

# Clinton D. Jones, Ph.D.

- CURRICULUM VITAE -

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Chair, Department of Chemistry and Biochemistry  
Associate Professor of Chemistry  
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Mercyhurst University  
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## Education

### **Ph.D. Analytical Chemistry** / Organic Chemistry minor, 2003

Georgia Institute of Technology - Atlanta, GA

Advisor: Professor L. Andrew Lyon

Thesis: Poly(*N*-Isopropylacrylamide) Based Microgels: I. Fundamental Properties of Core Shell Microgels. II. Assembly and Photothermal Patterning of Microgel Colloidal Crystals.

### **B.S. Chemistry** (SUMMA CUM LAUDE), 1999

Georgia Institute of Technology - Atlanta, GA

Advisor: Professor Z. John Zhang

Research: Synthesis and Characterization of Magnetic Barium Hexaferrite Nanoparticles.

## Appointments

### **Chairperson, Department of Chemistry and Biochemistry**, 2012 – present

Mercyhurst University

Department of Chemistry and Biochemistry - Erie, PA

### **Associate Professor**, 2012 – present

Mercyhurst University

Department of Chemistry and Biochemistry - Erie, PA

### **Assistant Professor**, 2006 – 2012

Mercyhurst University

Department of Chemistry and Biochemistry - Erie, PA

### **Senior Scientist**, 2005 – 2006

Science Applications International Corporation (SAIC)

Research and Development Center - Manassas, VA

### **Postdoctoral Research Associate**, 2003 – 2004

Pennsylvania State University

Department of Chemistry - University Park, PA

Advisor: Professor Christine D. Keating

Research Focus: The Creation and Study of Artificial Eukaryotic-type Cells from Aqueous Two-Phase Polymer Systems

## Teaching Experience

### **Mercyhurst University – Instructor**

General Chemistry 1, General Chemistry 1 Lab, General Chemistry 2, General Chemistry 2 Lab, Quantitative Analysis, Instrumental Analysis, Instrumental Analysis Lab, Forensic Chemistry, Introduction to Forensic Science Lab, Writing and Communication for Scientists, Astronomy, Astronomy Lab, Organic Chemistry 1 Lab, Biochemistry I Lab, Biochemistry II Lab, General Physics 2 Lab, Freshman Year Initiative

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## Teaching Experience (cont...)

### Pennsylvania State University – Substitute Lecturer

Advanced Inorganic Chemistry

### Georgia Institute of Technology – Graduate Teaching Assistant

Organic Chemistry 1 Lab, Organic Chemistry 2 Lab, Instrumental Analysis 1 Lab, Instrumental Analysis 2 Lab

## Research Mentorship

### Graduate Students at Mercyhurst University

Devin Rivers, 2011 – M.S. in Forensic Anthropology (Co-Advisor)

Thesis Title: Highlighting Microfractures in Bone with Gold Nanoparticles

### Undergraduate Students at Mercyhurst University

Kathryn Adams, *Current Sophomore*

Amanda Balasko, *Current Junior*

Alyssa Blake, *Current Junior*

Stephanie Farbizio, *Current Junior*

Lorraine Gentner, *Current Senior*

Shauna Novobilsky, *Current Sophomore*

Alicia Norton, *Current Junior*

Rachel Simeone, *Current Junior*

Kelsey Violanti, *Current Sophomore*

Kaitlin Volanski, *Current Senior*

Rebecca Wheeling, *Current Sophomore*

Erica Brubaker, 2011 – Pharm.D. Program, Duquesne University

Eve Klajbor, 2011 – Ph.D. Program, Stony Brook University

Kira Ceppaglia, 2010 – Analytical Chemist, Precious Plate Inc.

