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## Audrey Adcock, BSc

[https://www.researchgate.net/profile/Audrey\\_Adcock](https://www.researchgate.net/profile/Audrey_Adcock)

Education: B.S., Biology, Mars Hill College, Mars Hill, NC, 1988

### Research Experience

2008 to date North Carolina Central University Biomanufacturing Research Institute and Technology Enterprise (BRITE), 1801 Fayetteville Street Durham, NC 27707

Senior Scientist/Laboratory Instructor. Department of Pharmaceutical Sciences. Biosensors Technology laboratory. Survival assays after drug treatment comparing 2D and 3D cell culture systems. Compare protein expression levels of target proteins via western blot. Responsible for ordering the supplies needed in a timely manner and staying within budget. Writes justifications for equipment and supplies and helps with administrative duties that can be off loaded from PI. Keep the lab organized, clean, and maintain all safety documentation according to regulations for students and laboratory i.e. the daily operations of the laboratory. Teach and mentor students of all levels that work in laboratory. Briefly (2012) worked in a laboratory studying the role of Hyperthyroidism on Breast Cancer. (2008-2011) Natural Products Drug Discovery Laboratory. Train students from any PI's lab on sterile techniques and basic cell culture techniques at the PI's request. Serve as one of the team of instructors for the Bioprocessing Class Lab module. Due to her previous safety committee experience Ms. Adcock was selected to serve on the BRITE safety committee.

1988 to 2008 RTI International, Research Triangle Park, NC 27709.

Biologist III/Research Biologist 1 (2003 to 2008). Proteomics and Genomics Applications, Proteomics Research Group. Performed medium-high-throughput 2-D electrophoresis of proteomics samples using the CyDye DIGE platform. Served as bioinformatics/database coordinator for medium-high-throughput proteomics and genomics applications, including sample ID, sample tracking, collection of metadata and database work. Was also responsible for the DNA microsatellite analyses of rodents for genetic monitoring to ensure genetic integrity. Have extensive experience in biochemical (electrophoretic) analysis of protein polymorphisms. Experienced in both qualitative and quantitative immunoassay techniques (ELISA, RIA). Worked extensively in the area of hybridoma/monoclonal antibody production and characterization as well. Experienced in preparation of protocols for IRB and IACUC approval and served as the laboratory safety officer. EBV transformation of human blood cells.

Biologist I, II and III (1989-2003). Center for Bioorganic Chemistry, Chemistry and Life Sciences, Biochemical genetic monitoring of inbred rodents. H-2 typing of inbred mice by antibody-mediated cytotoxicity. Enzyme immunoassay techniques for quantitative experiments. Development of monoclonal and polyclonal antibodies and associated immunological techniques. Affinity chromatography techniques for isolation of hydrolysis products or extraction. HPLC and thin layer chromatography for separation of hydrolysis products. Molecular cloning and expression of recombinant antibodies into *E. coli*. Cyclic DNA sequencing. Semi-quantitative RT-PCR. Receptor binding assay. Proliferation assay. Helped set up cortical cultures for cytotoxicity testing. Radioimmunoassay for cannabinoid quantification.

Biologist I, II and III (1989 to 2003). Center for Bioorganic Chemistry, Chemistry and Life Sciences. Biochemical genetic monitoring of inbred rodents H-2 typing of inbred mice by antibody-mediated cytotoxicity. Enzyme immunoassay techniques for quantitative experiments.

## Statistics

<i>RG Score</i>	22.67
<i>Publications</i>	22
<i>Total Impact Points</i>	49.85
<i>Reads</i>	460
<i>Citations</i>	189

## Skills & Activities

*Skills* Western Blot Analysis, PCR, qPCR, Cancer Biomarkers, Cell Proliferation, Biological Assays, Cytotoxicity, Cell Culture, preparation of hybridomas

## Journal Publications

**Audrey F Adcock**, Goral Trivedi, Rasheena Edmondson, Courtney Spearman and Liju Yang: *Three-Dimensional (3D) Cell Cultures in Cell-based Assays for in-vitro Evaluation of Anticancer Drugs*. *J Anal Bioanal Tech* 2015; 6:3 doi.org/10.4172/2155-9872.1000249

