# Craig D. Phelps

### EDUCATION

- Ph.D. Environmental Science, May 1998 Rutgers, The State University of New Jersey, New Brunswick, N.J.
- M.S. Environmental Science, 1994 Rutgers, The State University of New Jersey, New Brunswick, N.J.
- B.S. Animal Science, 1988 Cornell University, Ithaca, N.Y.

## ACADEMIC POSITIONS

**Teaching Professor**, Department of Environmental Sciences, July 2022 – present. Rutgers University, New Brunswick, N.J.

Associate Teaching Professor, Department of Environmental Sciences, July 2017 – June 2022. Rutgers University, New Brunswick, N.J.

Assistant Teaching Professor, Department of Environmental Sciences, July 2015 – June 2017. Rutgers University, New Brunswick, N.J.

**Instructor**, Department of Environmental Sciences, Sep. 2007 – June 2015. Rutgers University, New Brunswick, N.J.

Laboratory Researcher, Department of Environmental Sciences, Nov. 1999 – Aug. 2007. Rutgers University, New Brunswick, N.J.

Postdoctoral Associate, Biotech. Center for Agriculture and the Environment, May 1998 - Oct. '99. Rutgers University, New Brunswick, N.J. Dr. Gerben Zylstra, P.I.

Adjunct Instructor, Middlesex County College, Sept. 1997 – May 1999 (four semesters)

**Graduate Assistant**, Biotech. Center for Agriculture and the Environment, August 1992 - May 1998 Rutgers University, New Brunswick, N.J.

# TEACHING

## CURRENT RESPONSIBILITIES

Course Coordinator – Introduction to Environmental Science

- Includes management of registration, websites, textbooks, and other instructional materials for four lecture sections and up to thirteen online sections each semester.
- Development of instructional materials.
- Coordination with other faculty instructors and guest lecturers.
- Includes supervision of several Part-Time Lecturers.
- Course enrolls over 2,000 students per year.

Instructor – Introduction to Environmental Science

- Full teaching responsibility for one section with 295-350 students (Fall/Spr.).
- Teach two online sections each semester (Spr./Sum./Fall)

Internship in Science Communication - 11:374:483

- Intern for "Forgotten Women in Science" project Betul Yildiz (Spr. 2024)
- Intern for "NEMPET Website" project Shriya Golugula (Spr. 2024)

## COURSES TAUGHT

Introduction to Environmental Science (11:375:101)

Fall '04 - present, Spring, Summer and Fall semesters.

Environmental Microbiology Lab (11:375:312 + 16:375:512)

- Fall '01 '17
- Teach and coordinate three lab sections.
- Development of novel instructional materials

Microbial Ecology and Diversity/Lab (11:680:491/492)

- Spr. '14,'15+'17+'19 Lead Field trips
- Fall '02+'03 **Guest Lectures**

#### Biological Principals of Environmental Science (11:375:201)

Fall '03 Team Taught (33%)

#### Rutgers Office of Continuing Professional Education

- Microbiology for the Non-Biologist Coordinator and Lecturer, 2008 - present.
- Activated Sludge
- Introduction to Sustainability Management

# Laboratory Instructor, 2008 - present

Lecturer, 2013 - 2017

## Middlesex County College

- Taught "General Microbiology" including laboratory, and "Applied Microbiology".
  - Applied Microbiology (Bio 224) including lab o Spring '99
  - General Microbiology (Bio 221) including lab o Fall '98
  - General Microbiology (Bio 221) laboratory only Spring '98
  - Fall '97 General Microbiology (Bio 221) co-taught.

# <u>AWARDS</u>

Presidential Award for Excellence in Teaching. 2020 SEBS Team Excellence Award – Online Mentors and Support Team. 2020 SEBS Teaching Excellence Award. 2012

### SERVICE

## SCHOOL

Member, Mentoring Committee for Dr. Chitra Ponnusamy (Dept. of Food Science). 2024.

