





BREMANSU OSA-ANDREWS, Ph.D.

Division of Animal and Nutritional Science
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Highlights

-  Dynamic, passionate and charismatic teacher with **10 years** of uninterrupted university-level teaching experience in biochemistry and chemistry (both lecture and laboratory).
-  Research interests/experience in molecular biology and analytical biochemistry, spectroscopy and biochemical and analytical instrumentation make me the ideal candidate for academic career.
-  Vast undergraduate and graduate students-mentoring, undergraduate student-advising, student-recruitment and other service experience.
-  Decent overall professional experience and leadership.

EDUCATION

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| 2018 | Ph.D. Biochemistry South Dakota State University, Brookings, SD. <i>Thesis:</i> Engineering of two-color ABC transporter protein biosensors for discovery of novel substrates and inhibitors. <i>Advisor:</i> Surtaj Iram, Ph.D. |
| 2010 | MPhil Clinical Chemistry (Chemical Pathology) University of Ghana Medical School, Korlebu-Ghana <i>Thesis:</i> Circulating Endothelial Progenitor Cells and Microvascular Damage in Sickle Cell Patients. <i>Advisor:</i> Ben Gyan, Ph.D. |
| 2005 | Bsc (HONS) Biochemistry Kwame Nkrumah University of Science and Technology, Kumasi-Ghana <i>Honors Thesis:</i> Physico-Chemical Properties of Cassava <i>Advisor:</i> Isaac William Ofosu, MSc. |

PROFESSIONAL EXPERIENCE

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| 2018 | Science Communication Fellow , NASA-EPSCoR funded. |
| 2018 | Scientific Teaching Fellow , Summer Institutes on Scientific Teaching, Yale Center for Teaching and Learning/Howard Huges Medical Institute (hhmi) /National science foundation (NSF)/South Dakota State University. |
| 2018 | Leader, students' recruitment at ACS Midwest regional meeting, Ames IA, for South Dakota State University |
| 2016-2018 | Mass Spectrometry Qtrap and LC-MS/MS , Project Lead Experience |

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| | South Dakota State University. |
| 2014 | Biochemistry research lab and instruments set-up experience , Iram Lab, South Dakota State University. |
| 2014 | Course curriculum development experience , Inorganic chemistry Lab, South Dakota state University. |
| 2014-2018 | Fluorescence spectroscopy Project Lead experience South Dakota State University. |
| 2012-2018 | Extensive Mentoring and supervisory experience , Multiple team-projects and instrumentations. |
| 2012-2013 | Full time Lecturer , of Medical Students, in Biochemistry/Chemical Pathology University of Ghana Medical School. |
| 2011-2013 | Program Coordinator , Graduate Entry Medical Program (GEMP) University of Ghana Medical School, Program Director: Sylvester Oppong, MD, Ph.D. |
| 2012-2013 | Member , University of Ghana Medical School Research Board |
| 2009-2013 | Coordinator/Lead , Clinical/Chemical Pathology labs for Medical Students, University of Ghana Medical School. |
| 2003&2004 (Summers) | Internship , Clinical Chemistry lab, Pathology division, 37 Military Hospital, Ghana. Supervisor, Anthony Kudzo, MSc. |
| 2013-2017 | Author/Co-author , five peer-reviewed articles, three more manuscripts in advanced preparation. |

ACADEMIC AWARDS/HONORS/GRANTS

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| 2019 | Outstanding Abstract Award , Personalized Medicine Division of American Association of Clinical Chemists. |
| 2019 | Best Abstract Award Tumor markers and Cancer Diagnostics Division of American Association of Clinical Chemists. |
| 2019 | Best Abstract Winner , by the Hematology and Coagulation Division of American Association of Clinical Chemists. |
| 2019 | Best Abstract Award- Honorable Mention , by the Clinical Translational Science of American Association of Clinical Chemists. |
| 2019. | 2019 Society of Young Laboratorians Grant National Award |
| 2018 | Science Communication Fellow Grant , NASA-EPSCoR funded. |
| 2018 | Richard Marshall Education Award/Travel Grant , by American Association of Clinical Chemists (AACC). |
| 2018 | Winner of the Love of Learning National Award , by Phi Kappa Phi Honors Society. |
| 2018 | Scientific Teaching Fellow , named by the Summer Institutes on Scientific Teaching. National Science Foundation (NSF), Yale University and Howard Hughes Medical Institutes (HHMI) sponsored. |
| 2017-date | Member , National Phi Kappa Phi Honors Society |
| 2007 | College of Health Sciences Bursary Award , University of Ghana Medical School |
| 2001-2005 | Winner of La-Mansaamokpee Educational Fund- Best Student Award, The City of La, Accra Ghana; Full College Tuition Award. |

