

**CURRICULUM VITAE
JOHN J. KELLY**

Loyola University Chicago
Department of Biology
1032 West Sheridan Road
Chicago, IL 60660

Tel: 773.508.7097
Fax: 773.508.3646
e-mail: jkelly7@luc.edu

PROFESSIONAL INTERESTS

- Microbial Ecology
- Environmental Microbiology
- Molecular Biotechnology

EDUCATION

- Ph.D. (1998) Rutgers, The State University of New Jersey, New Brunswick, NJ
Department of Environmental Sciences
- M.S. (1995) Rutgers, The State University of New Jersey, New Brunswick, NJ
Department of Environmental Sciences
- B.A. (1990) Dartmouth College, Hanover, NH
Major: Biology

PRINCIPAL POSITIONS HELD

- 2007 – current Associate Professor
Loyola University Chicago, Chicago, IL
Department of Biology
- 2001 – 2007 Assistant Professor
Loyola University Chicago, Chicago, IL
Department of Biology
- 1998 – 2001 Post Doctoral Fellow
Northwestern University, Evanston, IL
Department of Civil and Environmental Engineering
Supervisor: Dr. David A. Stahl
- 1993 – 1998 Graduate Research Assistant
Rutgers, The State University of New Jersey, New Brunswick, NJ
Department of Environmental Sciences

PROFESSIONAL APPOINTMENTS

- 2004 – current Editorial Board
Applied and Environmental Microbiology
- 2003 – current Adjunct Faculty
Department of Microbiology and Immunology
Loyola University Medical Center, Maywood, IL
- 2001 – current Adjunct Faculty
Department of Civil and Environmental Engineering
Northwestern University, Evanston, IL

AWARDS AND HONORS

- CAURS Award for Support of Undergraduate Research 2006
- Sujack Award for Teaching Excellence Nomination 2003, 2006

PROFESSIONAL AFFILIATIONS

- American Association for the Advancement of Science
- American Society for Microbiology
- International Society for Microbial Ecology
- Soil Science Society of America

AD-HOC REVIEWER

Applied Soil Ecology, Biogeochemistry, Canadian Journal of Microbiology, Ecosystems, Environmental Science & Technology, FEMS Microbiology Ecology, ISME Journal, Journal of Bacteriology, Journal of Environmental Quality, Journal of the North American Benthological Society, Limnology and Oceanography, Microbial Ecology, Molecular Ecology, PLoS ONE, Soil Science

PUBLICATIONS

Peer Reviewed Publications

- **Kelly, J.J.**, K. Policht, T. Grancharova, and L.S. Hundal. 2011. Distinct Responses in Ammonia-Oxidizing Archaea and Bacteria after Addition of Biosolids to an Agricultural Soil. *Appl. Environ. Microbiol.* 77:6551-6558.
- Peterson, C.G., A.D. Daley, S.M. Pechauer, K.N. Kalscheur, M.J. Sullivan, S.L. Kufra, M. Rojas, K.A. Gray, and **J.J. Kelly**. 2011. Development of associations between microalgae and denitrifying bacteria in streams of contrasting anthropogenic influence. *FEMS Microbiol. Ecol.* 77: 477-492.
- **Kelly, J.J.**, A. Bansal, J. Winkelman, L.R. Janus, S. Hell, M. Wencel, P. Belt, K.A. Kuehn, S.T. Rier, and N.C. Tuchman. 2010. Alteration of Microbial Communities Colonizing Leaf Litter in a Temperate Woodland Stream by Growth of Trees under Conditions of Elevated Atmospheric CO₂. *Appl. Environ. Microbiol.* 76: 4950-4959.
- Hoellein, T.J., J.L. Tank, **J.J. Kelly**, and E.J. Rosi-Marshall. 2010. Seasonal variation in nutrient limitation of microbial biofilms colonizing organic and inorganic substrata in streams. *Hydrobiologia* 649: 331–345.