SEBS Online Peer Mentors. 2020 – 2021.

- Worked with a team to develop resources to assist faculty moving to online instruction during the COVID crisis: "SEBS Online Teaching Toolkit" <u>https://rutgers.instructure.com/courses/86353</u>
- Provide one-on-one mentoring of faculty members converting class content:
  Peter Strom, Alan Robock, Deborah Greenwood, A.J. Both, Uta Krogmann, and Paul Gottlieb

SEBS First Year Student Advisor. 2005 – present.

- Advise 15-40 incoming first-year SEBS students through course and major selection.

Organized and supported travel for Undergraduate and Graduate students to present research at regional NEMPET Meeting.

- 2018: Yuwei Wang (grad)
- 2017: Spencer Roth (grad)
- 2016: Julia Campbell (grad), and Jessica Choi (grad)
- 2015: Ashley Grosche (grad), and Daniel Hollerbach
- 2014: Julia Campbell (grad), Raffia Ahmed, Robert Kruk, and Matt Rudnick
- 2013: Sean Carey and Bahram Manavi
- 2012: Sarat Kannepali (grad), Katherine Della Terza, and Bavani Subramaniam

Member, TA/GA Personnel Grievance Committee (replacement pool). Sept. 2015 – 2021.

Immersive Synchronous Lecture Initiative. 2016 - 2017.

- Selected to participate in university initiative to reduce student travel by teaching popular courses across campuses using video-linked lecture halls.

Member, Ad Hoc SEBS Teaching Excellence Award Committee. 2013 – 2015.

Member, SEBS Core Curriculum Committee. 2011 – 2012.

Coordinator of On-Line Education Initiative. 2007 – 2018.

- responsible for providing support to faculty and staff who are interested in developing new online or hybrid courses and instructional materials.

### DEPARTMENT

Member, Mentoring Committee for Dr. Abigail Porter. 2022 - present.

Member, Peer Evaluation Committee (FCP). 2016, 2017 + 2020.

Member, Curriculum and Educational Policy Committee. 2012 - present.

Secretary of the Faculty. Sept. 2015 - Oct. 2016.

Member, Recruitment and Outreach Committee. 2010 - 2013.

## PUBLIC OUTREACH

- Invited Panelist. "Navigating a Virtual Academic Setting" Rutgers Parent and Family Association Meeting. Online Sept. 14<sup>th</sup>, 2020
- Invited Panelist. "Developing Live Webinars" New Agriculture for a New Generation. Greece (online). April 2<sup>nd</sup>, 2020
- Discussion of methods to teach online for agricultural extension agents.

Invited Judge. Annual Projects Day, United States Military Academy - West Point. May 3, 2018

Judge. The North Jersey Regional Science Fair. 2008 – 2019

- "Magical Mud, Microbes and Methane" NJ350 Blog Nov. 2014 Doug Eveleigh, Theodore Chase Jr., Craig Phelps, and Lily Young http://officialnj350.com/magical-mud-microbes-and-methane/
- "Rutgers Environmental Science Students Volunteer at Local "Freecycle" Event" SEBS Newsroom <u>http://sebsnjaesnews.rutgers.edu/2014/11/rutgers-environmental-science-students-volunteer-at-local-freecycle-event/</u>

Presenter. STEM Educator Series. "Soil Microbial Ecology". Jan. 22<sup>nd</sup>, 2014

"Biocomplexity and Microorganisms: Lessons in Technology for Grades 5-8." Lamkie, J. and C.D. Phelps. http://www.engineeringplanet.rutgers.edu/lessons.php

Presenter. RutgersScience Saturday. May 15<sup>th</sup>, 2010.

#### PROFESSIONAL AFFILIATIONS

Northeast Microbiologists for Physiology, Ecology, Taxonomy. 1993 - present. President/Treasurer: 2015 – present.

American Society of Microbiologists. 1994 - present.

Microbial Educators Network (Delaware/Lehigh Valley Region). 2003 – present.