NEWS MEDIA FEATURE

<https://medicalxpress.com/news/2019-06-vitamin-d-metabolite-drug-resistant-cancer.html>

<http://www.epscorideaoundation.org/news/2019/epscor-supported-project-vitamin-d-metabolite-helps-stop-drug-resistant-cancer>

<https://www.sdstate.edu/news/2019/06/vitamin-d-metabolite-helps-stop-drug-resistant-cancer>

<https://phikappaphi.meritpages.com/stories/-Bremansu-Osa-Andrews-Receives-2018-Phi-Kappa-Phi-Love-of-Learning-Award-/11066027>

CERTIFICATIONS

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| 2018 | Science communication fellow certificate, NASA-EPSCoR funded |
| 2017 | Graduate Teaching Certificate of highest Excellence, Center for Excellence in Teaching and Learning (CETL), South Dakota State University |
| 2017 | Professional Development Program Certificate (by South Dakota State University) |
| 2016 | Certificate of Completion, Analyst® Software-Acquire (by SCIEX) |
| 2016 | Certificate of Completion, Analyst® Software-Explore (by SCIEX) |
| 2016 | Certificate of Completion, Analyst® Software-Compound and Source Optimization (by SCIEX) |
| 2014 | Physical Science Responsible Conduct of Research Course 1 (By CITI Program) |
| 2014 | Conflict of interest mini-course (By CITI Program) |
| 2014 | Graduate Teaching Certificate of Excellence Center for Excellence in Teaching and Learning (CETL), South Dakota State University |

PROFESSIONAL DEVELOPMENT AND TRAINING

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| 2018 | Mobile Summer Institute-2018 for Undergraduate STEM Education, Sponsored by the National Science Foundation (NSF) and the Howard Hughes Medical Institute (HHMI) at South Dakota State University. |
| 2017 | Professional Development Program, South Dakota State University. |
| 2017 | Workshops on Excellence in Graduate Teaching, Center for Excellence in Teaching and Learning (CETL), South Dakota State University. |

WORK EXPERIENCE

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| June 2019-date | Teaching Assistant Professor | West Virginia University |
| Jan-May2019 | Temporary Biochemistry Faculty | Eastern Illinois University |
| Summer 2018 | Adjunct Chemistry Instructor | Southeast Technical Institute |
| 2013-2018 | Teaching Assistant, BioChemistry | South Dakota State University |
| 2012-2013 | Assistant Lecturer, Clinical Chemistry | University of Ghana |
| 2010-2012 | Teaching Assistant, Clinical Chemistry | University of Ghana |

TEACHING EXPERIENCE

Courses lectured

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| June 2019- Date | Biochemistry of Proteins and Nucleic Acids (Upper level) |
| January-May 2019 | Biochemistry lecture and upper level lab, General chemistry I, Chemistry, Eastern Illinois University Biochemistry Faculty (Full-time) |
| Summer 2018 | Course Name: General Chemistry (Lecture and Lab) Southeast Technical Institute, Sioux Falls, SD. Instructor (Adjunct) |
| November 9, 2018 | Lecture Title: Acids and bases Course Name: General Chemistry, Class Size: 350 Students Course Director: Dr. Tanya Gupta South Dakota State University Guest Lecturer |
| October 5, 2018 | Lecture Title: Chemical reactions Course Name: General Chemistry, Class Size: 350 Students Course Director: Dr. Tanya Gupta South Dakota State University Guest Lecturer |
| November 3, 6&8 '17 | Lecture Title: Chemical Solutions Course Name: General Chemistry, Class Size: 350 Students Course Director: Dr. Tanya Gupta South Dakota State University Guest Lecturer |
| October 2, 2017 | Lecture Title: Redox Reactions Course Name: General Chemistry, Class Size: 350 Students Course Director: Dr. Tanya Gupta South Dakota State University Guest Lecturer |
| Fall 2017 | Lecture Title: General Chemistry Topics Course Name: General Chemistry, Class Size: 150+ Students Course Director: Dr. Tanya Gupta South Dakota State University Weekly Tutorials teacher |
| Fall 2013 | Lecture Titles: Iron Metabolism, Uric Acid Metabolism Course Name: Clinical Biochemistry IV, Class size: 50 Course Director: Dr. Seth Amanquah School of Allied Health Sciences, University of Ghana Guest Lecturer |