Kimberly Clarke, 2010 – Ph.D. Program, Georgia Tech

Michelle Clemens, 2010 – M.S. Program, Mercyhurst Intelligence Studies

Richard Pompei, 2010 – DO Program, Philadelphia College of Osteopathic Medicine

Devon Swanson, 2010 – Ph.D. Program, University of Rhode Island

Michael Williams, 2010 – Ph.D. Program, Arizona State University

Breanna Coletta, 2009 – Pharm.D. Program, Lake Erie College of Medicine

Sara Driscoll, 2009 – Forensic Chemist, Drug Enforcement Administration

Brian Franz, 2009 – Ph.D. Program, Albany Medical College Immunology

Kayla Lincoln, 2009 – Ph.D. Program, Georgetown University

Elizabeth Pillar, 2009 – Ph.D. Program, University of Kentucky

## Personal Honors & Awards

- Mercyhurst College Teaching Excellence Award, 2011
- Penn State University Industry Sponsor's Day Poster Winner, 2004
- Office of Naval Research/GA Tech Molecular Design Institute Fellowship, 2002
- National Science Foundation Research Fellowship, 2001
- Georgia Tech Polymer Education Research Center Fellowship, 2001
- ACS / Georgia Tech Analytical Chemistry Student Award, 2000
- Georgia Tech Graduate Student Teaching Award of Excellence, 2000
- Graduation with Highest Honors, 1999
- Hypercube Scholar Award, 1999
- Cherry Emerson Graduate Fellowship, 1999
- Georgia Tech Faculty Honors for Scholastic Achievement, 1998
- Founder and President: Clayton State University Science Association, 1996
- Chemical Rubber Company Chemistry Award, 1996

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- Personal Honors & Awards (cont...)**
- Clayton State University Scholastic Achievement Award in the Sciences, 1996
  - President: International Student Awareness Club, Clayton State University, 1995
  - Atlanta Airport Association Honorary Scholarship, 1995
- Mentored Honors & Awards**
- Eastern Analytical Symposium Undergraduate Research Award Winner, 2009  
*Student: Kimberly Clarke*
  - First-place Poster Winner (*tie*) Sigma Xi Undergraduate Research Conference, 2009  
*Student: Kimberly Clarke*
  - First-place Poster Winner (*tie*) Sigma Xi Undergraduate Research Conference, 2009  
*Student: Sara Driscoll*
- Publications**
1. **Jones, C. D.** "The Kitchen is Your Laboratory: A Useful Method for a Research-Based Term Paper Assignment" *Journal of Chemical Education* **2011**, 88, 1062.
  2. Luchini, A.; Geho, D. H.; Bishop, B.; Tran, D.; Xia, C.; Dufour, R.; **Jones, C. D.**; Espina, V.; Patanarut, A.; Zhou, Z.; Ross, M.; Tessitore, A.; Petricoin III, E. F.; Liotta, L. A. "Smart Hydrogel Particles: Biomarker Harvesting: One-Step Affinity Purification, Size Exclusion, and Protection against Degradation" *Nano Letters* **2008**, 8, 350.
  3. Geho, D. H.; **Jones, C. D.**; Petricoin, E. F.; Liotta, L.A. "Nanoparticles: Potential Biomarker Harvesters" *Current Opinions in Chemical Biology* **2006**, 10, 56.
  4. Long, M. S.; **Jones, C. D.**; Helfrich, M. R.; Mangeney-Slavin, L. K.; Keating, C. D. "Dynamic Microcompartmentation in Synthetic Cells" *Proceedings of the National Academy of Sciences U.S.A.* **2005**, 102, 5920.
  5. Lyon, L. A.; Debord, J. D.; Debord, S. B.; **Jones, C. D.**; McGrath, J. G.; Serpe, M. J. "Microgel Colloidal Crystals" *J. Physical Chemistry B* **2004**, 108, 19099.
  6. **Jones, C. D.**; McGrath, J. G.; Lyon, L. A. "Characterization of Cyanine Dye-Labeled Poly(N-isopropylacrylamide) Core/Shell Microgels Using Fluorescence Resonance Energy Transfer" *J. Physical Chemistry B* **2004**, 108, 12652.
  7. Serpe, M. J.; **Jones, C. D.**; Lyon, L. A. "Layer-by-Layer Deposition of Thermoresponsive Microgel Thin Films" *Langmuir* **2003**, 19, 8759.
  8. **Jones, C. D.**; Lyon, L. A. "Photothermal Patterning of Microgel/gold Nanoparticle Composite Colloidal Crystals" *J. American Chemical Society* **2003**, 125, 460.
  9. **Jones, C. D.**; Lyon, L. A. "Shell-Restricted Swelling and Core Compression in Poly(N-isopropylacrylamide) Core/shell Microgels" *Macromolecules* **2003**, 36, 1988.
  10. **Jones, C. D.**; Serpe, M. J.; Schroeder, L.; Lyon, L. A. "Microlens Formation in Microgel/Gold Colloid Composite Materials via Photothermal Patterning" *J. American Chemical Society* **2003**, 125, 5292.
  11. **Jones, C. D.**; Lyon, L. A. "Dependence of Shell Thickness on Core Compression in Acrylic Acid Modified Poly(N-isopropylacrylamide) Core/Shell Microgels" *Langmuir* **2003**, 19, 4544.
  12. **Jones, C. D.**; Lyon, L. A. "Poly(N-isopropylacrylamide) Core/shell Microgels: Synthetic Fundamentals and Characterization" *Polymer Preprints (American Chemical Society, Division of Polymer Chemistry)* **2002**, 43(1), 716.
  13. Lyon, L. A.; Gan, D.; **Jones, C. D.**; Wang, J.; El-Sayed, M. A. "Tunable Kinetics of Core/shell Microgel Volume Phase Transitions" *Polymer Preprints (American Chemical Society, Division of Polymer Chemistry)* **2002**, 43(1), 363.
  14. **Jones, C. D.**; Lyon, L. A. "Synthesis and Characterization of Multiresponsive Core/shell Microgels" *Macromolecules* **2000**, 33, 8301.

