CURRICULUM VITAE – Kenneth A. Christensen

PERSONAL DATA

Associate Professor
Department of Chemistry and Biochemistry
Brigham Young University
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EDUCATION

Ph.D., University of Michigan, 1997, Chemistry
B.S., Brigham Young University, 1992, Chemistry

PROFESSIONAL EXPERIENCE

Brigham Young University, 2015-present, Associate Professor of Chemistry and Biochemistry
Clemson University, 2011- 2015, Associate Professor of Chemistry
Clemson University, 2004-2011, Assistant Professor of Chemistry
Harvard Medical School, 2002-2004, Research Fellow (Microbiology and Molecular Genetics)
University of Michigan Medical School, 1998-2002, Research Fellow (Microbiology and Immunology)
University of Michigan, 1997-1998, Lecturer II (Chemistry)

PROFESSIONAL ACTIVITIES

Federation for Analytical Chemistry and Spectroscopy Societies, National Section Chair for Bioanalytical Chemistry for the 2008 FACSS Meeting in Reno, NV

American Chemical Society, Symposium co-chair for the 2007 Southeastern Regional Meeting of the American Chemical Society (SERMACS) in Greenville, SC

Ad hoc reviewer for: *Journal of the American Chemical Society, ChemBioChem, Regulatory Toxicology and Pharmacology, Analyst, Chemistry - A European Journal, Bioconjugate Chemistry, BMC Infectious Diseases, Langmuir, Advanced Functional Materials, Advanced Healthcare Materials, ChemComm, Analytical Chemistry, Acta Biomaterialla, Biomacromolecule, Nanoscale, Cytometry A, International Journal of Pharmaceutics, Journal of Materials Chemistry, Lab-on-a-Chip, Molecular Biosystems, Bioconjugate Chemistry, Analytical and Bioanalytical Chemistry, Advanced Materials, Army Corp of Engineers, National Institutes of Health, National Science Foundation*

Ad hoc member of NIH Study Section ZRG1 IDM-V (12): Non-HIV Infectious Agent Detection/Diagnostics, Food Safety, Sterilization/Disinfection and Bioremediation from 2011-present.
Alternate Chair of NIH Study Section ZRG1 IDM-V (12): Non-HIV Infectious Agent Detection/Diagnostics, Food Safety, Sterilization/Disinfection and Bioremediation from 2013-2014

Chair of NIH Study Section ZRG1 IDM-V (12): Non-HIV Infectious Agent Detection/Diagnostics, Food Safety, Sterilization/Disinfection and Bioremediation from 2015-present

Ad hoc member of NIH Study Section ZRG1 IMST-G (10) B: Biological Chemistry, Biophysics, and Drug Discovery from 2012-2013.

PUBLICATIONS

Refereed Journal Publications

1. Christensen, K.A., Bradley, N.L., Morris, M.D., and Morrison, R.V., "Raman Imaging Using a Tunable Dual-Stage Liquid Crystal Fabry-Perot Interferometer", *Applied Spectroscopy*, **49**, 1120-1125 (1995)
2. Shaver, J.M., Christensen, K.A., Pezzuti, J.A, and Morris, M.D., "Structure of Dihydrogen Phosphate Ion Aggregates by Raman-Monitored Serial Dilution", *Applied Spectroscopy*, ***52***, 259-264 (1998)
3. Christensen, K.A. and Morris, M.D., "Hyperspectral Raman Line-Imaging Using Powell Lens Illumination", *Applied Spectroscopy*, **52**, 1145-1147 (1998)
4. Savvate'ev, V., Friedl, J.H., Zou, L., Shinar, J., Christensen, K., Oldham, W., Rothberg, L.J., Chen-Esterlit, Z., and Kopelman, R., "Nanosecond Transients in the Electroluminescence from Multilayer Blue Organic Light-Emitting Devices Based on 4,4'-bis(2,2' diphenyl vinyl)-1,1'-biphenyl", *Applied Physics Lett*ers, **76**, 1501-1503 (2000)
5. Christensen, K.A., Myers, J.T., Swanson, J.A., "pH-dependent Regulation of Lysosomal Calcium in Macrophages", *Journal of Cell Science*, **115**, 599-607 (2002)
6. Hoppe, A., Christensen, K., and Swanson, J.A., "Fluorescence Resonance Energy Transfer-Based Stoichiometry in Living Cells", *Biophysical Journal*, **83**, 3652-3664 (2002)
7. Wigelsworth, D.J.*, Krantz, B.A.*, Christensen, K.A., Lacy, D.B., Juris, S.J., and Collier, R.J., "Binding Stoichiometry and Kinetics of the Interaction of a Human Anthrax Toxin Receptor, CMG2, with Protective Antigen", *Journal of Biological Chemistry*, **279**, 23349-23356 (2004)
8. Pimental, R-A.L.*, Christensen, K.A.*, Krantz, B.A., Collier, R.J., "Anthrax toxin complexes: heptameric protective antigen can bind lethal factor and edema factor

simultaneously", *Biochemical and Biophysical Research Communications*, **322**, 258–262 (2004)