Courses lectured and directed

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| January 2019-date | Biochemistry lecture and upper level lab, General chemistry I, Chemistry, Eastern Illinois University Biochemistry Faculty (Full-time) |
| 2011-2013 | Course Name: Clinical Biochemistry for Medical Students Class Size: 200 School of Medicine and Dentistry, University of Ghana, As Lecturer (full time) |
| 2012-2013 | Course Name: Biochemistry III NarhBita College, Ghana As Lecturer (Adjunct) |

Graduate Teaching Assistant, South Dakota State University.

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| Spring 2018 | Course Name: Structure and Function of Organic Molecules Lab. (<i>Honors Organic-I Lab</i> , Undergraduate) Course Coordinator: Dr. Shannon Anderson |
| Spring 2018 | Course Name: General Chemistry I Lab. (Undergraduate) Course Coordinator: Dr. Julie Leibold |
| Fall 2017 | Course Name: Transformations of Organic Molecules Lab. (<i>Honors Organic-II Lab</i> , Undergraduate) Course Coordinator: Dr. Shannon Anderson |
| Fall 2017 | Course Name: General Chemistry Survey Lecture (Undergraduate) Course Coordinator: Dr. Tanya Gupta |
| Summer 2016&2017 Spring 2015&2016 | Course Name: General Chemistry II Lab. (Undergraduate) Course Coordinator: Dr. Sara Madsen/Dr. Ronald Hirko |
| Spring 2017 Summer 2015 Fall 2013 | Course Name: Chemistry survey Lab. (Undergraduate) Course Coordinator: Dr. Julie Leibold Course Coordinator: Dr. Ronald Hirko |
| Summer 2015 | Course Name: Online General Chemistry I Lab. (Undergraduate) Course Coordinator: Dr. Ronald Hirko |
| Fall 2014, 2015 & 2016 | Course Name: General Chemistry I Lab. (Undergraduate) Course Coordinator: Dr. Julie Leibold/Dr. Ronald Hirko |
| Spring 2016 | Course Name: Organic and Biochemistry lab. (Undergraduate) Course Coordinator: Dr. Nicole Grove |
| Summer 2014&2015 | Course Name: Laboratory Development/Biochemistry Lab. (Graduate) Course Coordinator: Dr. Matthew Miller |

Spring 2014&2015 Course Name: Biochemistry methods Lab. (Undergraduate-Seniors)
Course Coordinator: Dr. Suvobrata Chakravarty

Summer 2014 Course Name: Inorganic Lab Development (Undergraduate)
Course Coordinator: Dr. Tanya Gupta

Graduate Teaching Assistant, University of Ghana Medical School.

2010 to 2012 Course Name: Chemical Pathology lab.
(400-level Medical Students)
Course Coordinator: Kingsley Offe-Amoyaw, Msc.

MENTORING/ADVISING EXPERIENCE

South Dakota State University

Fall 2017/Spring 2018 Iram Lab graduate students (qPCR, FRET assay, LCMSMS, Molecular Biology)
~Angelina Sampson ~Jennifer Kyeremanteng ~Vivian Osei-Poku
~Nizam Uddin

Summer 2017 Fish-back honors summer program (High School Honors Students)
~Jake Dickinson ~Julius Moy ~Grace Phinney
~Lindsay Baker ~Naomi Kinney ~Theresa Siers
~Meredith Ollerich ~Cheridan Wenzel ~Moriah Flanagan

Spring 2016 Training of *undergraduates* on Molecular Biology Techniques
~Shahrariah Rahman ~Keisha Voges ~Dane Hegdahl

Summer 2015 Training of High School Teachers on Gel electrophoresis and Molecular Cloning
(Towards MSc. Chemical Education Degree)
~Glenda Bossow
~Christopher Giese

Fall 2015 Training of *undergraduates* on Molecular Biology Techniques
~David Gidey
~Shahrariah Rahman