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## Books

1. **Jones, C. D.;** Lyon, L. A. "Core/Shell Hydrogel Nanoparticles" in Encyclopedia of Nanoscience and Nanotechnology, J. A. Schwarz, C. Contescu, K. Putyera, Eds., Marcel Dekker, NY., 2004.
2. **Jones, C. D.;** Baker, C.; Lyon, L. A. "Synthesis and Characterization of Environmentally Responsive Core/shell Hydrogel Nanoparticles" in Biomaterials for Drug Delivery and Tissue Engineering; Mallapragada, S., Tracy, M., Narasimhan, B., Mathiowitz, E. and Korsmeyer, R., Eds.; MRS: Warrendale, PA, 2001; Vol. 662.

## Oral Presentations

1. Jones, C. D. "The Kitchen Is Your Laboratory: A Useful Method for a Research-Based Term Paper Assignment In a Scientific Writing Lecture Course" 239<sup>th</sup> American Chemical Society National Meeting, San Francisco, CA. March 2010.
2. Jones, C. D. "The Kitchen Is Your Laboratory: A Useful Method for a Research-Based Term Paper Assignment In a Scientific Writing Lecture Course" 41<sup>st</sup> Central Regional Meeting of the American Chemical Society, Cleveland, OH. May 2009.
3. Jones, C. D. "Intelligent Hydrogel Nanoparticles for the Extraction of Environmentally Relevant Molecules from Aqueous Solutions" 4<sup>th</sup> Annual Regional Science Consortium Research Symposium of the Tom Ridge Environmental Center, Erie, PA. Nov 2008.
4. Jones, C. D.; Lyon, L. A. "Shell-restricted Swelling and Core Compression in Poly(*N*-isopropylacrylamide) Core/shell Microgels" 77<sup>th</sup> ACS Colloid and Surface Science Symposium, Atlanta, GA. June 2003.
5. Jones, C. D.; Lyon, L. A. "Poly(*N*-Isopropylacrylamide) Core/shell Microgels: Synthetic Fundamentals and Characterization" 223<sup>rd</sup> American Chemical Society National Meeting, Orlando, FL. April 2002.
6. Jones, C. D.; Lyon, L. A. "An Introduction to Core/shell Hydrogel Nanoparticles" Georgia Tech Polymer Seminar Series, Atlanta, GA. October 2001.