New Jersey Science Teachers Association. 2003 – 2005.

### PROFESSIONAL ACTIVITIES

American Society of Microbiologists – Conference on Undergraduate Education. June 29-July 1, 2021 – Online - Abstract Review Committee

Northeast Microbiologists for Physiology, Ecology, Taxonomy (NEMPET) Annual Meeting. June 25-27, 2021.

- Conference Chair and Organizer

Journal of Microbiology & Biology Education (JMBE) – Editorial Board (Reviewer). 2017 – 2020.

American Society of Microbiologists - Conference on Undergraduate Education. July 8-9, 2020 - Online

- Abstract Review Committee
- Flash-talk Session Facilitator

American Society of Microbiologists - Conference on Undergraduate Education. Aug. 1-4, 2019 - Tyson, VA

- Abstract Review Committee
- Flash-talk Session Facilitator

Northeast Microbiologists for Physiology, Ecology, Taxonomy (NEMPET) Annual Meeting. June 28-30, 2019. - Conference Chair and Organizer

McGraw-Hill Environmental Science Symposium, Dubuque Iowa, (Participant) Feb. 28 - Mar. 1, 2019

American Society of Microbiologists – Conference on Undergraduate Education. July 26-29, 2018 – Austin, TX - Flash-talk Session Facilitator

Northeast Microbiologists for Physiology, Ecology, Taxonomy (NEMPET) Annual Meeting. June 22-24, 2018. - Conference Chair and Organizer

American Society of Microbiologists - Conference on Undergraduate Education. July 26-29, 2017 - Denver, CO

- Flash-talk Session Facilitator
- Presenter

Northeast Microbiologists for Physiology, Ecology, Taxonomy (NEMPET) Annual Meeting. June 23-25, 2017. - Conference Chair and Organizer

American Society of Microbiologists – Conference on Undergraduate Education. July 21-24, 2016 – Bethesda, MD

Presenter

Northeast Microbiologists for Physiology, Ecology, Taxonomy (NEMPET) Annual Meeting. June 24-26, 2016.

- Conference Chair and Organizer

Northeast Microbiologists for Physiology, Ecology, Taxonomy (NEMPET). 2015

- Incorporated the group as a 501c (3) non-profit corporation.
- Drafted bylaws and applied for tax-exempt status.
- Established an independent bank account and raised corporate donations.

American Society of Microbiologists – Conference on Undergraduate Education (Attendee). 2013.

USEPA Workshop on Monitored Natural Attenuation of Polynuclear Aromatic Hydrocarbons at Manufactured Gas Plant Sites, Dallas TX. (Participant). May 27-29, 2009.

14<sup>th</sup> Annual Northeast Regional Teaching Workshop (Attendee). 2005.

34<sup>th</sup> Mid-Atlantic Industrial and Hazardous Waste Conference (Session Moderator). 2002.

Gordon Research Conference (Environmental Sciences: Water). 2000.

Gordon Research Conference (Applied and Environmental Microbiology). 1999+2003.

Peer review:

Journals Aquatic Microbial Ecology Biodegradation Chemical Engineering Communications Environmental Science and Technology FEMS – Microbiology Ecology Frontiers in Microbiological Chemistry Journal of Environmental Engineering Journal of Hazardous Materials PLOS One Soil Science -2019

<u>Grant Proposals</u> Canada Foundation for Innovation

Textbook review:

- 2021 "Environmental Science and Sustainability, 1<sup>st</sup> Edition" Sherman and Montgomery. W.W. Norton
- 2020 "Scientific American Environmental Science for a Changing World, 4<sup>th</sup> Edition" Karr. W.H. Freeman and Co.
- 2020 "Tackling Climate Change: a Workbook for Environmental Science Students" (proposal) Pontius and McIntosh. Springer
- 2020 "Environment Disrupted" (proposal) Wyner and DeSalle. Macmillan Learning
- 2019 "Teaching and Learning the West Point Way: Educating the Next Generation of Leaders." Edited by M.G. Ender, R.A. Kimball, R.M. Sondheimer, J.C. Bruhl. Routledge
- 2017 "Principles of Environmental Science, Inquiry and Application, 9e" Cunningham. McGraw-Hill
- 2017 "Scientific American Environmental Science for a Changing World, 3<sup>rd</sup> Edition" Karr. W.H. Freeman and Co.
- 2017 "Essential Environment: The Science Behind the Stories", 6th ed., Withgott and Laposata. Pearson
- 2017 "Environmental Science" book proposal, Stiling. Sinauer Associates
- 2017 "Mastering Environmental Science" Online Content Faculty Advisory Board. Pearson
- 2016 "Environment: Science, Issues, Solutions!" Molles. Macmillan Learning
- 2015 "Norton Field Guide to Environmental Science and Sustainability" W.W. Norton
- 2009 "Environmental Science" Botkin and Keller. John Wiley & Sons
- 2009 "Environment: The Science Behind the Stories" Withgott and Brennan. Pearson

## **SCHOLARSHIP**

## **TEXTBOOKS**

Phelps, C.D., (Contributing Author) Chapter 5 – Interactions: Environments and Organisms.
 "Environmental Science: A Study in Interrelationships" 16<sup>th</sup> Edition. (2022) Enger and Smith. McGraw-Hill

## PUBLICATIONS

\* Graduate Student under my direct or indirect supervision

- \*Oka, A.R., C.D. Phelps, X, Zhu, D.L. Saber, and L.Y. Young. 2011. Dual Biomarkers of Anaerobic Hydrocarbon Degradation in Historically Contaminated Groundwater. *Environ. Sci. Technol*, 45 (8): 3407–3414.
- \*Callaghan, A.C., M. \*Tierney, C.D. Phelps and L.Y. Young. 2009. Characterization of a Denitrifying Consortium: Evidence of Carboxylation during Hexadecane Degradation. *Appl. Environ. Micro.* 75(5): 1339–1344.
- \*Oka, A.R., C.D. Phelps, L.M. McGuinness, A. Mumford, L.Y. Young, and L.J. Kerkhof. 2008. Identification of critical members in a sulfidogenic benzene-degrading consortium by DNA stable isotope probing. *Appl. Environ. Microbiol.* 74(20):6476-6480.
- 5. Rhine, E.D., C.D. Phelps and L.Y. Young. 2006. Anaerobic arsenite oxidation by novel denitrifying isolates. *Environ. Microbiol.* 8(5):899-908.
- 6. Rhine, E.D., E. García-Domínguez, C.D. Phelps and L.Y. Young. 2005. Environmental microbes can speciate and cycle arsenic. *Environ. Sci. and Technol.* 39:9569-9573.
- \*Gallagher, E., L. McGuinness, C.D. Phelps, L.Y. Young and L.J. Kerkhof. 2005. <sup>13</sup>C-Carrier DNA shortens the incubation time needed to detect benzoate-utilizing denitrifying bacteria by stable-isotope probing. *Appl. Environ. Microbiol.* 71(9):5192-5196.
- 8. Young, L.Y. and C.D. Phelps. 2005. Metabolic biomarkers for monitoring *in situ* anaerobic hydrocarbon degradation. *Environmental Health Perspectives*. 113(1):62-67.
- So, C.M., C.D. Phelps and L.Y. Young. 2003. Anaerobic transformation of alkanes to fatty acids: Initial reactions by the sulfate-reducer strain HXD3 using stable isotope labeled compounds. *Appl. Environ. Microbiol.* 69(7):3892-3900.
- 10. Phelps, C.D., J. Battistelli, and L.Y. Young. 2002. Metabolic biomarkers for monitoring anaerobic naphthalene biodegradation *in situ*. *Environ. Microbiol.* 4(9):532-537.
- 11. Phelps, C.D., X. Zhang, and L.Y. Young. 2001. Detection of benzoate from anaerobic benzene metabolism by a sulfidogenic consortium. *Environ. Microbiol.* 3(9):600-603.
- 12. Sullivan, E.R., X. Zhang, C.D. Phelps and L.Y. Young. 2001. Anaerobic mineralization of stable isotope labeled 2-methylnaphthalene. *Appl. Environ. Microbiol.* 67(9):4353-4357.
- 13. Phelps, C.D. and L.Y. Young. 2000. Anaerobic biodegradation of gasoline components: A review. *Advances in Agronomy*, Vol. 70. pp. 329-358.
- 14. Phelps, C.D., and L.Y. Young. 1999. Anaerobic biodegradation of BTEX and gasoline in various aquatic sediments. *Biodegradation*. 10(1): 15-25.

