

Sandra D. Adams, Ph.D.
Department of Biology
Montclair State University

EDUCATION:

Ph.D.	Georgia State University	2001	Biology
	Area of Concentration - Molecular Genetics/Virology		
Ph.D.	University of Pittsburgh	1985	Science Education
M.Ed.	Georgia State University	1978	Sec. Education-Biology
BSA	University of Georgia	1975	Biological Sciences

PROFESSIONAL EXPERIENCE:

2014	Montclair State University, Montclair, NJ Professor, Department of Biology
2006 - 2013	Montclair State University, Montclair, NJ Associate Professor, Department of Biology and Molecular Biology
2001 - 2006	Montclair State University, Montclair, NJ Assistant Professor, Department of Biology and Molecular Biology
1995 - 2001	Georgia State University, Atlanta, Georgia Graduate Research Assistant, Department of Biology
1991-1995	West Georgia College, Carrollton, Georgia Assistant Professor of Science Education (tenured, 1995)
1988 – 1991	Birmingham Southern College Assistant Professor of Secondary Education
1986-1988	West Georgia College, Carrollton, Georgia School of Education, Assistant Professor of Science Education
1985-1986	Stockton State College, Pomona, New Jersey Visiting Assistant Professor of Science Education
Spring, 1985	Assistant Professor of Science Education (Half-time)
1980-1983	Carnegie-Mellon University, Pittsburgh, Pennsylvania Staff/Associate
1982-1983	University of Pittsburgh, Pittsburgh, Pennsylvania Instructor (part-time) - physical science
1977-1979	Adamson Junior High School, Clayton County Georgia Science Teacher
1975-1976	Decatur High School, Decatur, Georgia Science Teacher

ACADEMIC AND PROFESSIONAL ASSOCIATION MEMBERSHIPS

American Society for Virology
National Association of Biology Teachers
Metropolitan Association of College and University Biologists
National Science Teachers Association

PUBLICATIONS:

Stamos JD, Lee LH, Taylor C, Elias T, Adams SD. In Vitro and In Silico Analysis of the Inhibitory Activity of EGCG-Stearate against Herpes Simplex Virus-2. *Microorganisms*. 2022 Jul 20;10(7):1462. doi: 10.3390/microorganisms10071462. PMID: 35889181; PMCID: PMC9315604.

Larkin D and Adams S. 04/27/2022 - [ARISE Blog: Lessons Learned from Running a Scholarship Program for Undergraduate Pre-Service STEM Teachers](https://us16.campaign-archive.com/?u=e36c17fc89d5b87585f5b7804&id=902d09f99f) <https://us16.campaign-archive.com/?u=e36c17fc89d5b87585f5b7804&id=902d09f99f>

Mohamed, H. , Lee, L. and **Adams, S.** (2021) EGCG-S Impacts Oxidative Stress and Infection of Enterovirus 69 in Lung Cells. *Advances in Bioscience and Biotechnology*, **12**, 109-124. doi: [10.4236/abb.2021.125008](https://doi.org/10.4236/abb.2021.125008).

Elias T, Lee LH, Rossi M, Caruso F, **Adams SD.** In Vitro Analysis of the Antioxidant and Antiviral Activity of Embelin against Herpes Simplex Virus-1. *Microorganisms*. 2021 Feb 19;9(2):434. doi: 10.3390/microorganisms9020434. PMID: 33669814; PMCID: PMC7922599.

Patel, S.N., **Adams, S.D.**, and Lee, L.H. (2018). Inhibition of Herpes Simplex Virus-1 by the Modified Green Tea Polyphenol EGCG-Stearate. *Advances in Bioscience and Biotechnology*, **9**, 679-690.

Klyczek KK, Jacobs-Sera D, Adair TL, **Adams SD**, Ball SL, Benjamin RC, Bonilla JA, Breitenberger CA, Daniels CJ, Gaffney BL, Harrison M, Hughes LE, King RA, Krukonis GP, Lopez AJ, Monsen-Collar K, Pizzorno MC, Rinehart CA, SEA-PHAGES Program, PHIRE Program, Staples AK, Stowe EL, Garlena RA, Russell DA, Cresawn SG, Pope WH, Hatfull GF. 2018. Complete genome sequences of 44 *Arthrobacter* phages. *Genome Announc* 6:e01474-17. <https://doi.org/10.1128/genomeA.01474-17>.