- Jessica Jenkins Broglie, Brittny Alston, Chang Yang, Lun Ma, **Audrey F Adcock**, Wei Chen, Liju Yang: *Antiviral Activity of Gold/Copper Sulfide Core/Shell Nanoparticles against Human Norovirus Virus-Like Particles*. PLoS ONE 10/2015; 10(10):e0141050. DOI:10.1371/journal.pone.0141050
- Catherine J. Wooten, **Audrey F. Adcock**, DaTonye I. Agina-Obu, Dayami Lopez: *Having excess levels of PCSK9 is not sufficient to induce complex formation between PCSK9 and the LDL receptor*. Archives of Biochemistry and Biophysics 11/2014; 562. DOI:10.1016/j.abb.2014.08.003
- Catherine J Wooten, Ayodele Fakayode, **Audrey F Adcock**, Kendra M Davis, Raven S King, Denika D Rhodes, Dayami Lopez: *Osmotic Stress Modulates the Expression and Function of the Human LDL Receptor*.
- Rasheena Edmondson, Jessica Jenkins Broglie, **Audrey F Adcock**, Liju Yang: *Three-Dimensional Cell Culture Systems and Their Applications in Drug Discovery and Cell-Based Biosensors*. Assay and Drug Development Technologies 05/2014; 12(4):207-18. DOI:10.1089/ad.2014.573
- Catherine J Wooten, **Audrey F Adcock**, Datonye I Agina-Obu, Dayami Lopez: *Having excess levels of PCSK9 is not sufficient to induce complex formation between PCSK9 and the LDL receptor*. Archives of Biochemistry and Biophysics 01/2014; 545. DOI:10.1016/j.abb.2014.01.018
- Tamam El-Elimat, Mario Figueroa, Huzefa A. Raja, **Audrey F. Adcock**, David J. Kroll, Steven M. Swanson, Mansukh C. Wani, Cedric J. Pearce, Nicholas H. Oberlies: *ChemInform Abstract: Waol A (I), trans-Dihydrowaol A (II), and cis-Dihydrowaol A (III): Polyketide-Derived  $\gamma$ -Lactones from a Volutella Species.* ChemInform 11/2013; 44(46):no-no. DOI:10.1002/chin.201346133
- Mario Figueroa, Huzefa Raja, Joseph O Falkinham, **Audrey F Adcock**, David J Kroll, Mansukh C Wani, Cedric J Pearce, Nicholas H Oberlies: *Peptaibols, Tetramic Acid Derivatives, Isocoumarins, and Sesquiterpenes from a Bionectria sp (MSX 47401)*. Journal of Natural Products 06/2013; 76(6):1007-1015. DOI:10.1021/np3008842
- Tamam El-Elimat, Mario Figueroa, Huzefa A. Raja, **Audrey F. Adcock**, David J. Kroll, Steven M. Swanson, Mansukh C. Wani, Cedric J. Pearce, Nicholas H. Oberlies: *El-Elimat T. et al. Waol A, trans-dihydrowaol A, and cis-dihydrowaol A: polyketide-derived gamma-lactones from a Volutella species*. Tetrahedron Lett. 54, 4300-4302. Tetrahedron Letters 06/2013; 54(32). DOI:10.1016/j.tetlet.2013.06.008
- Tamam El-Elimat, Mario Figueroa, Huzefa A Raja, Tyler N Graf, **Audrey F Adcock**, David J Kroll, Cynthia S Day, Mansukh C Wani, Cedric J Pearce, Nicholas H Oberlies: *Benzoquinones and Terphenyl Compounds As Phosphodiesterase-4B Inhibitors from a Fungus of the Order Chaetothyriales (MSX 47445)*. Journal of Natural Products 01/2013; 76(3). DOI:10.1021/np300749w
- Mario Figueroa, Tyler N Graf, Sloan Ayers, **Audrey F Adcock**, David J Kroll, Jilai Yang, Steven M Swanson, Ulyana Munoz-Acuna, Esperanza J. Carcache de Blanco, Rajesh Agrawal, Mansukh C Wani, Blaise A Darveaux, Cedric J Pearce, Nicholas H Oberlies: *Figueroa M. et al. Cytotoxic epipolythiodioxopiperazine alkaloids from filamentous fungi of the Bionectriaceae*. J. Antibiot. 65, 559-564. The Journal of Antibiotics 09/2012; 65(11). DOI:10.1038/ja.2012.69
- Sloan Ayers, Brandie M Ehrmann, **Audrey F Adcock**, David J Kroll, Esperanza J. Carcache de Blanco, Qi Shen, Steven M Swanson, Joseph O Falkinham, Mansukh C Wani, Sheila M Mitchell, Cedric J Pearce, Nicholas H Oberlies: *Peptaibols from two unidentified fungi of the order Hypocreales with*

*cytotoxic, antibiotic, and anthelmintic activities*. Journal of Peptide Science 08/2012; 18(8):500-10.  
DOI:10.1002/psc.2425

T El-Elimat, M Figueroa, TN Graf, **AF Adcock**, DJ Kroll, MC Wani, CJ Pearce, NH Oberlies: *Two benzoquinones and one terphenyl compound from an unidentified fungus (MSX 47445)*. Planta Medica 07/2012; 78(11). DOI:10.1055/s-0032-1320773

Arlene A Sy-Cordero, Tyler N Graf, **Audrey F Adcock**, David J Kroll, Qi Shen, Steven M Swanson, Mansukh C Wani, Cedric J Pearce, Nicholas H Oberlies: *Correction to Cyclodepsipeptides, Sesquiterpenoids, and Other Cytotoxic Metabolites from the Filamentous Fungus Trichothecium sp. (MSX 51320)*. Journal of Natural Products 02/2012; 75(2):307. DOI:10.1021/np3000766