- Kominoski, J.S., T.J. Hoellein, **J.J. Kelly**, C.M. Pringle. 2009. Does mixing litter of different qualities alter stream microbial diversity and functioning on individual litter species? *Oikos* 118: 457-463.
- Baniulyte, D., E. Favila, and **J.J. Kelly**. 2009. Shifts in microbial community composition following surface application of dredged river sediments. *Microb. Ecol.* 57: 160–169.
- **Kelly, J.J.** 2009. Application of DNA microarrays to microbial ecology research: history, challenges, and recent developments. *Env. Res. J.* 3: 357-384.
- Ishida, C.K., S. Arnon, C.G. Peterson, **J.J. Kelly**, and K.A. Gray. 2008. Influence of algal community structure on denitrification rates in periphyton cultivated on artificial substrates. *Microb. Ecol.* 56: 140–152.
- Bavykin, S.G., V.M. Mikhailovich, V.M. Zakharyev, Y.P. Lysov, **J.J. Kelly**, O.S. Alferov, I.M. Gavin, A.V. Kukhtin, J. Jackman, D.A. Stahl, D. Chandler, and A.D. Mirzabekov. 2008. Discrimination of *Bacillus anthracis* and Closely Related Microorganisms by Analysis of 16S and 23S rRNA with Oligonucleotide Microarray. *Chem. Bio. Interact.* 171: 212-235.
- **Kelly, J.J.**, E. Favila, L.S. Hundal, and J.C. Marlin. 2007. Assessment of soil microbial communities in surface applied mixtures of Illinois River sediments and biosolids. *Appl. Soil Ecol.* 36: 176-183.
- Ishida, C.K., **J.J. Kelly**, and K.A. Gray. 2006. Effects of variable hydroperiods and water level fluctuations on denitrification capacity, nitrate removal, and benthic microbial community structure in constructed wetlands. *Ecol. Eng.* 28: 363-373.
- Angeloni, N.L., K.J. Jankowski, N.C. Tuchman, and **J.J. Kelly**. 2006. Effects of an invasive cattail species (*Typha x glauca*) on sediment nitrogen and microbial community composition in a freshwater wetland. *FEMS Microbiol. Lett.* 263: 86-92.
- Siripong, S., **J.J. Kelly**, D.A. Stahl, and B.E. Rittmann. 2006. Impact of pre-hybridization PCR amplification on microarray detection of nitrifying bacteria in wastewater treatment plant samples. *Env. Microbiol.* 8: 1564–1574.
- Janus, L.R., N.L. Angeloni, J. McCormack, S.T. Rier, N.C. Tuchman, and **J.J. Kelly**. 2005. Elevated atmospheric CO₂ alters soil microbial communities associated with trembling aspen (*Populus tremuloides*) roots. *Microb. Ecol.* 50: 102-109.
- **Kelly, J.J.**, S. Siripong, J. McCormack, L.R. Janus, H. Urakawa, S. El Fantroussi, P.A. Noble, L. Sappelsa, B.E. Rittmann, and D.A. Stahl. 2005. DNA microarray detection of nitrifying bacterial 16S rRNA in wastewater treatment plant samples. *Water Res.* 39: 3229-3238.
- Bavykin, S. G. , Y. P. Lysov, V. Zakhariev, **J. J. Kelly**, J. Jackman, D. A. Stahl, A. Cherni. 2004. Use of 16S rRNA, 23S rRNA, and gyrB gene sequence analysis to determine phylogenetic relationships of *Bacillus cereus* group microorganisms *J. Clin. Microbiol.* 42:3711-3730.
- **Kelly, J. J.** 2003. Molecular techniques for the analysis of soil microbial processes: functional gene analysis and the utility of DNA microarrays. *Soil Sci.* 168:597-605.
- **Kelly, J. J.**, M. Haggblom, and R. L. Tate. 2003. Effects of heavy metal contamination and remediation on soil microbial communities in the vicinity of a zinc smelter as indicated by analysis of microbial community phospholipid fatty acid profiles. *Biol. Fertil. Soils* 38:65–71.
- Urakawa, H. , S. El Fantroussi, H. Smidt, J. C. Smoot, E. H. Tribou, **J. J. Kelly**, P. A. Noble, and D. A. Stahl. 2003. Optimization of single-base-pair mismatch

discrimination in oligonucleotide microarrays. *Appl. Environ. Microbiol.* 69: 2848-2856.