9. Krantz, B.A., Trivedi, A.D., Cunningham, K., Christensen, K.A., and Collier, R.J., "Acid-induced Unfolding of the Amino-terminal Domains of the Lethal and Edema Factors of Anthrax Toxin", *Journal of Molecular Biology*, **344**, 739-756 (2004)
10. Christensen, K.A.*, Krantz, B.A.*, and Collier, R.J., "Interaction of the 20 kDa and 63 kDa Fragments of Anthrax Protective Antigen: Kinetics and Thermodynamics", *Biochemistry*, **44**, 1047-1053 (2005)
11. Qa'dan, M., Christensen, K.A., Zhang, L., Roberts, T.M., and Collier, R.J., "Membrane Insertion by Anthrax Protective Antigen in Cultured Cells", *Molecular and Cellular Biology*, **25**, 5492-5498 (2005)
12. Christensen, K.A., Krantz, B.A., and Collier, R.J., "The assembly and disassembly kinetics of anthrax toxin complexes", *Biochemistry*, **45**, 2380-2386 (2006)
13. Shaughnessy, L.M., Hoppe, A.D., Christensen, K.A., and Swanson, J.A., "Membrane perforations inhibit lysosome fusion by altering pH and calcium in *Listeria monocytogenes* vacuoles", *Cellular Microbiology*, **8**, 781–792 (2006)
14. Daniels, J.K., Caldwell, T.P., Christensen, K.A., and Chumanov, G., "Monitoring the Kinetics of *Bacillus subtilis* Endospore Germination via Surface-Enhanced Raman Scattering Spectroscopy", *Analytical Chemistry*, **78**, 1724-1729 (2006)
15. Evanoff, D.D. Jr., Heckel, J., Caldwell, T.P., Christensen, K.A., and Chumanov, G., "Monitoring DPA Release from a Single Germinating Bacillus subtilis Endospore via Surface-Enhanced Raman Scattering Microscopy", *Journal of the American Chemical Society*, **128**, 12618-12619 (2006)
16. Rogers, M.S., Christensen, K.A., Wigelsworth, D.J., Collier, R.J., and D'Amato, R.J., "Mutant Anthrax Toxin B-moiety (Protective Antigen) Inhibits Angiogenesis and Tumor Growth", *Cancer Research*, **67**, 9980-9985 (2007)
17. Wu, C., Bull B., Szymanski, C., Christensen, K., and McNeill, J., "Multicolor Conjugated Polymer Dots for Biological Fluorescence Imaging", *ACS Nano*, **2**, 2415–2423 (2008)
18. Wu, C., Bull, B., Christensen, K. and McNeill, J., "Ratiometric Single-Nanoparticle Oxygen Sensors for Biological Imaging", *Angewandte Chemie International Edition*, **48**, 2741-2745 (2009)
19. Luo, P.J.G., Wang, H.F., Gu, L.R., Lu, F.S., Lin, Y., Christensen, K.A., Yang, S.T., Sun, Y-P, "Selective Interactions of Sugar-Functionalized Single-Walled Carbon Nanotubes with Bacillus Spores", *ACS Nano*, **3**, 3909-3916 (2009)
20. Bhut, B.V., Christensen, K.A., and Husson, S.M., "Membrane chromatography: Protein purification from E. coli lysate using newly designed and commercial anion-exchange stationary phases", *Journal of Chromatography A*, **1217**, 4946-4957 (2010)

21. Fernando, L.P., Kandel, P.K., Yu, J., McNeill, J., Ackroyd, P.C., and Christensen, K.A., "Mechanism of cellular uptake of highly fluorescent conjugated polymer nanoparticles", *Biomacromolecules*, **11**, 2675-2682 (2010)

22. Chaurra, A., Gutzman, B.M., Taylor, E., Ackroyd, P.C., and Christensen, K.A., "Lucifer Yellow as a live cell fluorescent probe for imaging water transport in subcellular organelles", *Applied Spectroscopy*, **65**, 20-25 (2011)

23. Dodson, H.C., Lyda, T.L., Chambers, J.W., Morris, M.T., Christensen, K.A., Morris, J., "Quercetin, a fluorescent bioflavanoid, inhibits Trypanosoma brucei hexokinase 1" *Experimental Parasitology*, **127**, 423-428 (2011)