Flores, D. J., Lee, H.L., & **Adams, S. D.** (2016) Inhibition of Curcumin-Treated Herpes Simplex Virus 1 and 2 in Vero Cells. *Advances in Microbiology*, **6**, 276-287. <http://dx.doi.org/10.4236/aim.2016.64027>

Pope WH, Bowman CA, Russell DA, Jacobs-Sera D, Asai DJ, Cresawn SG, Jacobs WR, Hendrix RW, Lawrence JG, Hatfull GF; Science Education Alliance Phage Hunters Advancing Genomics and Evolutionary Science; Phage Hunters Integrating Research and Education; Mycobacterial Genetics Course. Whole genome comparison of a large collection of bacteriophages reveals a continuum of phage diversity. *eLife* 2015, Apr 28;4:e06416. doi: 10.7554/eLife.06416

+Collaborators

* Montclair State SEA PHAGE participants are listed in a supplementary file as co-authors/collaborators

Chu, T-C., **Adams, S.**, Lee, L. Tea polyphenolic compounds against herpes simplex viruses. In S.P. Gupta (Ed.), 2014. *Cancer Causing Viruses and Their Inhibitors* (Chapter 11). CRC Press, Taylor & Francis Group. ISBN: 9781466589773

Cantatore, A., Randall, S.D., Traum, D. and **Adams, S.D.** (2013). Effect of black tea extract on herpes simplex virus-1 infection of cultured cells. BMC Complementary and Alternative Medicine, 13:139 doi:10.1186/1472-6882-13-139

Stollar, V., Mensah, V. **Adams, S.**, & Li, M-L. (2013). Evolution of Sindbis virus with a low-methionine resistant phenotype is dependent on a pre-existing mutation and on the methionine concentration in the medium. PLoS ONE 10.1371/journal.pone.0060504

Oliveira, A., **Adams, S. D.**, Lee, L.H., Murray, S. R., Hsu, S. D., Hammond, J. R., Dickinson, D., Chen, P., and Chu, T-C. (2012). Inhibition of herpes simplex virus type 1 with the modified green tea polyphenol palmitoyl-epigallocatechin gallate. Food and Chemical Toxicology, 52, 207-215.

Gui H, Lu C-W, **Adams, S.**, Stollar, V. and Li, M-L. (2010). hnRNP A1 interacts with the genomic and subgenomic RNA promoters of Sindbis virus and is required for the synthesis of G and SG RNA. Journal of Biomedical Science 17:59 <http://www.jbiomedsci.com/content/17/1/59>

Adams, Sandra D. (2006). Improving the scientific and technological literacy of our biology and molecular biology majors. In C. Angeli, N. Valanides, & A. Niculescu (Eds.) Science and Technology Literacy in the 21st Century Vol. 1 (pp. 125 – 128). Cyprus: J.G. Cassoulides & Son Ltd.

Kight, Scott L., Gaynor, John J., & **Adams, Sandra D.** (2006) Undergraduate Research Communities: A Powerful Approach to Research Training. The Journal of College Science Teaching. 35(7), 34-39.

Travaille, M. & **Adams, S.D.** (2006) Digital Microscopy and the Study of *Caenorhabditis elegans* Live Cultures in a High School Anatomy and Physiology Laboratory Course. The Science Teacher., 73(4), 50-54.

Luers, A.J., **Adams, S.D.**, Smalley, J., Campanella, J. J. (2005) A phylogenomic study of the Alphavirus genus employing whole genome comparison. Comparative and Functional Genomics, 6, 217-227.

Adams, S.D., Tzeng, W-P., Chen, M.-H., & Frey, T.K. (2003) Analysis of Intermolecular RNA-RNA Recombination by Rubella Virus. Virology, 309, 258-271.

Adams, S.D. & Michael, J.R. (1993). Project SOAR - a college/public school partnership. In J. Miller (ed.), Students At-Risk: Pitfalls and Promising Plans.

Wm. C. Brown Communications, Inc.

Adams, S.D. (1990). Recruitment and retention of African American teacher education students in predominantly white institutions. In E.J. Middleton, C.J. Mason, H. Barnard & F. Bickle (eds.), Recruitment and Retention of Minority Students in Teacher Education: Programs That Work, Proceedings of the Fourth National Conference (pp. 42-48). Lexington, KY.

Adams, S.D. and Moser, G.W. (1986) The relationship of information processed for solving an ecology problem and achievement in mathematics and science by adolescents. Proceedings of the Sixteenth Modeling and Simulation Conference, University of Pittsburgh.

Adams, S.D. (1985). An analysis of the relationships between mental operativity, science ability, aptitude, information variables and the measured achievement of secondary students in a summer program. Dissertation Abstracts International, 46(11), (University Microfilms International, ISSN 0419-4209).