- El Fantroussi, S., H. Urakawa, A. E. Bernhard, **J. J. Kelly**, P. A. Noble, H. Smidt, G. M. Yershov, and D. A. Stahl. 2003. Direct profiling of environmental microbial populations by thermal dissociation analysis of native ribosomal RNAs hybridized to oligonucleotide microarrays. *Appl. Environ. Microbiol.* 69: 2377-2382.
- **Kelly, J. J.**, B. K. Chernov, I. Tovstanovsky, A. D. Mirzabekov, and S. G. Bavykin. 2002. Radical generating coordination complexes as tools for rapid and effective fragmentation and fluorescent labeling of nucleic acids for microchip hybridization. *Analyt. Biochem.* 311: 103-118.
- Koizumi, Y., **J. J. Kelly**, T. Nakagawa, H. Urakawa, S. El-Fantroussi, S. Al-Muzaini, M. Fukui, Y. Urushigawa, and D.A. Stahl. 2002. Parallel Characterization of Anaerobic Toluene- and Ethylbenzene-Degrading Microbial Consortia by PCR-Denaturing Gradient Gel Electrophoresis, RNA-DNA Membrane Hybridization, and DNA Microarray Technology. *Appl. Environ. Microbiol.* 68: 3215-3225.
- Urakawa, H., P. A. Noble, S. El Fantroussi, **J. J. Kelly**, D. A. Stahl. 2002. Single-base-pair discrimination of terminal mismatches by using oligonucleotide microarrays and neural network analyses. *Appl. Environ. Microbiol.* 68: 235-244.
- **Kelly, J. J.**, M. Haggblom, and R. L. Tate. 1999. Changes in soil microbial communities over time resulting from one time application of zinc: a laboratory microcosm study. *Soil Biol. Biochem.* 31: (10) 1455-1465.
- **Kelly, J. J.**, M. Haggblom, and R. L. Tate. 1999. Effects of the land application of sewage sludge on soil heavy metal concentrations and soil microbial communities. *Soil Biol. Biochem.* 31: (10) 1467-1470.
- **Kelly, J. J.**, and R. L. Tate. 1998. Effects of heavy metal contamination and remediation on soil microbial communities in the vicinity of a zinc smelter. *J. Environ. Qual.* 27: 609-617.
- **Kelly, J. J.**, and R. L. Tate. 1998. Use of BIOLOG for the analysis of microbial communities from zinc contaminated soils. *J. Environ. Qual.* 27: 600-608.

RESEARCH FUNDING

- | | |
|---------------------|---|
| 4/1/2011- 3/31/2014 | National Science Foundation (NSF) CBET 1067439
PI: John Kelly, Co-PI: Christopher Peterson (Loyola University)
Title: The Unintended Ecological Consequences of Nanomaterials: Effects of nanotitania in benthic systems.
Funds Awarded: \$242,464 |
| 3/1/2011-2/28/2012 | United States Geological Survey (USGS)
PI: John Kelly, Co-PIs: Christopher Peterson (Loyola University) and Kimberly Gray (Northwestern University)
Title: Influence of Algal / Bacterial Interactions on Denitrification in Stream Biofilms
Funds Awarded: \$22,672 |