- 15. Boyle, A.W., C.D. Phelps and L.Y. Young. 1999. Isolation of a *Desulfovibrio* strain from estuarine sediments which can grow on lactate coupled to the reductive dehalogenation of 2,4,6-Tribromophenol. *Appl. Environ. Microbiol.* 65(3): 1133-1140.
- 16. Phelps, C.D., L. Kerkhof and L.Y. Young. 1998. Molecular characterization of a sulfate-reducing consortium which mineralizes benzene. *FEMS Microbiology Ecology* 27(3):269-279.
- Phelps, C.D., X. Zhang, C.-M. So and L.Y. Young. 1998. Petroleum components can be biodegraded in anoxic environments. Proceedings: 1998 Pacific Basin Conference on Hazardous Waste. April 22-24, Honolulu, HI, USA. pp. 128-140.
- 18. Phelps, C.D. and L.Y. Young. 1997. Microbial metabolism of the plant phenolic compounds ferulic and syringic acids under three anaerobic conditions. *Microbial Ecology* 33(3): 206-215.
- 19. Phelps, C.D., J. Kazumi and L.Y. Young. 1996. Anaerobic degradation of benzene in BTX mixtures dependent on sulfate-reduction. *FEMS Microbiology Letters* 145(3): 433-437.

# PRESENTATIONS

#### PLATFORM PRESENTATIONS:

- 1. Phelps, C.D. 2019. Sophronia's Gardens: Teaching Microbiology in the Progressive Age. Departmental Seminar. Dept. of Environmental Science, Rutgers University.
- Phelps, C.D. 2018. Sophronia's Gardens: Science Communication in the Progressive Age. Invited Keynote Lecture, Regional Microbiology Educators 14th Annual Student Research Symposium. St. Joseph's University, Philadelphia, PA
- 3. Phelps, C.D. 2018. Sophronia's Gardens: Science Communication in the Progressive Era. Ann. Conference of Northeast Microbiologists for Physiology, Ecology, Taxonomy, Blue Mtn. Lake, NY.
- Phelps, C.D. 2017. Winogradsky's Battery: Visualizing Electron Potential in a Sediment Column. Microbrew Presentation. American Society for Microbiology Conference for Undergraduate Educators. Denver, Colorado.
- Phelps, C.D. 2016. Using a Simple Soil Assay to Demonstrate Regulation of Enzyme Production. Microbrew Presentation. American Society for Microbiology Conference for Undergraduate Educators. North Bethesda, Maryland.
- 6. Phelps, C.D. and A. Oka. 2009. Metabolic and Molecular Biomarkers of In Situ Biodegradation. Ann. Conference of Northeast Microbiologists for Physiology, Ecology, Taxonomy, Blue Mtn. Lake, NY.
- 7. Phelps, C.D. 2006. A Simple Soil Assay to Demonstrate Enzyme Regulation. Ann. Conference of Northeast Microbiologists for Physiology, Ecology, Taxonomy, Blue Mtn. Lake, NY.
- 8. Phelps, C.D. 2005. Modeling the biogeochemical cycle of arsenic. Ann. Conference of Northeast Microbiologists for Physiology, Ecology, Taxonomy, Blue Mtn. Lake, NY.
- 9. Phelps, C.D. 2005. Microbial degradation pathways: a tool for environmental monitoring. Annual Meeting of the Center for Environmental Bio-Inorganic Chemistry. Princeton, NJ.

