00 p.m. **Therefore, you must bring this letter with you and show it to Security in order to place your poster between 7:30 and 9:00 a.m. for the morning session or to remove it between 4:00 and 5:30 p.m. for the afternoon session. On Thursday, admittance will be until 12:30 p.m. for poster removal/retrieval.**

Please recall that you agreed to present your poster as scheduled. If you fail to do so, you will be prohibited from submitting abstracts to ASM-sponsored meetings for 3 years. If unable to present your poster, notify ASM before March 5, 2004, so that your abstract will not be published.

Please check our website at <http://www.asm.org/Meetings/index.asp?bid=697> for information regarding presentation hints. Select "Poster Guidelines" from the sidebar. While you are at the website, do not forget to register for the General Meeting. The link to the registration company can be found under "Registration and Housing" at the URL listed above.

Please note that for those who submitted a request for a student travel grant, confirmation notices will be sent under separate cover March 10.

We look forward to your participation and to seeing you in New Orleans.

Sincerely,

104th General Meeting

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