- 1/15/2011-12/31/2011 Illinois-Indiana Sea Grant (IISG)
 PI: John Kelly, Co-PIs: Christopher Peterson (Loyola University) and Kimberly Gray (Northwestern University)
 Impacts of Nanomaterials on Aquatic Microbial Communities
 Funds Awarded: \$10,000
- 3/1/2010- 2/28/2013 Water Research Foundation (WRF)
 PI: Aaron Packman (Northwestern Univ), Co-PI: John Kelly
 Title: Characterizing the Interactions Between Pathogens and Biofilms and Their Fate & Transport in Distribution Systems.
 Funds Awarded: \$300,000
- 6/1/2009-6/30/2012 Illinois Sustainable Technology Center (ISTC)
 PI: John Kelly, Co-PIs: Emma Rosi Marshall (Cary Institute of Ecosystem Studies) and Teresa Chow (ISTC)
 Title: Ecotoxicology of Antimicrobial Pharmaceutical and Personal Care Products in Illinois Rivers and Streams.
 Funds Awarded: \$107,636
- 8/1/2007-7/31/2010 National Science Foundation (NSF) DEB 0640717
 PI: Christopher Peterson (Loyola University Chicago), Co-PIs: John Kelly and Kimberly Gray (Northwestern University)
 Title: Mediation of Denitrification by Algal/Bacterial Interactions in Stream Periphyton.
 Funds Awarded: \$687,320
- 9/1/2005-8/31/2009 US Department of Agriculture (USDA)
 PI: John Kelly
 Title: Development of Microarray-Based PCR for Analysis of Nitrogen Cycling Functional Guilds in Soil.
 Funds Awarded: \$100,000
- 5/1/2006-6/30/2007 Illinois Department of Natural Resources (IL-DNR)
 PI: John Kelly.
 Title: Impact of Time Since Application on Development of Soil Microbial Communities in Surface Applied River Sediment.
 Funds Awarded: \$5,000
- 5/1/2005-6/30/2006 Illinois Department of Natural Resources (IL-DNR)
 PI: John Kelly.
 Title: Assessment of Soil Microbial Communities in Surface Applied River Sediment.
 Funds Awarded: \$5,000

- 9/17/2003-8/31/2004 National Science Foundation (NSF)
 PI: Nancy Tuchman (Loyola University Chicago).
 John Kelly (Co-PI on Supplemental Funding Request)
 Title: Elevated Atmospheric CO₂ Alters Plant Detritus
 Nutritional Quality: Effects on Microbial and Detritivore Food
 Webs in Aquatic Ecosystems.
 Supplemental Funds Awarded (Kelly): \$27,000
- 12/1/2002-11/30/2003 Defense Advanced Research Projects Agency (DARPA)
 PI: Darrell Chandler (Argonne National Lab). Co-PI: John Kelly.
 Title: Design and Development of Oligonucleotide Probes and
 PCR Primers for Toxin genes.
 Funds Awarded (Kelly): \$75,000
- 1/1/2002-11/30/2003 Defense Advanced Research Projects Agency (DARPA)
 PI: Joany Jackman (Johns Hopkins Univ.). Co-PI: John Kelly.
 Title: Iterative Testing and Development of Field Portable
 Biochip Assay.
 Funds Awarded (Kelly): \$125,000
- 7/1/2001-6/30/2002 Defense Advanced Research Projects Agency (DARPA)
 PI: Darrell Chandler (Argonne National Lab). Co-PI: John Kelly.
 Project Title: MAGIChip Biosensor Program: Bacterial chip
 expansion.
 Funds Awarded (Kelly): \$100,000