- 10. Phelps, C.D., J. Lamkie. 2004. Winogradsky's Battery: Exploring biocomplexity in aquatic sediment. New Jersey Science Convention. Somerset, NJ.
- Phelps, C.D., E. Gallagher, L. Kerkhof and L.Y. Young. 2004. New approaches to studying biodegradation of TNT in anaerobic sediments. The 14<sup>th</sup> Annual West Coast Conference on Soils, Sediments and Water. San Diego, CA.
- Phelps, C.D. 2002. Metabolic biomarkers for detecting PAH biodegradation in groundwater and sediments. The 18<sup>th</sup> Annual International Conference on Contaminated Soils, Sediments and Water. Amherst, MA.
- 13. Phelps, C.D., and E.L. Hacherl. 2001. A modified Winogradsky column for teaching the iron cycle. Ann. Conference of Northeast Microbiologists for Physiology, Ecology, Taxonomy, Blue Mtn. Lake, NY.
- 14. Phelps, C.D., and L.Y. Young. 2001. Metabolic biomarkers for monitoring *in situ* toluene and naphthalene bioremediation. Battelle Symposium on In Situ and On-Site Bioremediation San Diego, CA.
- 15. Phelps, C.D., and L.Y. Young. 2000. Anaerobic metabolites and co-metabolites as bioindicators of *in situ* biodegradation. Ann. Conference of Northeast Microbiologists for Physiology, Ecology, Taxonomy, Blue Mtn. Lake, NY.
- 16. Phelps, C.D. and L.Y. Young. 1998. Anaerobic biodegradation of benzene and other gasoline components. Fairfield University, Fairfield, CT (invited speaker).
- 17. Phelps, C.D. and L.Y. Young. 1998. Biodegradation of BTEX under anaerobic conditions in various aquatic sediments. Ann. Conference of Northeast Microbiologists for Physiology, Ecology, Taxonomy, Blue Mtn. Lake, NY.
- 18. Phelps, C.D., X. Zhang, C.-M. So and L.Y. Young. 1998. Petroleum components can be biodegraded in anoxic environments. Pacific Basin Conference on Hazardous Waste, Honolulu, HI.
- 19. Phelps, C.D. and L.Y. Young. 1996. Anaerobic benzene mineralization in marine sediments. Ann. Conference of Northeast Microbiologists for Physiology, Ecology, Taxonomy, Blue Mtn. Lake, NY.

### SELECTED POSTERS:

- 1. Phelps, C.D. 2021. Dust Gardens: S. Maria Elliott and Microbiology Education in the Home Economics Movement. World Microbe Forum June 20 24. Online.
- Anderson, P., T. Barkay, T. Chase Jr., S. Crane, D. Davis, G. Davis, J. Dietz, D. Eveleigh, Z. Freedman, I. Gray, M. Häggblom, A. Isola, H. Liu, K. Maguire, A. Marinucci, A. Patel, C. Phelps\*, S. Rawat, M. Spero, G. Swiatek, C. Vetriani, C. Villano, & L. Young. 2014. The First American Microbiological Experiment: the George Washington and Thomas Paine Demonstration that the Marsh Will-O-the-Wisp was due to a Flammable Gas. General Meeting of the American Society for Microbiology Boston, MA.
- 3. Phelps, C.D. 2012. A Simple Soil Assay to Demonstrate Enzyme Regulation. General Meeting of the American Society for Microbiology San Francisco, CA.
- 4. Oka, A.R., C. D. Phelps, X. Zhu, D. L. Saber, L. Y. Young. 2009. Metabolic Biomarkers and Biomolecular Signatures Provide Evidence for Natural Attenuation of Hydrocarbons in Anoxic Groundwater. General Meeting of the American Society for Microbiology Philadelphia, PA.
- 5. Phelps, C.D., C. M. Goodman, R. Miskewitz, W. J. Sciarappa, and C. C. Obropta. 2009. Evaluation of Critical Parameters for Effective qPCR-Based Microbial Source Tracking on a Watershed Scale. General Meeting of the American Society for Microbiology Philadelphia, PA.