GENBANK SUBMISSIONS

Arthrobacter phage **KittyKat** Submitted (01-DEC-2020) Accession: NC_054423.1
Mycobacterium phage **Aneem**. Submitted (11-NOV-2019). Accession: MN703405.1
Arthrobacter phage **Linus** Submitted (19-JUL-2019) Accession: MN204503.1
Mycobacterium phage **Gator** Submitted (21-JUN-2019) Accession: MN096361.1
Mycobacterium phage **MoneyMay** Submitted (01-MAY-2019). Accession: MK875800.1
Arthrobacter phage **Tenno** Submitted (31-AUG-2018). Accession: MH825711.1
Mycobacterium phage **BreSam8** (2018). Accession: MH576949
Mycobacterium phage **LugYa** (2018). Accession: MG757161
Mycobacterium phage **LifeSavor** (2018). Accession: MG872839
Mycobacterium phage **Tarynearal** (2018). Accession: MH338241.1
Arthrobacter Phage **Abidatro** (2017) Accession: MF140397
Mycobacterium Phage **Malinsilva** (2016) Accession: KU984914
Mycobacterium Phage **TeardropMSU** (2016) Accession: KU865303
Mycobacterium Phage **Brocalys** (2016) Accession: KU865302
Mycobacterium phage **Sheen** (2015) Accession: KP273225
Mycobacterium phage **Alsfro** (2014) Accession: KJ174156
Mycobacterium phage **ShiVal** (2013) Accession: KC576784

POSTER PRESENTATIONS:

(July 2022) Adams, S. & Larkin, D. Presentation Annual Noyce Teacher Scholarship Conference, Washington, DC. Taking Stock of Teacher Preparation in the Montclair State Noyce Teacher Scholarship Program (2013 - 2022).

(April 2022) SEA Symposium 2022 (virtual); BenitoAntonio, Hankly, and Inked: Three Novel *Arthrobacter* phage; presenters Sandra Duskiewicz and Hrisa Goga; Faculty mentors: K. Monsen-Collar, K. Bilyk, Q. Vega, and S. Adams.

(July 2020) Adams, S. & Larkin, D. Montclair State Noyce Teacher Scholarship Program (Track 1). Presentation Annual Noyce Teacher Scholarship Conference (Virtual)

(July 2018) *In Vitro* antiviral Activity of *Camellia sinensis* Derived Tea Polyphenols on Sindbis Virus in Vero Cells. Jose Villagomez, **Sandra D. Adams, Ph.D.** and Lee H. Lee, Ph.D. Annual Meeting of the American Society for Virology (37th Annual Conference, College Park, MD, July 14 – 18.

Larkin, D.B., **Adams, S.** (2018) Leveraging District Partnerships for Clinical Placements in the Montclair Noyce Teacher Scholarship program. Poster presented at the Annual Noyce Teacher Scholarship Conference, Washington, DC.

(June 2018) Isolation and Characterization of Novel *Mycobacterium smegmatis* and *Arthrobacter sp.* Bacteriophage from New Jersey Soil Over the Past Seven Years, Leen Khashashina and Ashly Reyes; Mentors: **Sandra D. Adams, Ph.D.** and Kirsten Monsen-Collar, HHMI Science Education Alliance Student Research Symposium, Janelia Farms, VA.

(June 2017) *In Vitro* Synergistic Antiviral Activity of Epigallocatechin-Gallate Stearate and Acyclovir on Herpes Simplex Virus Types 1 and 2 in Vero Cells . Bianca Sanabria, **Sandra D. Adams, Ph.D.** and Lee H. Lee, Ph.D. Annual Meeting of the American Society for Virology (36th Annual Conference, Madison, WI, June 24 – 27, 2017)

Larkin, D.B., Oyler, J., Adams, S. (2017) New Teacher Induction within the Montclair Noyce Teacher Scholarship Program. Poster presented at the Annual Noyce Teacher Scholarship Conference, Washington, DC.

(June 2017) Isolation and Characterization of Novel *Mycobacterium smegmatis* Bacteriophage from New Jersey Soil Over the Past Six Years; Gerard Nasser and Adam Zadeh, Mentors: **Sandra D. Adams, Ph.D.** and Kirsten Monsen-Collar, HHMI Science Education Alliance Student Research Symposium, Janelia Farms, VA.

(June 2016) Isolation and Characterization of LifeSaver and Abidatro, Kailyn Grant and Kaide Udit; Mentors: **Sandra D. Adams, Ph.D.**, Kirsten Monsen-Collar, and Jose Villagomez. HHMI Science Education Alliance Student Research Symposium, Janelia Farms, VA.

Larkin, D.B., Adams, S., Berger, J, and Dacey, C. (2016) The Pathway from Community College into Noyce: Challenges and Opportunities Montclair Noyce Teacher Scholarship Program. Poster presented at the Annual Noyce Teacher Scholarship Conference, Washington, DC.