PRESENTATIONS

Invited Oral Presentations

- Elevated Atmospheric Carbon Dioxide Alters Aquatic and Terrestrial Microbial Communities in a Temperate Forest. Oral presentation given in the Department of Biology, **Western Michigan University**, Oct 22, 2010.
- Elevated Atmospheric Carbon Dioxide Alters Aquatic and Terrestrial Microbial Communities in a Temperate Forest. Oral presentation given for the Associated Colleges of the Chicago Area Seminar Series held at **Benedictine University**, October 26, 2010.
- Elevated Atmospheric Carbon Dioxide Alters Aquatic and Terrestrial Microbial Communities in a Temperate Forest. Oral presentation given in the Department of Microbiology, **Southern Illinois University**, Oct 15, 2010.
- Ecological Impacts of Pharmaceutical and Personal Care Products in Illinois Rivers and Streams. Oral presentation given at the **Illinois Sustainable Technology Center**, September 29, 2010.
- Elevated Atmospheric Carbon Dioxide Alters Terrestrial and Aquatic Microbial Communities in a Temperate Forest. Oral presentation given for "Challenges in Environmental Molecular Microbiology" workshop held at **Argonne National Lab** April 26-27, 2010.
- Elevated Atmospheric Carbon Dioxide Alters Terrestrial and Aquatic Microbial Communities in a Temperate Forest. Oral presentation given in the Department of Environmental Sciences at **Rutgers University** on May 1, 2009.

- Elevated Atmospheric Carbon Dioxide Alters Terrestrial and Aquatic Microbial Communities in a Northern Michigan Watershed. Oral presentation given at the **General Meeting of the American Society for Microbiology** in Boston, MA on June 3, 2008. My presentation was part of a Colloquium titled: Understanding the Microbiological Aspects of Global Change.
- Ecological Impacts of Pharmaceutical and Personal Care Products in Illinois Rivers and Streams. Oral presentation given at the Symposium on PPCPs in the Illinois Environment hosted by the **Illinois Waste Management and Research Center** on April 25, 2008.
- Assessment of Soil Microbial Communities in Surface Applied Illinois River Sediments. Oral presentation given at the Illinois River Sediment Conference, hosted by **Illinois Waste Management and Research Center**, March 1, 2007.
- Development of DNA Microarray Technology for Detection of Bacteria in Environmental Samples. Oral presentation given at the **Stritch School of Medicine**, Loyola University Medical Center, on May 16, 2006.
- Development of DNA Microarrays for the Detection of Nitrifying Bacteria in Wastewater Treatment Systems. Oral presentation given at the Annual Symposium sponsored by the **University of Illinois' Center of Advanced Materials** for Purification of Water with Systems in Atlanta, GA, on April 14, 2005.
- Impacts of Ecosystem Change Processes on Microbial Communities. Oral presentation given in the Department of Civil and Environmental Engineering at **Northwestern University** on April 20, 2005.
- Impacts of Heavy Metal Contamination on Soil Microbial Communities. Oral presentation given at the **Annual Meeting of the Soil Science Society of America** in Seattle, WA, on November 2, 2004.
- Development of DNA Microarray Technology for the Detection of Bacteria in Environmental Samples. Seminar given at the Chemistry Department at **Loyola University Chicago** on October 21, 2004.
- Impacts of Elevated CO₂ on Soil Microbial Communities. Seminar given at the **University of Michigan Biological Station**, Pellston, MI. July 29, 2004.
- Development of DNA Microarray Technology for the Detection of Bacteria in Environmental Samples. Seminar given at the Department of Molecular and Cellular Biochemistry, **Stritch School of Medicine**, Maywood, IL. November 3, 2003.
- Use of DNA Microarrays for the Detection of Bacteria in Environmental Samples. Seminar given at the "Frontiers in Assessment Methods for the Environment" symposium which was held at the **University of Minnesota**, Minneapolis, MN. August 10-13 2003.
- Development of DNA Microarray Technology for the Detection of Nitrifying Bacteria. Seminar given at the Department of Biology, **DePaul University**, Chicago, IL. March 21, 2001.
- Development of DNA Microarrays for the Detection of Nitrifying Bacteria. Seminar given at the Department of Civil and Environmental Engineering, **Northwestern University**, Evanston, IL, October 25, 2000.
- Comparison of DNA Microarrays and Membrane Hybridization as Platforms for the Application of Oligonucleotide Probes Targeting Nitrifying Bacteria. Seminar given at the Midwest Molecular Microbial Ecology Conference. **Northern Illinois University**, DeKalb, IL. July 17, 2000.
- Development of DNA Microarrays for Microbial Monitoring. Seminar given at the Advanced Environmental Monitoring and Control Project Meeting. **Jet Propulsion Laboratory**, Arcadia, CA. April 24-26, 2000.