24. Kandel, P.K., Fernando, L.P., Ackroyd, P.C., and Christensen, K.A., "Incorporating Functionalized Polyethylene Glycol Lipids into Reprecipitated Conjugated Polymer Nanoparticles for Bioconjugation and Targeted Labeling of Cells" *Nanoscale*, **3**, 1037-1045 (2011)

25. Yang, Z., Nguyen, K.T., Chen, H., Qian, H., Fernando, L.P., Christensen, K.A., and Anker, J.N., "Plasmonic Silver Nanobelts via Citrate Reduction in the Presence of HCl and their Orientation-Dependent Scattering Properties" *Journal of Physical Chemistry Letters*, **2**, 1742-1746 (2011)

26. Cracowski, J.-M., Sharma, B., Brown, D.K., Christensen, K., Lund, B.R., and Smith, D.W., "Perfluorocyclopentenyl (PFCP) Aryl Ether Polymers via Polycondensation of Octafluorocyclopentene with Bisphenols" *Macromolecules*, **45**, 766-771 (2012)

27. Wang, F.; Widejko, R.; Yang Z.; Nguyen, K.V.T.; Chen, H; Fernando L.P.; Christensen, K.A.; Anker, J.N. "Surface-enhanced Raman scattering detection of pH with silica-encapsulated 4-mercaptobenzoic acid-functionalized silver nanoparticles." DOI: 10.1039/C2CP41858D **84**, 8013-8019 (2012)

28. Rogers, M.S., Cryan, L.M., Habeshian, K.A., Bazinet, L., Caldwell, T.P., Ackroyd, P.C., and Christensen, K.A., "A FRET-based High Throughput Screening Assay to Identify Inhibitors of Anthrax Protective Antigen Binding to Capillary Morphogenesis Gene 2 Protein" *PLOS One*, **7**(6): e39911 (2012).

29. Fernando, L.P., Kandel, P.K., Ackroyd, P.C., and Christensen, K.A., "The Relative Brightness of PEG Lipid-Conjugated Polymer Nanoparticles as Fluid-phase Markers in Live Cells" *Analytical and Bioanalytical Chemistry*, DOI: 10.1007/s00216-012-6441-5, **404**, 3003-3014 (2012)

30. Cryan, L.M., Habeshian, K.A., Caldwell, T.P., Morris, M.T., Ackroyd, P.C., and Christensen, K.A., D'Amato, R., Rogers, M.S. "Identification of Small Molecules that Inhibit the Interaction of TEM8 with Anthrax Protective Antigen using a FRET Assay" *Journal of Biomolecular Screening,* **18**, 714-725 (2013), DOI: 10.1177/1087057113478655

31. Cryan, L.; Bazinet, L.; Habeshian, K.; Cao, S.; Clardy, J.; Christensen, K.; Rogers, M., "1,2,3,4,6-Penta-O-galloyl-β-D-glucopyranose inhibits angiogenesis via inhibition of capillary morphogenesis gene 2", *Journal of Medicinal Chemistry*, **56**, 1940-1945 (2013), DOI: 10.1021/jm301558t

32. Lin, S., Morris, M.T., Ackroyd, P.C., Morris, J.C., Christensen, K.A., "Peptide targeted delivery of pH sensor for quantitative measurements of intraglycosomal pH in live Trypanosoma brucei" *Biochemistry*, **52**, 3629-3637 (2013), DOI: 10.1021/bi400029m
33. Schadock-Hewitt, A.J., Pittman, J.J., Christensen, K.A., and Marcus, R.K., "Head group-functionalized poly(ethyleneglycol)–lipid (PEG–lipid) surface modification for highly selective analyte extractions on capillary channeled polymer (C-CP) fibers" *Analyst*, **139**, 2108-2113 (2014), DOI: 10.1039/c3an01899g; Featured on the inside cover of the journal issue.
34. Dukes, K.D., Christensen, K.A., and Chumanov, G., "Core-Shell Silver Nanoparticles for Optical Labeling of Cells" *Analytical Biochemistry*,**458,** 43–48 (2014), DOI: 10.1016/j.ab.2014.04.015
35. Brown, D.K., Cracowski, J.-M., Iacono, S.T., Christensen, K., and Smith, D.W., "Preparation of Segmented Semifluorinated Poly(aryl ether)s from Aromatic Trifluorovinyl Ethers and Oligo(ethylene glycol)s" Journal of Applied Polymer Science (2015), DOI: 10.1002/APP.41798