(July 2015) *In vitro* Synergistic Antiviral Activity of Black Tea Theaflavins and Acyclovir on Herpes Simplex Virus Types 1 and 2 in A549 Cells **Sandra D. Adams**, Cody Berkefeld, and Lee H. Lee; Annual Meeting of the American Society for Virology (34th Annual Conference), London Ontario, Canada; July 11 - 15, 2015.

(July 2015) Inhibition of HSV-2 Infection in A549 and Vero Cells by EGCG-Stearate. James Stamos, **Sandra D. Adams**, and Lee H. Lee; Annual Meeting of the American Society for Virology (34th Annual Conference), London Ontario, Canada; July 11 - 15, 2015.

(July 2015) Green Tea Polyphenols, EGCG and EGCG-Stearate as Potential Inhibitors of Herpes Simplex Virus -1 in Human Epithelial Cells
Shivani N. Patel, Lee H. Lee, and **Sandra D. Adams**; Annual Meeting of the American Society for Virology (34th Annual Conference), London Ontario, Canada; July 11 - 15, 2015.

(June 2015). Poster Presentation: J. Ambrose, A. DeVito, T. Singletary, E. Adams, S. Alkhalaf, T. Anderson, S. Argawal, A. Binness, C. Bohn, E. Cruz, T. Dhondup, S. Edwards, H. Free, G. Gendelman, K. Gonzalez, Q. Grooms, A. Haziri, M. Helmi, K. Jaipersad, D. Kallush, S. Khatchadourian, H. Kim, K. Kim, E. Ligsay, E. Lipkin, N. Malindretos, N. Martinez, P. Meyerriecks, D. Nabsu, R. Otterbine, E. Pastor, P. Patel, T. Paz, A. Proscia, M. Rahman, S. Rahman, A. Rodriguez, P. Rubilar, A. Salha, W. Shergalis, K. Silva, D. Tamimi, O. Toyosi, S. Valverde, J. Welcome; Faculty Sponsors: **Dr. S. Adams**, Dr. Q. Vega, Dr. K. Monsen-Collar. Isolation, Characterization and Annotation of Novel *Mycobacterium* Bacteriophage and *Arthrobacter sp* Bacteriophage from New Jersey Soil. HHMI Science Education Alliance Student Research Symposium, Janelia Farms, VA.

(October 2014). Cody Berkefeld, **Sandra D. Adams**, and Lee H. Lee. "In Vitro Synergistic Antiviral Activity of Black Tea Theaflavins and Acyclovir on Herpes Simplex Virus Types 1 and 2 in A549 Cells". Metropolitan Association of College and University Biologists, Molloy College. Graduate Award Winner

(October 2014) James Stamos, **Sandra D. Adams** and Lee H. Lee. (2015) "Inhibition of HSV-2 in Vero Cells by EGCG and EGCG-Stearate". Metropolitan Association of College and University Biologists, Molloy College. First Place Award

(October 2014). Anum Aftab, Lee H. Lee and **Sandra D. Adams**. "Effect of Black Tea Extract on Herpes Virus Type-2 Infection of A549 cells". Metropolitan Association of College and University Biologists, Molloy College. First Place Award

July 2014) Poster Presentation: Daniel J. Flores and **Sandra D. Adams**, The Effect of Curcumin on Herpes simplex virus-1 Infection of Cultured Cells, Annual Conference of the American Society of Virology, Ft. Collins, CO.

(July 2014) Poster Presentation James Stamos, Shivani Patel, **Sandra D. Adams**, & Lee H. Lee. The Inhibitory Effects of EGCG-S on HSV Infections in Cultured Vero and Human Epithelial Cells. Annual Conference of the American Society of Virology, Ft. Collins, CO.

(June 2014) Poster Presentation: Nadeem Obaydou, Yasmeen Abboud, Sheetal Agarwal, Dwa'a Alkhalaf, Randy Arsheed, Ikenna Anyanwu, Victoria Borden, William Brooks, Nico Carbone, Anthony Disteso, Alaa Elhayek, Joseph Fiorenza, Bridget Gonzalez, Gabriela Hilario, Amina Kurury, Julie Lau, Carin Magharious, Nairobi Mesa, Gianna Moglino, Urmila Nair, Florence Ogalo, Rehnuma Rashid, Alyssa Requillo, Antonella Rivezzi, George Romanos, Kenny Salamea, Vasu Shah, John Starner, Nandini Surendranathan, Aneta Szpernoga, George Taishin, Athena Thomas, Andrew Tobias, Dionne Ubungen, Justin Yen, Elennie Zamora. Faculty sponsors: **Sandra D. Adams**, Kirsten Monsen-Collar, Quinn C. Vega. Isolation and characterization of two novel mycobacterium smegmatis bacteriophage from New Jersey soil, HHMI Science Education Alliance Student Research Symposium, VA.