- Soil Heavy Metal Contamination and Methods for Characterization of Microbial Communities. Seminar given at the Department of Plant and Soil Science, **University of Delaware**, Newark, DE. April 13, 2000.
- Development of DNA Microarrays for the Analysis of Microbial Communities. Seminar given at the **DOE NABIR Workshop** on Applications of Genomic Technology to Bioremediation. Arlington, VA. December 5–7, 1999.
- Development of DNA Microarrays for the Analysis of Microbial Communities. Seminar given at the Department of Civil and Environmental Engineering, **Northwestern University**, Evanston, IL. December 1, 1999.
- Effects of Sludge Applied Heavy Metals on Soil Microbial Communities. Seminar given at the Department of Soil and Water Engineering, **Cornell University**, Ithaca, NY. March 25, 1997.
- Effects of Metal Contamination and Remediation on Soil Microbial Communities. Seminar given at the Department of Environmental Sciences, **Rutgers University**, New Brunswick, NJ. October 11, 1996.

Poster Presentations

- Drury, B., J.W. Scott, E. Rosi-Marshall, J.J. Kelly. Effects of Triclosan on Microbial Communities in River Sediments. General Meeting of the American Society for Microbiology, New Orleans, LA, May 21-24, 2011.
- Peterson, C.G., A.D. Daley, S.M. Pechauer, K.N. Kalscheur, M.J. Sullivan, S.L. Kufra, M. Rojas, K.A. Gray **J.J. Kelly**. Development of associations between microalgae and denitrifying bacteria in streams of contrasting anthropogenic influence. General Meeting of the American Society for Microbiology, New Orleans, LA, May 21-24, 2011.
- Peterson, E. J. Winkelman, S.T. Rier, N. C. Tuchman, **J.J. Kelly**. Elevated Atmospheric Carbon Dioxide Alters the Size and Composition of Denitrifying Microbial Communities in Soil. General Meeting of the American Society for Microbiology, New Orleans, LA, May 21-24, 2011.
- **Kelly, J.J.**, A. Bansal, J. Winkelman, L. R. Janus, S. Hell, M. Wencel, P. Belt, K. A. Kuehn, S.T. Rier, and N.C. Tuchman. Growth of Trees under Elevated Atmospheric CO₂ Alters Microbial Communities Colonizing Leaf Litter in a Temperate Woodland Stream. International Society for Microbial Ecology Conference, Seattle, WA, August 22-27, 2010.
- Peterson, C. G., A.D. Daley, S.M. Hell, K.N. Kalscheur, M. Sullivan, S.L. Kufra, K.A. Gray, **J.J. Kelly**. Development of Benthic Micro-Algal and Denitrifying-Bacterial Community Structure During Biofilm Development in Streams of Contrasting Attributes. Annual Meeting of the North American Benthological Society, Santa Fe, NM, June 6-11, 2010.
- Winkelman, J., T. Walter, M. Sullivan, J. Gil, N.Tuchman and **J.J. Kelly**. Effect of Elevated Atmospheric CO₂ on Terrestrial Nitrogen-Cycling Microbial Communities. General Meeting of the American Society for Microbiology, Philadelphia, PA, May 17-21, 2009.
- Hell, S.M., A. Daley, K. Kalscheur, J. Saliba, M. Sullivan, R. Bednarczyk, S. Kufra, S. Bigley, K. Gray, C. Peterson, **J. J. Kelly**. The Development of Denitrifying Biofilms in Urban Streams. General Meeting of the American Society for Microbiology, Philadelphia, PA, May 17-21, 2009.