Manuscripts Submitted or In Revision for Refereed Journals

**Contributed equally to the work*

Other Scholarly Publications

Christensen, K.A., Milne, E.A., and Morris, M.D., "Raman Spectroscopy", *Kirk-Othmer Encyclopedia of Chemical Technology* (1995) 4th ed., vol. 14, 416-430, John Wiley & Sons, New York, NY

PRESENTATIONS

1. Morris, M.D., Christensen, K.A., and Bradley, N.L., "Raman Imaging in the Real World", an invited talk at the Microscopy & Microanalysis '96 Meeting, Minneapolis, MN (August 11-15, 1996)
2. Morris, M.D., Shaver, J.M., Christensen, K.A. and Bradley, N.L., "Getting the Most Out of the Least: Data Transformation in Raman Microspectroscopy and Imaging," an invited talk at the FACSS XXIII Meeting, Kansas City, MO (September 29-October 4, 1996)
3. Christensen, K.A., Shaver, J.M. and Morris, M.D., "Visualizing Dynamic Processes in Two- and Three-dimensions" an invited talk at the FACSS XXIII Meeting, Kansas City, MO (September 29-October 4, 1996)
4. Christensen, K.A., "Multivariate Analysis for Raman Spectroscopy and Imaging" an invited lecture for the Mid-Michigan chapter of the Society for Applied Spectroscopy, Midland, MI (December 4, 1996)

5. Morris, M.D., Jestel, N.L., Christensen, K.A., and Shaver, J.M., "Full Spectrum Raman Imaging of Glasses and Other Materials" an invited talk at the Microscopy and Microanalysis '97 meeting, Cleveland, OH (August 10-14, 1997)
6. Christensen, K.A., Cunningham, K., Lacy, D.B., Collier, R.J., "Resonance Energy Transfer Studies of Anthrax Lethal Toxin Complex" a platform presentation at the Biophysical Society Annual Meeting, San Antonio, TX (March 1-5, 2003)
7. McAbee, J.A. and Christensen, K.A., "Optimization of a Bacillus anthracis Protective Antigen receptor binding assay for high-throughput screening of potential Anthrax and cancer therapies" a poster presented at the 231st ACS National Meeting, Atlanta, GA, March 26-30, 2006
8. Chaurra, A.M. and Christensen, K.A., "Ratiometric Fluorescence Imaging of Water Transport in Subcellular Organelles of Live Cells Using D_2O as a Contrast Agent" a poster presented at the 2006 FACSS National Meeting, Orlando, FL (September 24-28, 2006)
9. Christensen, K.A., Smith, N.E., and Caldwell, T.P., "Monitoring Conformational Rearrangements in *Bacillus anthracis* Protective Antigen Using FRET Microscopy" a poster presented at the 2006 FACSS National Meeting, September 24-28, 2006, Orlando, FL
10. Chumanov, G., Daniels, J., Evanoff, D., Caldwell, T., and Christensen, K., "Sandwich SERS Substrates for Monitoring Germination of Bacillus Spores", a talk presented at the 2006 FACSS National Meeting, Orlando, FL (September 24-28, 2006)
11. Madera, S., Caldwell, T.P., Smith, N.E., and Christensen, K.A., "Monitoring conformational rearrangements in Bacillus anthracis Protective Antigen using FRET microscopy" a poster presented at the 233rd ACS national meeting, in Chicago, IL, March 25-29, 2007
12. Evanoff, D.D. Jr., Heckel, J., Caldwell, T.P., Christensen, K.A., and Chumanov, G. "Monitoring DPA release from a single germinating *Bacillus subtilis* endospore via surface-enhanced Raman scattering microscopy" a poster presented at the 234th ACS National Meeting, Boston, MA, August 19-23, 2007
13. Christensen, K.A., Rogers, M.S., He, J., and Animula, N., "Homogenous Fluorescence Resonance Energy Transfer Assays for Identification of Inhibitors of Angiogenesis and Anthrax Toxin Receptors Using High Throughput Screening", a poster presented at the FACSS National Meeting, Memphis, TN, October 14-18, 2007.
14. Christensen, K.A., Rogers, M.S., and Caldwell, T.P, "Assays for Identification of Inhibitors of Angiogenesis and Anthrax Toxin Receptors Using High Throughput Screening" an invited talk presented at the Southeastern Regional Meeting of the American Chemical Society (SERMACS), Greenville, SC, October 24-27, 2007.
15. Animula, N., Marcus, R.K., and Christensen, K.A., "Qualitative and Semi Quantitative Micro-Volume Lateral Flow Assays Using Capillary-Channeled Films" a poster presented at the Southeastern Regional Meeting of the American Chemical Society (SERMACS), Greenville, SC, October 24–27, 2007.