(March, 2014). James Stamos, Daniel Flores, Shivani Patel, Lee H. Lee and **Sandra D. Adams** “Inhibition of Herpes Simplex Virus in Vero and A549 cells by plant polyphenols”. ASM 114th General Meeting

(October 2013) Poster Presentation: Daniel Flores and **Sandra D. Adams** (Faculty mentor). The Effect of Curcumin on Herpes simplex virus-1 Infection of Cultured Cells. Metropolitan Association of College and University Biologists, Bergen Community College.

(October 2013) Poster Presentation: James Stamos, **Sandra D. Adams** (Faculty mentor), and Lee H. Lee (Faculty mentor). Inhibition of HSV-2 in Vero Cells by EGCG and EGCG-Stearate. Metropolitan Association of College and University Biologists, Bergen Community College.

(October 2013) Poster Presentation: The Effect of EGCG-Stearate on Cultured Human Epithelial Cells. Shivani N. Patel, **Sandra D. Adams** (Faculty mentor) and Lee H. Lee (Faculty mentor). Metropolitan Association of College and University Biologists, Bergen Community College.

(June 2013) Poster Presentation: Nicole Abdallah, **Sandra D. Adams**, Froogh Aziz, Dajana Borova, Christian Brutofsky, Elizabeth Burger, Alston Chen, Farahzebin Chowdhury, Natasha Daibes, Pauline Encarnacion, Jessica Eucker, Avianca Goldston, Catherine Ibrahim, Lauren Liddy, Blanca Mendez, Alvin Mercado, Adriana Messyas, Kirsten Monsen-Collar, Ann Nduati, Rossara Nunez, Richard Ode, Devansi Patel, Harshal Patel, Nikita Patel, Alyssa Prush, Mark Razon, Michael Ruiz, Sherry Sacks, Ethan Sebasco, Ramata Sy, Jennifer Thomas, Mahfuz Torafdar, Jessica Torres, Joshua Tull, and Amber Yohn. HHMI Science Education Alliance Student Research Symposium.

(April 2013) Poster Presentation: Daniel Flores and **Sandra D. Adams**. The Effect of Curcumin on Herpes simplex virus-1 Infection of Cultured Cells. Montclair State University Student Research Symposium.

(April 2013) Poster Presentation: Classification of Mycobacterium Phage Using Polymerase chain Reaction. Chrisabelle Cempron and **Sandra D. Adams** (Faculty mentor). Montclair State University Student Research Symposium.

(April 2013) Poster Presentation: Classification of Mycobacterium Phage Using Polymerase Chain Reaction. Chrisabelle Cempron and **Sandra D. Adams** (Faculty mentor). New Jersey Academy of Science 58th Annual Meeting. Second Place Award

(April 2013) Poster Presentation: Inhibition of Sindbis Virus in Vero Cells Ozioma Onyegbule and **Sandra D. Adams** (Faculty mentor). Montclair State University Student Research Symposium.

(June 2012) Poster Presentation: **Adams, S.D.**, Binsol, M.R., Caldararo, M.D., Ely, S.E., Kassa, W.T. Khan, Z.K., Majekodunmi, M., Marcillo, D., Marcoux, R., Monsen-Collar, K.J., Ndukwe, K., Paschalis, V.M., Patel, S.N., Salim, M., Silva, A.F., Villagomez, J.H., Wong, L.T.. Mycobacteriophage ShiVal. HHMI Science Education Alliance Student Research Symposium.

(April 2012) Research Talk: Inhibition of HSV-1 by Black Tea Polyphenols in Cultured Cells; Daniel Traum and **Sandra D. Adams**, Montclair State University Student Research Symposium.

(April 2012) Research Talk: Investigation of latency in herpes simplex virus-1 in cultured cells, Mario Caldararo and **Sandra D. Adams**, Montclair State University Student Research Symposium

(April 2012) Poster Presentation: HSV-1 Viral Induced Apoptosis in Vero Cells Treated with Theaflavins; Samantha Dickon, Daniel Traum, and **Sandra D. Adams** (Faculty mentor), Montclair State University Student Research Symposium

(April 2012) Poster Presentation: Isolation, Purification, and Annotation of Mycobacteriophage Shival. **Adams, S.D.**, Binsol, M.R., Caldararo, M.D., Ely, S.E., Kassa, W.T. Khan, Z.K., Majekodunmi, M., Marcillo, D., Marcoux, R., Monsen-Collar, K.J., Ndukwe, K., Paschalis, V.M., Patel, S.N., Salim, M., Silva, A.F., Villagomez, J.H., Wong, L.T. Montclair State University Student Research Symposium.