## Mentored Oral Presentations

1. Klajbor, E.; Jones, C. D. "GC/MS and GC/ECD Analysis of Polybrominated Diphenyl Ethers in Feline and Canine Blood Samples" National Conferences on Undergraduate Research, Ithaca, NY. April 2011.
2. Brubaker, E. E.; Jones, C. D. "The Enhancement of Extraction Methods of PBDEs with Reversed-Phase SPE" 87<sup>th</sup> Annual Meeting of the Pennsylvania Academy of Science, Altoona, PA. April 2011.
3. Pillar, E. A.; Jones, C. D. "Investigation of Polyaromatic Hydrocarbon (PAH) Separation via HPLC Mobile Phase Variation" 5<sup>th</sup> Annual Regional Science Consortium Research Symposium of the Tom Ridge Environmental Center, Erie, PA. November 2009.
4. Clarke, K. C.; Jones, C. D. "*N*-Isopropylacrylamide Molecularly Imprinted Polymers for the Extraction of Caffeine" 5<sup>th</sup> Annual Regional Science Consortium Research Symposium of the Tom Ridge Environmental Center, Erie, PA. November 2009.
5. Clemens, M. L.; Jones, C. D. "Analysis of Caffeine in Local Waters" 5<sup>th</sup> Annual Regional Science Consortium Research Symposium of the Tom Ridge Environmental Center, Erie, PA. November 2009.
6. Clarke, K. C.; Jones, C. D. "*N*-Isopropylacrylamide Molecularly Imprinted Polymers for the Extraction of Caffeine" Mercyhurst College Student Research Conference, Erie, PA. October 2009.
7. Swanson, D.; Jones, C. D. "Detection and Identification of Gasoline Grades Using Various Laboratory Techniques" Mercyhurst College Student Research Conference, Erie, PA. October 2009.
8. Pompei, R.; Jones, C. D. "Preparation and Study of the Optical Properties and Hydrophobicity of *N*-Isopropylacrylamide-co-Styrene Microgel Colloidal Crystals" Mercyhurst College Student Research Conference, Erie, PA. October 2009.
9. Klajbor, E., Jones, C. D. "The Investigation of Fire-Retardant Compounds in Feline Blood Samples via Gas Chromatography Electron Capture and Mass Spectrometry" Mercyhurst College Student Research Conference, Erie, PA. October 2009.

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## Poster Presentations

1. Jones, C. D.; Keating C. D. "Polymer-Based Artificial Cells" Penn State Industry Sponsor's Day, University Park, PA. October 2004.
2. Jones, C. D.; Lyon, L. A. "Photothermal Patterning and Microlens Formation in Hydrogel/Gold Nanoparticle Composite Colloidal Crystals" 54<sup>th</sup> Southeast Regional Meeting of the American Chemical Society, Charleston, SC. November 2002.
3. Jones, C. D.; Lyon, L. A. "Core/shell Microgel Synthesis and the Fundamentals of Particle Behavior" 223<sup>rd</sup> American Chemical Society National Meeting, Orlando, FL. April 2002.
4. Jones, C. D.; Gan, D.; Lyon, L. A. "Environmentally Responsive Core/shell Microgels" Gordon Research Conference on Organic Thin Films, Newport, RI. June 2001.
5. Jones, C. D.; Lyon, L. A. "Synthesis and Applications of Core/shell Microgels" 2001 Harold Nations Symposium, Atlanta, GA. October 2001.
6. Jones, C. D.; Lyon, L. A. "Environmentally Responsive Core/shell Hydrogels" 53<sup>rd</sup> Southeast Regional Meeting of the American Chemical Society, Savannah, GA. September 2001.
7. Jones, C. D.; Lyon, L. A. "Environmentally Responsive Core/shell Hydrogels" Second Georgia Tech Conference on Nanoscience and Nanotechnology, Atlanta, GA. Sept. 2001.
8. Jones, C. D.; Gan, D.; Lyon, L. A. "Environmentally Responsive Core/shell Hydrogels" 2001 Molecular Design Institute Annual Review, Atlanta, GA. May 2001.
9. Jones, C. D.; Lyon, L. A. "Environmentally Responsive Core/shell Hydrogels" Materials Research Society National Meeting, Boston, MA. November 2000.
10. Jones, C. D.; Lyon, L. A. "Environmentally Responsive Core/shell Hydrogels" Frontiers in Chemical Sensors, 2000 Harold Nations Symposium, Atlanta, GA. November 2000.
11. Jones, C. D.; Lyon, L. A. "Core/shell Hydrogel Nanoparticles" First Georgia Tech Conference on Nanoscience and Nanotechnology, Atlanta, GA. October 2000.