16. Date, M.S., Dominy, B.N., and Christensen, K.A., "Flexibility in Polyproline II and Calibration Tool for Förster Resonance Energy Transfer Experiments" a poster presented at the Southeastern Regional Meeting of the American Chemical Society (SERMACS), Greenville, SC, October 24–27, 2007.
17. Bull, B.J., Caldwell, T.P., and Christensen, K.A., "Development of a High-Throughput Screening Assay to Identify Inhibitors of Tumor Endothelial Marker 8 TEM8 and Angiogenesis" a poster presented at the Southeastern Regional Meeting of the American Chemical Society (SERMACS), Greenville, SC, October 24–27, 2007.
18. He, J., Caldwell, T.P., and Christensen, K.A., "Screening for Inhibitors of Capillary Morphogenesis Gene Protein 2 CMG2 and Angiogenesis" a poster presented at the Southeastern Regional Meeting of the American Chemical Society (SERMACS), Greenville, SC, October 24–27, 2007.
19. Chaurra, A., Gutzman, B., and Christensen, K.A., "Measuring Water Transport across Endocytic Organelle Membranes in Living Cells Using Ratiometric Fluorescence Imaging" a talk given at Pittcon 2008, New Orleans, LA, March 2-7, 2008.
20. Bull, B.J., Caldwell, T.P., and Christensen, K.A., "Quantifying Affinities of Membrane Associated Protein-Protein Interactions Using Ratiometric and Fluorescence Resonance Energy Transfer Imaging" a talk given at Pittcon 2008, New Orleans, LA, March 2-7, 2008.
21. Everett, A., Marcus, R.K., Brown, P., Christensen, K.A., and Kornev, K., "Hydrodynamic Study in Capillary-Channeled Polymer (C-CP) Films Using Fluorescently Labeled THP-1 Cells" a talk given at Pittcon 2008, New Orleans, LA, March 2-7, 2008.
22. Christensen, K.A., Bull, B.J., and Caldwell, T.P., "Quantification of Affinity and Kinetics of Membrane Associated Proteins by Ratiometric Imaging and Flow Cytometry" a poster presented at FACSS 2008, Reno, NV, September 28-October 2, 2008.
23. Christensen, K.A., Kandel, P., Fernando, L., and McNeill, J., "Intracellular Delivery and Localization of Luminescent Conjugated Polymer Nanoparticles" a poster presented at FACSS 2008, Reno, NV, September 28-October 2, 2008.
24. Christensen, K.A., "Capillary-Channeled Polymer Films as a Platform for Cellular Analysis" an invited talk presented at FACSS 2008, Reno, NV, September 28-October 2, 2008.
25. Christensen, K.A. and Chaurra, A., "A Mechanism for Water Transport across Endocytic Organelle Membranes in Living Cells" a poster presented at FACSS 2008, Reno, NV, September 28-October 2, 2008.
26. Chaurra, A. and Christensen, K.A., "Measuring Water Transport across Organelle Membranes to Probe the pH-Dependent Function of Aquaporins in Endocytic Compartments" an oral presentation presented at Pittcon 2009, Chicago, IL, March 8-13, 2009.
27. Kandel, P., Zheng, Y., Fernando, L., McNeill, J., and Christensen K.A., "Bioconjugation of π-Conjugated Polymer Nanoparticles as Targeted Probes for Fluorescence Microscopy of

Living Cells" an oral presentation presented at Pittcon 2009, Chicago, IL, March 8-13, 2009.