- Grancharova, T., P. Geddes, **J.J. Kelly**. Impact of Invasive Plant Species on Nitrogen Cycling Bacterial Communities in Freshwater Wetland Sediments. General Meeting of the American Society for Microbiology, Philadelphia, PA, May 17-21, 2009.
- Policht, K., T. Grancharova, L.S. Hundal, K. Kumar, and **J.J. Kelly**. 2009. Impacts of Biosolids Application on Nitrogen Cycling in Agricultural Soil. General Meeting of the American Society for Microbiology, Philadelphia, PA, May 17-21, 2009.
- Daley, A.D., S.M. Hell, K.N. Kalscheur, M. Sullivan, S.L. Kuffa, J.S. Saliba, R. Bednarczyk, S. Bigley, K.A. Gray, **J.J. Kelly**, C.G. Peterson. Linkage among algal/bacterial community structure, organic exudates and denitrification potential in stream biofilms. Annual Meeting of the North American Benthological Society, Grand Rapids, MI, May 16-23, 2009.
- Bansal, A., A.P. Taber, M. Wencel, P. Belt, L.R. Janus, S.T. Rier, N.C. Tuchman, and **J.J. Kelly**. Impacts of Leaves Grown Under Elevated Carbon Dioxide on Detritivore Bacterial and Fungal Communities in a Temperate Woodland Stream. General Meeting of the American Society for Microbiology, Boston, MA, June 1-5, 2008.
- Lima, B.P., J. Winkelman, J. Gil, and **J.J. Kelly**. Assessment of Nitrogen Cycle Functional Gene Diversity by Multiplex PCR and Microarray Hybridization. Annual Meeting of the Soil Science Society of America, New Orleans, LA, November 4-8, 2007.
- Lima, B.P. and **J.J. Kelly**. Assessment of Nitrogen Cycle Functional Gene Diversity by Multiplex PCR and Microarray Hybridization. General Meeting of the American Society for Microbiology, Toronto, Canada, May 21-25, 2007.
- Baniulyte, D., E. Favila, and **J. J. Kelly**. Assessment of Soil Microbial Communities in Surface Applied Illinois River Sediments. General Meeting of the American Society for Microbiology, Toronto, Canada, May 21-25, 2007.
- Lima, B.P. and **J.J. Kelly**. Development of Microarray-Based PCR for Analysis of Nitrogen Cycling Functional Guilds. Annual Meeting of the Soil Science Society of America, Indianapolis, IN, November 12-16, 2006.
- **J.J. Kelly** and E. Favila. Assessment of Soil Microbial Communities in Surface Applied Mixtures of Illinois River Sediments and Biosolids. Annual Meeting of the Soil Science Society of America, Indianapolis, IN, November 12-16, 2006.
- Taber, A.P., S.T. Rier, L.R. Janus, N.C. Tuchman, and **J.J. Kelly**. Impacts of Aspen Leaves Grown Under Elevated Carbon Dioxide on Detritivore Bacterial Communities and Fungal Communities. General Meeting of the American Society for Microbiology, Orlando, FL, May 21-25, 2006.
- Angeloni, N.L., K.J. Jankowski, N.C. Tuchman, and **J.J. Kelly**. Effects of an Invasive Cattail Species (*Typha x glauca*) on Microbial Community Composition in a Freshwater Wetland. General Meeting of the American Society for Microbiology, Orlando, FL, May 21-25, 2006.
- Taber, A.P., S.T. Rier, L.R. Janus, N.C. Tuchman, and **J.J. Kelly**. Impacts of Leaves Grown Under Elevated Carbon Dioxide on Detritivore Bacterial Communities. General Meeting of the American Society for Microbiology, Atlanta, GA, June 5-9, 2005.
- Angeloni, N.L., K.J. Jankowski, N.C. Tuchman, and **J.J. Kelly**. Effect of an Invasive Cattail Species on Soil Nutrient Levels and Microbial Composition of a Wetland