(October 2011) Poster presentation: Inhibition of HSV-1 by black tea polyphenols in cultured Vero and A549 cells; Daniel Traum, Anthony Cantatore, and **Sandra D. Adams, Ph.D.**, Metropolitan Association of College and University Biologists, Seton Hall University.

(July 2011) Poster presentation: Inhibition of HSV-1 by black tea polyphenols in cultured Vero and A549 cells; Daniel Traum, Anthony Cantatore, and **Sandra D. Adams, Ph.D.** American Society for Virology Annual Conference, Minneapolis, MN.

(October, 2010) Poster Presentation: Curcumin inhibits SinV in Vero Cells; Parth Vyas; Faculty Mentor – **Sandra D. Adams, Ph.D.** Metropolitan Association of College and University Biologists, Molloy College.

(October, 2010) Poster Presentation; Poster Presentation: Modified green tea polyphenols as a novel approach to inhibit Herpes simplex viral infections; Aline de Oliveira, **Sandra D. Adams, Ph.D.**, Lee Lee, Ph.D. Sean Murray, Ph.D., and Steven Hsu, Ph.D. Metropolitan Association of College and University Biologists, Molloy College.

(July, 2010) Poster Presentation: Modified green tea polyphenols as a novel approach to inhibit Herpes simplex viral infections; Aline de Oliveira, **Sandra D. Adams, Ph.D.**, Lee Lee, Ph.D. Sean Murray, Ph.D., and Steven Hsu, Ph.D. American Society for Virology Annual Conference, Bozeman, MT.

(May, 2010) Poster Presentation: Curcumin inhibits SinV in Vero Cells; Parth Vyas; Montclair State University Student Research Symposium; Faculty Mentor – **Sandra D. Adams, Ph.D.**

(May, 2010) Poster Presentation: Modified green tea polyphenols as a novel approach to inhibit Herpes simplex viral infections; Aline De Olivera; Montclair State University Student Research Symposium; Faculty Mentors – Lee Lee, Ph.D. and **Sandra D. Adams, Ph.D.**

(October, 2009) Poster Presentation: In vitro inhibition of Sindbis virus replication by Glycyrrhizin; Luz Guevara and **Sandra D. Adams, Ph.D.** Metropolitan Association of College and University Biologists; Kingsborough Community College.

(May, 2009) Poster Presentation: The Effect of Temperature on Infectivity of Coilphage T4r; Kristen Larson and Mahzabin Tibbi; Montclair State University Student Research Symposium. Faculty Mentor: **Sandra D. Adams, Ph.D.**

(May, 2009) Poster Presentation: The Effect of Bacteriophage X174 and T4r on *E. Coli* ; Pablo Salcedo, Warren Farber, Yvonne Okereke and Lauren Small; Montclair State University Student Research Symposium. Faculty Mentor: **Sandra D. Adams,**

Ph.D.

(May, 2009) Poster Presentation: The morphological effect of Coliphage T4r on various strains of *E coli* ; Daniel Traum, Andrew Boulos, Thomas Fuchs and Joseph Daibes; Montclair State University Student Research Symposium. Faculty Mentor:

Sandra D. Adams, Ph.D.

(May, 2009) Poster Presentation: In vitro inhibition of Sindbis virus replication by Glycyrrhizin; Luz Guevara. Montclair State University Student Research Symposium; Faculty Mentor: **Sandra D. Adams, Ph.D.**

(May, 2008) Poster Presentation: "Cloning the SP-ORF and Junction Region of Sindbis Virus"; Jacqueline Lim and Marcel Castor; Sigma Xi Conference; Faculty Mentor – **Sandra D. Adams, Ph.D.**

(May, 2008) Poster Presentation: "The Effect of UV Radiation on Sindbis Virus Infection of Cultured BHK Cells". Kenael Plummer and Christal Lewis; Sigma Xi Conference. Faculty Mentor – **Sandra D. Adams, Ph.D.**

(May, 2007) Poster Presentation: "Cloning the Genes of the SP-ORF of Sindbis Virus". Connan Vaca, Christal Lewis, George Makdis, and Luis Collar. Sigma Xi Conference; Faculty Mentor – **Sandra D. Adams, Ph.D.**

(May, 2006) Poster Presentation: "Induction of Apoptosis by Sindbis Virus and Fort Morgan Virus in Cultured Cells", Janet Wangari. Faculty mentors – **Sandra D. Adams, Ph.D.** and Reginald Halaby, Ph.D.