28. Bull, B.J., Fernando, L., McNeill, J., and Christensen, K.A., "Determining the Cytotoxicity and Phototoxicity of Fluorescent π-Conjugated Polymer Nanoparticles" an oral presentation presented at Pittcon 2009, Chicago, IL, March 8-13, 2009.
29. Christensen, K.A., "Capillary-Channeled Polymer Films as a Platform for Cellular Analysis and Ultra-Sensitive Bioassays" an oral presentation presented at Pittcon 2009, Chicago, IL, March 8-13, 2009.
30. Christensen, K.A., "Polymer Fiber-Based Platforms for Measuring Gene Expression" a poster presented at FACSS 2010, Raleigh, NC, October 17-21, 2010.
31. Kandel, P.K. and Christensen, K.A., "Highly Fluorescent Conjugated Polymer Nanoparticle for Measuring pH in Acidic Compartments of Living Cells" a poster presented at FACSS 2010, Raleigh, NC, October 17-21, 2010.
32. Kandel, P.K., Fernando, L.P., and Christensen, K.A., "Conjugated Polymer Nanoparticles for Sensitive Fluorescence Detection of mRNA", an oral presentation to be presented at Pittcon 2011, Atlanta, GA, March 13-18, 2011.
33. Lin, S., Kandel, P.K., Fernando, L.P, and Christensen, K.A., "Cellular Imaging with Sugar-Coated Conjugated Polymer Nanoparticles", an oral presentation to be presented at Pittcon 2011, Atlanta, GA, March 13-18, 2011.
34. Obondi, C.O., Bostic, R.T., and Christensen, K.A., "Capillary-channeled Polymer Fibers as a Platform for Detection of Disease Biomarkers", a poster presentation to be presented at Pittcon 2011, Atlanta, GA, March 13-18, 2011.
35. Nguyen, K.T., Yang, Z., Fernando, L.P., Christensen, K.A., Moeller, W., and Anker, J.N., "Rotational Tracking of Single Plasmonic and Fluorescent Particles in Living Macrophages" a poster presentation to be presented at Pittcon 2011, Atlanta, GA, March 13-18, 2011.
36. Pittman, J.J., Christensen, K.A., and Marcus, R.K., "Functionalization of Capillary-channeled Polymer (C-CP) Fibers Using Adsorption of Polyethylene Gylcol (PEG) for High Performance Liquid Chromatography (HPLC) Stationary Phases" a poster presentation to be presented at Pittcon 2011, Atlanta, GA, March 13-18, 2011.
37. Cryan, L.M, Habeshian, K., Christensen, K., and Rogers M., "A high-throughput assay for tumor endothelial marker-8 (TEM8/ANTXR1) inhibitors" an oral presentation to be presented at AACR 2011, Orlando, FL, April 2-6, 2011
38. Fernando, L.P., Obondi, C.O., Bostic, R.T., Kornev, K.G., and Christensen, K.A., "Micro- and nano-fiber bundles as a platform for sensitive detection of biomacromolecules" an oral presentation to be presented at the International Symposium on New Frontiers in Fiber Materials Science; Charleston, SC, October 11-13, 2011
39. Lin, S., Christensen, K.A., Morris, M., Morris, J., "Ratiometric Sensing in Trypanosoma Burcei Glycosomes" an oral presentation at Pittcon 2012, Orlando, FL, March 11-15, 2012

40. Khan, N., Marcus, R.K., Christensen, K.A., " Capturing Affinity-Tagged Cells Using Capillary-Channeled Polymer (C-CP) Fiber Devices" an oral presentation at Pittcon 2012, Orlando, FL, March 11-15, 2012
41. Kandel, P.K., Latham, P., Fernando, L.P, and Christensen, K.A., " Passivation of Conjugated Polymer Nanoparticles for Sensitive Detection of Biomarkers" an oral presentation at Pittcon 2012, Orlando, FL, March 11-15, 2012
42. Christensen, K.A., "Capillary-channeled polymer fibers and nanofiber yarns as a platform for detection of biomolecular interactions" an invited presentation at the 2012 Summer Workshop of the Biomolecular Interaction Technologies Center at the University of New Hampshire, Durham, NH, July 16, 2012
43. Christensen, K.A., "Capillary-channeled polymer fibers and nanofiber yarns for detection of biomolecular interactions" an invited presentation at Georgia Southern University, Department of Chemistry, Statesboro, GA, October 11, 2012
44. Christensen, K.A., "Spectroscopic Probes and Sensors for Analysis of Live Cells" an invited presentation at North Dakota State University, Department of Chemistry and Biochemistry, Fargo, ND, January 31, 2013
45. Christensen, K.A., "Conjugated Polymer Nanoparticles for Cell Labeling and Sensing" an invited presentation at the University of North Carolina—Charlotte, Charlotte, NC, March 14, 2013
46. Christensen, K.A., "Targeting Anthrax Toxin Receptors to Inhibit Angiogenesis" an invited presentation at Clemson University, Department of Genetics and Biochemistry, Clemson, SC, March 29, 2013
47. Khan, N., Ackroyd, P.C., and Christensen, K.A., "Rapid pull-down assay using capillary-channeled polymer fiber stationary phases" a poster presented at the Fiber Society's Fall Symposium, Clemson, SC, October 23-25, 2013
48. Lin, S., Morris, M.T., Morris, J.C., Christensen, K.A., "ATP dependence of Glycosomal pH Regulation in *T. brucei*" an oral presentation at the Cell Biology of Eukaryotic Pathogens Symposium, Clemson, SC, October 25, 2013.
49. Christensen, K.A., "Peptide targeting of pH sensors to Trypanosome glycosomes" an invited presentation at Brigham Young University, Provo, UT, January 14, 2014.
50. Lin, S., Morris, M.T., Morris, J.C., Christensen, K.A., "Peptide-mediated Ratiometric Sensing of pH Regulation in *Trypanosoma brucei* Glycosomes" an oral presentation to be presented at Pittcon 2014, Chicago, IL, March 2-6, 2014.
51. Lin, S., Morris, M.T., Morris, J.C., Christensen, K.A., "Acidification of the *T. brucei* Glycosome during Starvation" a poster presentation at the 24th Annual Molecular Parasitology and Vector Biology Symposium, Athens, GA, April 29, 2014.