- 6. Oka, A.R., J. Anello, C.D. Phelps, and L.Y. Young. 2008.\_Anaerobic Mechanism of Benzene and Phenol Degradation in a Sulfidogenic Consortium from Guaymas Basin. General Meeting of the American Society for Microbiology Boston, MA.
- Phelps, C.D., K.A. Buckley, C.C. Obropta, and L.Y. Young. 2007. Comparison of qPCR-Based Microbial Source Tracking Data to Traditional Water Quality Measurements in the Upper Cohansey River Watershed. General Meeting of the American Society for Microbiology Toronto, ON.
- 8. Gallagher, E., C.D. Phelps, L.Y. Young and L. Kerkhof. 2004. Monitoring changes in anaerobic, aromatic degrading communities using stable-isotopes. General Meeting of the American Society for Microbiology New Orleans, LA.
- 9. Phelps, C.D. 2003. Winogradsky's Battery: Demonstrating redox potential using stratified sediment columns. General Meeting of the American Society for Microbiology Washington, DC.
- 10. Wise, A., C.D. Phelps, and L.Y. Young. 2002. Anaerobic metabolism of *p*-cresol. General Meeting of the American Society for Microbiology Salt Lake City, UT.
- 11. Battistelli, J.M., C.D. Phelps, and L.Y. Young. 2002. Use of metabolic biomarkers for monitoring anaerobic naphthalene biodegradation. General Meeting of the American Society for Microbiology Salt Lake City, UT.
- 12. Phelps, C.D., X. Zhang, and L.Y. Young. 2001. Transformation of biphenyl and fluorobiphenyl by a sulfidogenic consortium degrading phenanthrene. General Meeting of the American Society for Microbiology Orlando, FL.
- 13. Phelps, C.D., J. Oberer, G. Mortimer and L.Y. Young. 2000. Use of metabolic biomarkers to monitor *in situ* bioremediation at a contaminated field site. General Meeting of the American Society for Microbiology Los Angeles, CA.
- Phelps, C.D., and L.Y. Young. 1999. Isolation and characterization of an oligotrophic member of the Cytophagales. Ann. Conference of Northeast Microbiologists for Physiology, Ecology, Taxonomy, Blue Mtn. Lake, NY.
- 15. Phelps, C.D., L. Kerkhof and L.Y. Young. 1998. Characterizing an anaerobic, benzene-degrading consortium. General Meeting of the American Society for Microbiology Atlanta, GA.
- 16. Phelps, C.D. and L.Y. Young. 1997. Biodegradation of BTEX Under anaerobic conditions in various aquatic sediments. General Meeting of the American Society for Microbiology, Miami, FL.
- 17. Phelps, C.D., J. Kazumi and L.Y. Young. 1995. Anaerobic biodegradation of benzene in marine sediments. General Meeting of the American Society for Microbiology, Washington, D.C.
- Phelps, C.D. and L.Y. Young. 1993. Degradation of ferulic and syringic acids, two model lignin monomers, under three different reducing conditions. Ann. Conference of Northeast Microbiologists for Physiology, Ecology, Taxonomy, Blue Mtn. Lake, NY.

## <u>GRANTS</u>

Investigation of the Fate and Transport of Fecal Contamination Using Microbial Source Tracking. USDA National Institute of Food and Agriculture. \$399,863. Obropta, C.O.; Miskewitz, R.J.; Phelps, C. 15 June, 2007 – 14 June, 2011.