(May, 2006) Poster Presentation: "The Effects of Chemical Inhibitors on Entry and Endocytosis of Alphaviruses in Cultured Cells", Yuri T. Jadotte, Ines Rauschenbach, Maria B. Yballa, Dominika Rozanski, Sigma Xi Conference, Montclair State University; Faculty Mentor - **Sandra D. Adams, PhD.**

(May, 2006) Paper presentation – "Improving the Scientific and Technological Literacy of our Biology and Molecular Biology Majors. Science and Technology Literacy for the 21st Century, Virginia Commonwealth University.

(May, 2005) The Effects of Heparan Sulfate Binding and N-glycosylation on Alphavirus Infection. Matias Alvarez Saavedra, Yasmin Sharif, and Massoud Shahidi. Sigma Xi Conference; Faculty Mentor – **Sandra D. Adams, Ph.D.**

(October, 2004) Poster Presentation: "Ability of Pine Extracts to Inhibit the Replication and Infection of Fort Morgan Virus in Cultured Vero Cells", Almetra Lundy; Dirk Vanderklein and **Sandra D. Adams**, faculty mentors. Metropolitan Association of College and University Biologists, Long Island University.

(May, 2004) Poster Presentation: "A Revision of the Alphaviral Phylogeny using Genomic Analysis"; Aimee J. Luers; Sigma Xi Conference; Faculty Mentors: **Sandra D. Adams, Ph.D.**, John Smalley, James Campanella, Ph.D.

(May, 2004) Poster Presentation: "The Effect of Various Disinfectants on Fort Morgan Virus Infection of Vero Cells"; Jose Bustillo; Sigma Xi Conference; Faculty Mentor - **Sandra D. Adams, Ph.D.**

(April 1, 2004). Zippy Foam Heart Models – Workshop presented at the National Science Teachers Association Annual Conference with Aimee Luers, Atlanta, GA.

(March, 2004). Incorporating Quicktime Movies in Power Point Presentations. Faculty "Best Practices" Workshop presented at the NJEdge.net conference, Raritan Valley Community College

(March, 2004) Teaching Science in an Urban Setting. TRUST Program Workshop, College of Education and Human Services, Montclair State University.

(November, 2003). Microarrays – Workshop presented to scientists from Pfizer. Montclair State University.

(October, 2003). Fort Morgan Virus Activates Apoptosis in Vero Cells, Aimee Luers and Parul Patel; Faculty mentors - **Dr. Sandra Adams** and Dr. Reginald Halaby. Poster presented at the Metropolitan Association of College and University Biologists 2003 Annual Conference.

(March, 2003). Workshop presented to CSAM faculty on using software to predict RNA secondary structure

(April, 2003). Poster Presentation, Faculty mentor presenters – Aimee Luers, Tamara Beckford, and Quarashia Al-Shehab: Analysis of the Infection and Replication of Fort Morgan Virus in Vero and Chinese Hamster Ovary Cells, Sigma Xi Conference, Montclair State University.

(October, 2003) Poster Presentation: “Fort Morgan Virus Activates Apoptosis in Vero Cells”; Aimee Luers and Parul Patel. Metropolitan Association of College and University Biologists, 36th Annual Conference; Faculty Mentors - **Sandra D. Adams, Ph.D.** and Reginal Halaby, Ph.D.

(October, 2002). Poster Presentation with Beatrice Amoakoh: The Effect of Polyions on FMV Infection of Vero Cells, Metropolitan Association of College and University Biologists (M.A.C.U.B.) 35th Annual Fall Conference

(October, 2001). Poster Presentation; An Analysis of Rubella Virus RNA-RNA Recombination, Metropolitan Association of College and University Biologists (M.A.C.U.B.); 34th Annual Fall MACUB Conference, Cranford, NJ

(July, 2000). An Analysis of Rubella Virus RNA-RNA Recombination. Oral presentation to the American Society for Virology Annual Conference, Ft. Collins, Colorado.

(March, 2000). Rubella virus RNA-RNA Recombination. Oral presentation to the Sixth Southeastern Regional Virology Conference, Atlanta Georgia.

(July, 1999). Rubella virus RNA-RNA Recombination. Poster presented at the American Society for Virology Annual Conference, Amherst, Massachusetts.

February, 1999). The “BIOBUS”- A Mobile Science Laboratory. Presentation with B. Baumstark at the Georgia Science Teachers Association Annual Conference, Atlanta, Georgia.

(February, 1995). Science Activities Using Everyday, Inexpensive Materials. Workshop presented at the Georgia Middle School Association Conference; Atlanta, Georgia.