Presenting author is underlined

SPONSORED RESEARCH

"Understanding anthrax toxin assembly and delivery *in vivo*", Clemson University Research Grant Committee, Principal Investigator, $3,418.80, ($3418.80), 2004-2005--Completed

"Quantitative FRET microscopy measurement of protein-protein interactions *in vivo*", University of New Hampshire--Biomolecular Interaction Technologies Center, Principal Investigator, $69,705 ($69,705), 2005-2008--Completed

"Assay for Molecules that Inhibit Anthrax Intoxication and Pathologic Angiogenesis", National Institutes of Health, Principal Investigator, $88,207 ($88,207), 2005-2007--Completed

"Assay for Inhibitors of Angiogenesis and Anthrax Toxin Receptor 1", National Institutes of Health, Sub-award Principal Investigator, $216,788 ($84,325), 2007-2009--Completed

"Polymer Dot Nanoparticles for Detection of Single Molecules in Live Cells", National Institutes of Health, Co-Investigator, $960,000 ($480,000), 2007-2012--Completed

"Novel Angiogenesis Inhibitors Targeting the Anthrax Toxin Receptors", National Institutes of Health, Sub-award Principal Investigator, $1,841,854 ($546,315), 2008-2014

"Antiangiogenic Natural Products Targeting Anthrax Toxin Receptor 2", Department of Defense—Breast Cancer Research Program Synergistic Idea Award Program, Sub-award Principal Investigator, $520,498 ($86,611), 2008-2010--Completed

"Bioconjugation of Carbon Nanoparticles for Cell-Based Imaging and Flow Cytometry" a small restricted receipt project with SELAH Technologies, Inc., Principal Investigator, $7,000 ($7,000), 9/2008-12/2008--Completed.

"Functional fiber-based platforms for cell and biopolymer probes, analyses, and disease diagnostics", Center for Advanced Engineering Fibers and Films, Co-Principal Investigator, $54,480 ($11,875), 9/2008-6/2009--Completed

"Advanced Functional Membranes for Protein Chromatography", Center for Advanced Engineering Fibers and Films, Co-Principal Investigator, $26,508 ($0), 9/2008-6/2009--Completed.

"Selective Protein Separations Using Modified C-CP Fibers as Stationary Phase", Center for Advanced Engineering Fibers and Films, Co-Principal Investigator, $27,333, ($2,106), 9/2008-6/2009--Completed.

"EFRI-BSBA: Multifunctional Materials and Devices for Distributed Actuation and Sensing", National Science Foundation, Co-Principal Investigator, $1,999,878, ($400,000), 2009-2014.

Supplemental funding for "Novel Angiogenesis Inhibitors Targeting Anthrax Toxin Receptors", National Institutes of Health, Sub-award Principal Investigator, $241,374 ($241,374), 2010-2014.

"pH and glucose sensing in Trypanosoma brucei glycosomes", National Institutes of Health, Principal Investigator (MPI), $381,956 ($220,110), 2013-2015.

"Phage Display Selection of Antiangiogenic CMG2 Cyclic Peptide Antagonists", National Institutes of Health, Principal Investigator, $416,226 ($221,556); 2014-2016

GRADUATE STUDENT ADVISING

Past Graduate Advising

Chaurra, A.M. (PhD), "DEVELOPMENT OF A FLUORESCENT PROBE FOR DETERMINATION OF WATER TRANSPORT IN SUBCELLULAR ORGANELLES" December 2009. She is currently in an academic research position in her native Columbia (Universidad del Valle).

Brown, D.K. (PhD), "INCORPORATION OF POLYETHYLENE GLYCOL TO AROMATIC TRIFLURORVINYL ETHER" August 2011.

Kahn, N. (MS), "A FLUIDIC FIBER PLATFORM MODIFIED FOR THE SELECTIVE EXTRACTION AND ON FIBER FLUORESCENCE DETECTION OF PROTEINS AND NUCLEIC ACIDS" August 2014.

Kandel, P.K. (PhD), "PASSIVATION AND FUNCTIONALIZATION OF CONJUGATED POLYMER NANOPARTICLES WITH HEAD GROUP MODIFIED PHOSPHOLIPIDS AND PROTEINS" August 2014.