- Ecosystem. General Meeting of the American Society for Microbiology, Atlanta, GA, June 5-9, 2005.
- Angeloni, N.L., L.R. Janus, J. McCormack, S.T. Rier, N.C. Tuchman, and **J.J. Kelly**. Growth of Quaking Aspen Trees (*Populus tremuloides*) under Elevated Atmospheric CO₂ Alters Soil Bacterial and Fungal Communities. General Meeting of the American Society for Microbiology, New Orleans, LA, May 23-27, 2004.
 - **Kelly, J.J.**, J. McCormack, L.R. Janus, N. Angeloni, S.T. Rier, and N.C. Tuchman. Elevated Atmospheric CO₂ Alters Belowground Microbial Communities Associated with Quaking Aspen Roots. General Meeting of the American Society for Microbiology, Washington, DC, May 18-22, 2003.
 - Siripong, S., **J.J. Kelly**, J. McCormack, P.A. Noble, B.E. Rittmann, and D.A. Stahl. Detection of Autotrophic Nitrifying Bacteria in Activated Sludge Samples from a Full-scale Wastewater Treatment Plant Using a DNA Oligonucleotide Microarray. General Meeting of the American Society for Microbiology, Washington, DC, May 18-22, 2003.
 - Urakawa, H. S. El Fantroussi, P. A. Noble, **J.J. Kelly**, D. A. Stahl. Single-base-pair mismatch discrimination using oligonucleotide DNA microarrays and real-time melting analysis. General Meeting of the American Society for Microbiology, Salt Lake City, UT, May 19-23, 2002.
 - **Kelly, J.J.**, L. Sappelsa, and D. A. Stahl. Optimized target-group discrimination using a DNA microarray format to identify nitrifying species. General Meeting of the American Society for Microbiology, Orlando, FL, May 20-24, 2001.
 - El Fantroussi, S., H. Urakawa, **J.J. Kelly**, L. Sappelsa, P. A. Noble, and D. A. Stahl. Optimization of 16S rRNA-based microchip "PhyloChip" for microbial community analysis. General Meeting of the American Society for Microbiology, Orlando, FL, May 20-24, 2001.
 - **Kelly, J.J.**, L. Sappelsa, and D.A. Stahl. Development of DNA microarray technology for the identification of nitrifying bacteria. General Meeting of the American Society for Microbiology, Los Angeles, CA, , May 21-25, 2000.
 - **Kelly, J.J.**, L. Sappelsa, S. G. Bavykin, A. D. Mirzabekov, and D. A. Stahl. Optimization of DNA microarrays for the rapid characterization of microbial community population structure. General Meeting of the American Society for Microbiology, Chicago, IL, May 27-June 02, 1999.
 - **Kelly, J.J.** and R.L. Tate. Microbial community assessment in zinc contaminated soils: Biolog and phospholipid fatty acid analyses. General Meeting of the American Society for Microbiology, Atlanta, GA, May 14-19, 1998.
 - **Kelly, J.J.** and R.L. Tate. Effects of remediation of heavy metal contaminated soils on the soil microbial communities. Annual Meeting of the Soil Science Society of America, Anaheim, CA, October 26-31, 1997.
 - **Kelly, J.J.** and R.L. Tate. Long term effects of sludge applied heavy metals on soil microbial communities. General Meeting of the American Society for Microbiology, Miami, FL, May 19-23, 1997.
 - **Kelly, J.J.** and R.L. Tate. 1996. BIOLOG analysis of zinc contaminated soil microbial communities. General Meeting of the American Society for Microbiology, New Orleans, LA, May 19-23, 1996.