(February, 1995). Integrating Mathematics and Science in Middle Schools. Workshop presented at the Georgia Science Teachers Association Conference; Savannah, Georgia

(April, 1994). Increasing the Participation of Minority Students in Science. Workshop presented at the National Science Teachers Association Annual Conference; Anaheim, California.

(February, 1994). Random Selection in the Middle School Science Classroom. Workshop presented at the Georgia Science Teachers Association Conference; Savannah, Georgia.

(February, 1993). Statistics for Middle School Science. Workshop presented at the Georgia Science Teachers Association Conference; Atlanta, Georgia.

(March, 1992). Innovative Programs That Work - Project SOAR. Presented at the Third Annual Conference on At-Risk Youth; mentored by Georgia Southern University; Savannah, Georgia.

(February, 1992). Female Friendly Science. Workshop presented at the Georgia Science Teachers Association Conference; Atlanta, Georgia.

October, 1991). Teaching Middle Grades Science. Workshop presented at the Georgia Conference of Childhood Educators, West Georgia College.

(January, 1990). Recruitment and retention of African American teacher education students in predominantly white institutions. Paper presented at the Fourth Annual Conference on Recruitment and Retention of Minorities in Teacher Education, University of Kentucky.

GRANTS

2018 National Science Foundation, Induction and Mentoring Programs for the Retention of Science Teachers Douglas B. Larkin, PI; **Sandra D. Adams**, Co-PI, \$799,913.00;

2017 National Science Foundation, MRI: Acquisition of a Shared Use Integrated Next-Generation Sequencing Platform, Robert Meredith, PI, Co-PIs Kirsten Monsen, Chunguang Du, **Sandra D. Adams**, and John Gaynor, **\$202,125**

2017 American Association for the Advancement of Science/National Science Foundation, AAAS Regional Summit on Stimulating Research and Innovation for Preservice Education of STEM Teachers in High-Needs Schools, Douglas Larkin, PI, **Sandra D. Adams**, Co-PI, \$50,000

2013 National Science Foundation Robert Noyce Teacher Scholarship Program; Montclair State Noyce Teacher Scholarship Program; **Sandra D. Adams**, PI, Douglas Larkin, Co-PI, John Berger, Co-PI. (5 years) **\$1,474,232**

2011 ASBMB Seed Grant - Integrating Molecular Biology Research Techniques into the High School Science Classroom. **Sandra D. Adams**, PI and Ronald M. Durso, Fairlawn High School, Co-PI **\$2000**.

2010 Howard Hughes Medical Institute Science Education Alliance; Phage Genomics Research Initiative. Funding to offer a freshman level phage genomics research course (supplies, reagents, travel, sequencing)
Sandra D. Adams, PI, Kirsten Monsen-Collar, Co-PI

2004 Summer grant proposal development award; College of Science and Mathematics, Montclair State University. \$4000

2002 Project SEED - American Chemical Society Grant to provide support for Hipatia Ramirez, Irvington High School, to investigate FMV infection in Vero cells. \$1250

2002 Sokol Student Faculty Research Grant
CSAM - Provided support for student/faculty project on replication of FMV in Vero cells
\$2000

1995 Eisenhower Grant for the Improvement of Science Education. An Integrated Approach to Mathematics and Science Instruction for Middle Grades Teachers in Paulding County (with S. Smith) (Paulding County Schools) \$18,210.80

1994 Eisenhower Grant for the Improvement of Mathematics and Science Education. An Integrated Approach to Mathematics and Science Instruction for Middle School Teachers (with S. Smith) (Floyd County Schools) \$21,522.00

1994 Eisenhower Grant for the Improvement of Science Education. An Interdisciplinary Approach to Elementary Science Instruction for Elementary Teachers (Spaulding County Schools) \$14,400.00

1993 Eisenhower Grant for the Improvement of Mathematics and Science Education. An Integrated Approach to Mathematics and Science Instruction for Middle School Teachers (with S. Smith) (Troup County Schools) \$21,488

1992 Eisenhower Grant for the Improvement of Science Education. An Interdisciplinary Approach to Elementary Science Instruction (Bremen City Schools) \$18,688

1991 Eisenhower Grant for the Improvement of Science Education. An Interdisciplinary Approach to Elementary Science Instruction (Carrollton City Schools) \$10,480

HONORS:

2019 Williams Forum for Diabetic Education and Healthcare, Hidden Figures Honoree

2018 Minority Access, National Role Model, Mentoring

2010 College of Science and Mathematics Teaching Award

2008 College of Science and Mathematics Faculty Service Award

2006 MSU Chapter of NAACP Image Award