Current Graduate Advising

Lin, X. (PhD), 5th year graduate student (graduating in May 2015)

Voyton, C. (PhD), 2nd year graduate student

UNDERGRADAUTE STUDENT ADVISING (HONORS THESIS)

Past Undergraduate Advising

Smith, N.E. (B.S. Biochemistry, Honors), "USING FRET TO MEASURE STRUCTURAL CHANGES DURING THE PREPORE TO PORE TRANSITION OF ANTHRAX PROTECTIVE ANTIGEN IN LIVING CELLS", (May 2006)

Simpkins, L. (B.A. Chemistry, Honors), "A NEW QUANTITATIVE FLOW CYTOMETRY ASSAY FOR MEASURING EFFECTS OF SMALL MOLECULE INHIBITORS ON ANTHRAX INTOXICATION USING LF_N-DTA" (December 2009).

Godshaw, B.A. (B.A. Chemistry, Honors), "THERMODYNAMICS AND KINETIC ANALYSIS OF ANTHRAX PROTECTIVE ANTIGEN BINDING THE CELL-SURFACE RECEPTOR TUMOR ENDOTHELIAL MARKER 8" (May 2010).

Morgan, P.F. (B.S. Chemistry, Honors), "ASSESSING NOVEL INHIBITORS OF THE CAPILLARY MORPHOGENESIS GENE-2 PROTEIN" (May 2011).

Current Undergraduate Advising

Mohit Gandhi (BIOSCI), Brad Tatko (BIOSCI), Rebecca Ray (CH)

TEACHING

Courses Taught

CH 910, Special Topics: Bioanalytical Chemistry (Currently CH 4140/6140), S05

CH 851, Physical/Analytical Chemistry Student Seminar, S05, F05, S06, F06, S07, F07, S08, F08, S09, F09, S10, F10

CH 313, Quantitative Analysis, F05, F06, F07

CH 414/614, Bioanalytical Chemistry, S06, F07, S11, S13

CH 315/317, Quantitative Analysis Laboratory, F08, F09, F10, F11, F12

CH 1010, Chemistry, Life, the Universe and Everything, F13, F14

CH 1020, Chemistry, Life, the Universe and Everything, S12, S14, S15

New Course Development

CH 910/CH 414/614, Bioanalytical Chemistry

CH 315/317, Quantitative Analysis Laboratory Curriculum Revision

UNIVERSITY AND PUBLIC SERVICE

Continuing Education

"What I've Learned about the Case Method" Developer and Lecturer for the Office of Teaching Effectiveness and Innovation (Nov/Dec 2005)

Committees

Department:
Member, Physical/Analytical Chemistry Student Seminar (2004-2006, 2010-2012)
Chair, Physical/Analytical Chemistry Student Seminar (2006-2010)
Member, Chemistry Department Newsletter (2005-2006)
Chair, Chemistry Department Newsletter (2006-2007)
Member, Bio-organic Faculty Search Committee (2005-2006)
Member, *ad hoc* Core Curriculum Committee (2007-2008)
Member, Analytical Search Committee (2007-2008)
Member, Undergraduate Curriculum Committee (2010-2015)
Member, *ad hoc* Department Instrumentation Committee (2011-2012)
Member, Safety Committee (2011-2102)
Chair, Graduate Admissions Committee (2103-2014)

University:
Elected Member, CoES Representative to the Clemson Research Council (2011-2014)
Member, *ad hoc* Committee to evaluate the role of the Institutional Biosafety Committee in approving protocols with chemical hazards (2009)
Member, Institutional Biosafety Committee (2013-2015)

Other Public Service Activities

Co-Director of the Clemson University Recombinant Protein Expression and Purification Facility (with Dr. Sarah Harcum in Bioengineering). The Christensen Lab houses, runs, and maintains the facility's chromatography equipment.

Ad hoc Consultant on Pool Chemistry and Management for Fike Recreation Center. Works with campus recreation and facilities to promote good management practices for McHugh Natatorium pool through proper chemistry and maintenance (2007-2010).

Ad hoc Consultant for McHugh Natatorium scoreboard for Clemson University Swimming and Diving.

Non-University Public Service

Instructor, Clemson Elementary School 2nd Grade Math Superstars (2004-2005)

Board of Directors, At-large member, Clemson Aquatic Team (2006-2008)

Guest Instructor and Demonstrator, Clemson Elementary School 5th Grade Science (2008)

Board of Directors, Chair, Clemson Aquatic Team (2008-2012)

Board of Directors, Administrative Vice-Chair, South Carolina Swimming (2012-2014)

Board of Directors, General Chair, South Carolina Swimming (2014-2015)

Updated March 3, 2015