## Mentored Poster Presentations

1. Klajbor, E.; Jones, C. D. "The Investigation of Polybrominated Diphenyl Ethers in Feline Blood Samples via Gas Chromatography Electron Capture and Mass Spectrometry" 19<sup>th</sup> Annual Sigma Xi Undergraduate Student Research Conference, Erie, PA. April 2010.
2. Klajbor, E.; Jones, C. D. "The Investigation of Polybrominated Diphenyl Ethers in Feline Blood Samples via Gas Chromatography Electron Capture and Mass Spectrometry" 239<sup>th</sup> American Chemical Society National Meeting, San Francisco, CA. March 2010.
3. Clarke, K. C.; Jones, C. D. "N-Isopropylacrylamide Molecularly Imprinted Polymers for the Extraction of Caffeine" 2009 Eastern Analytical Symposium and Exhibition, Somerset, NJ. November 2009.
4. Pillar, E. A.; Jones, C. D. "Investigation of Polycyclic Aromatic Hydrocarbon (PAH) Separation via HPLC Mobile Phase Variation" Mercyhurst College Student Research Conference, Erie, PA. October 2009.
5. Ceppaglia, K. N.; Jones, C. D. "The Development of a Dynamic Light Scattering Experiment for the Undergraduate Laboratory: Analyzing Casein Micelles in Commercial Milk" Mercyhurst College Student Research Conference, Erie, PA. October 2009.
6. Clarke, K.; Jones, C. D. "Toward the Design of SPME Fibers Using Thermoresponsive Polymer Nanoparticles" 41<sup>st</sup> Central Regional Meeting of the American Chemical Society, Cleveland, OH. May 2009.
7. Pompei, R.; Jones, C. D. "Preparation and Study of the Optical Properties and Hydrophobicity of Styrene-co-N-Isopropylacrylamide Microgel Colloidal Crystals" 41<sup>st</sup> Central Regional Meeting of the American Chemical Society, Cleveland, OH. May 2009.
8. Clarke, K.; Jones, C. D. "Toward the Design of SPME Fibers Using Thermoresponsive Polymer Nanoparticles" 18<sup>th</sup> Annual Sigma Xi Undergraduate Student Research Conference, Penn State Behrend, Erie, PA. April 2009.

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9. Driscoll, S.; Jones, C. D. "Determining the Size of Casein Micelles Under Acidic Conditions Using Dynamic Light Scattering: A Laboratory Experiment" 18<sup>th</sup> Annual Sigma Xi Undergraduate Student Research Conference, Penn State Behrend, Erie, PA. April 2009.
10. Lincoln, K. R.; Jones, C. D. "Investigations of N-Isopropylacrylamide Microgel Behavior Based on Co-Polymerization with Allyamine" 18<sup>th</sup> Annual Sigma Xi Undergraduate Student Research Conference, Penn State Behrend, Erie, PA. April 2009.
11. Pompei, R.; Jones, C. D. "Preparation and Study of the Optical Properties and Hydrophobicity of Styrene-co-N-Isopropylacrylamide Microgel Colloidal Crystals" 18<sup>th</sup> Annual Sigma Xi Undergraduate Student Research Conference, Penn State Behrend, Erie, PA. April 2009.
12. Lincoln, K. R.; Jones, C. D., "Preconcentration of Metal Ions from Natural Water Samples Using Thermoresponsive Hydrogel Polymers: Bulk Gels Versus Nanoparticles" 3rd Annual Regional Science Consortium Research Symposium of the Tom Ridge Environmental Center, Erie, PA. November 2007.

## **Professional Organizations**

- Society for Analytical Chemists of Pittsburgh, 2008 – present
- American Association for the Advancement of Science: Member, 2007 – present
- American Chemical Society: Member, 1999 – present

## **Service & Administration**

- Peer reviewer for American Chemical Society Journals, 2007 – present
- Peer reviewer for Wiley Science Journals, 2007 – present
- Peer reviewer for Elsevier Science Journals, 2007 – present
- Evaluator for The American Chemical Society's Chemistry Olympiad – Erie, PA
- Volunteer for Because You Care Animal Shelter – Erie, PA