Sloan Ayers, Tyler N Graf, **Audrey F Adcock**, David J Kroll, Qi Shen, Steven M Swanson, Susan Matthew, Esperanza J. Carcache de Blanco, Mansukh C Wani, Blaise A Darveaux, Cedric J Pearce, Nicholas H Oberlies: *Cytotoxic Xanthone-Anthraquinone Heterodimers from an Unidentified Fungus of the Order Hypocreales (MSX 17022)*. The Journal of Antibiotics 11/2011; 65(1):3-8. DOI:10.1038/ja.2011.95

Sloan Ayers, Brandie M Ehrmann, **Audrey F Adcock**, David J Kroll, Mansukh C Wani, Cedric J Pearce, Nicholas H Oberlies: *Ayers, S. et al. Thielavin B methyl ester: a cytotoxic benzoate trimer from an unidentified fungus (MSX 55526) from the Order Sordariales*. Tetrahedron. Lett. 52, 5733-5735. Tetrahedron Letters 11/2011; 52(44):5733-5735. DOI:10.1016/j.tetlet.2011.08.125

Arlene A Sy-Cordero, Tyler N Graf, **Audrey F Adcock**, David J Kroll, Qi Shen, Steven M Swanson, Mansukh C Wani, Cedric J Pearce, Nicholas H Oberlies: *Cyclodepsipeptides, Sesquiterpenoids, and Other Cytotoxic Metabolites from the Filamentous Fungus Trichothecium sp (MSX 51320)*. Journal of Natural Products 10/2011; 74(10):2137-42. DOI:10.1021/np2004243

Sloan Ayers, Tyler N Graf, **Audrey F Adcock**, David J Kroll, Qi Shen, Steven M Swanson, Mansukh C Wani, Blaise A Darveaux, Cedric J Pearce, Nicholas H Oberlies: *Obionin B: An o-pyranonaphthoquinone decaketide from an unidentified fungus (MSX 63619) from the Order Pleosporales*. Tetrahedron Letters 10/2011; 52(40):5128-5230. DOI:10.1016/j.tetlet.2011.07.102

Sloan Ayers, Tyler N Graf, **Audrey F Adcock**, David J Kroll, Susan Matthew, Esperanza J. Carcache de Blanco, Qi Shen, Steven M Swanson, Mansukh C Wani, Cedric J Pearce, Nicholas H Oberlies: *Resorcylic Acid Lactones with Cytotoxic and NF- $\kappa$ B Inhibitory Activities and Their Structure-Activity Relationships*. Journal of Natural Products 05/2011; 74(5):1126-31. DOI:10.1021/np200062x

Patricia V Basta, **Audrey F Adcock**, C Ray Tallent, Denise N Fleming, Herbert H Seltzman, Carol C Whisnant, C Edgar Cook: *Preparation of monoclonal antibodies reactive to the endogenous small molecule, anandamide*. Journal of Immunological Methods 02/2004; 285(2):181-95.  
DOI:10.1016/j.jim.2003.12.004

Karen B. Basham, Sarah P. Whitmore, **Audrey F. Adcock**, Patricia V. Basta: *Chronic and Acute Prenatal and Postnatal Ethanol Exposure on Lymphocyte Subsets from Offspring Thymic, Splenic, and Intestinal Intraepithelial Sources*. Alcoholism Clinical and Experimental Research 11/1998; 22(7):1501-8.  
DOI:10.1097/00000374-199810000-00020

## Conference Proceedings

Establishment of Three-dimensional (3D) Cell Culture for In Vitro Evaluation of Anti-Cancer Drugs.

**Audrey Adcock**, Goral Trivedi, Rasheena Edmondson, Courtney Spearman, Jessica McKoy, Eric McCoy, Liju Yang. Presented at IBE-2014, Louisville, KY, March 6-9, 2014.

Cell-Based Sensing: From 2D to 3D Cell Culture. L. Yang, G. Trivedi, **A. F. Adcock** 2014 ECS and SMEQ Joint International Meeting; 10/2014

Proteomics Analysis of Human Saliva: Evaluation of Sample Collection and Processing Procedures. C. C.

Whisnant, **A. F. Adcock**, K. B. Basham, J. L. Bundy, B. J. Cargile, P. Davis-Searles, J. Sevinsky, D. L. Talley and J. L. Stephenson, Jr. Presented at US-HUPO-2005, Arlington, VA, March 12-16, 2005.

Gender Differences in Biomarkers of Immunosuppression. P. Davis-Searles, P. Basta, **A. Adcock**, K.

Basham, J. Bundy, H. Navarro, J. Stephenson, D. Talley, and C. Whisnant. Presented at Protein Biomarkers 2004, Philadelphia, PA, September 8-10, 2004.