Summer 2015 Training of *undergraduates* on Molecular Biology Techniques
~Brian Peterson

Spring 2015 Training of *undergraduates* on Molecular Biology Techniques
~Brian Peterson
~Develyn Vetos
~Jaymee Knippling

Summer 2014 Training of High School Teachers on Protein Assay and Nitrosation of Cardiac
Myofilaments (Towards MSc. Chemical Education Degree)
~Emiley Milam
~Brandon Milam

University of Ghana

2012-2013 Academic Advisor for;
 ~ Bismark Dakurah
 ~ Festus Torbowonaa
 Senior Students' Research Projects, Medical laboratory science

EXPERIENCE WITH BIOCHEMICAL AND ANALYTICAL TECHNIQUES

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| ~Molecular biology (PCR, DNA extraction, Cloning, Mutagenesis) | ~Spectroscopy |
| ~Agarose gel electrophoresis and SDS-PAGE | ~HPCL and LC-MS-MS |
| ~RT-PCR (RNA isolation, cDNA Synthesis, qPCR) | ~Fluorimetry and FRET analysis |
| ~Western blot | ~NMR-teaching lab |
| ~Vesicular Transport (Radio-label/Scintillation counter) | ~FTIR |
| ~Confocal Microscopy | ~Flow cytometry |
| ~Mammalian Tissue Culture | |
| ~GC-FID | ~Membrane Vesicle Preparation |
| ~Distillation and reflux (Organic Lab) | ~Thin layer/Column chromatography |

ACADEMIC AND RESEARCH COMMITTEES

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| 2012-2013 | Member, University of Ghana Medical School Research Board |
| 2012 | Member, Selection/Interview Committee, Department of Chemical Pathology (For admission of incoming graduate students) |

LEADERSHIP SKILLS

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| 2013-2018 | Laboratory Organizer, Purchasing and Inventory, Iram Lab, South Dakota State University. |
| Fall 2017 | Leader, New Graduate Students' Orientation/Preparation for Teaching Assignments. |
| 2012-2013 | Member, University of Ghana Medical School Research Board |
| 2006-2007 | Representative for Chemical Pathology, Graduate Students' Association, University of Ghana. |
| 1998-1999 | Ghana Students' Representative Council General Secretary, St. Thomas Aquinas Senior High- Ghana. |
| 1998-1999 | Deputy Compound Prefect, St. Thomas Aquinas Senior High school. |
| 1994-1998 | Kpeshie Supreme Boys' Leader, Ghana Red Cross Society. |

PROFESSIONAL ORGANIZATIONS

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| 2019- Present | American Society for Biochemistry and Molecular Biology (ASBMB) |
| 2018- Present | American Association for the Advancement of science (AAAS) |
| 2018- Present | American Chemical Society (ACS) |
| 2018- Present | Chemical Toxicology Division, American Chemical Society, |

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| 2018- Present | Biological Chemistry Division American Chemical Society, |
| 2018- Present | Biochemical Technology Division, American Chemical Society |
| 2013-Present | American Association of Clinical Chemists (AACC) |
| 2013- Present | Midwest Section, American Association of Clinical Chemists |
| 2013- Present | Society for Young Clinical Laboratorians (SYCL) |

COMPUTER AND TECHNOLOGY PROFICIENCY

Microsoft office suite- Word, Power-point, Outlook, Excel, Endnote.

Image processing (Image J)

SPSS (Statistical Package for the Social Sciences),

Graph Pad Prism statistical software

JMP statistical software

Advanced search engines (PubMed)

Endnotes for manuscript referencing

Bioinformatics

Desire to Learn (D2L)

Starfish student performance reporting

Learning Catalytics

Mastering Chemistry

COMMUNITY AND VOLUNTARY SERVICE

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| 2017- date | Junior Achievement Program Teacher for K-12 |
| 2017-2018 | Policy Council Representative, Early Head-Start program, Brookings SD. |
| 2016-2017 | Policy Council Representative, Head-Start Program, Brookings SD. |
| 2016-2018 | Board Member (Parent representative) South Dakota Head-start Association (SDHSA), a Federal Educational (School) Program from birth through pre-school. |
| 2016-2017 | Board Member (Policy Council Liaison to the Board) Inter-Lakes Community Action Program (ICAP-South Dakota), Parent-federal organization of SDHSA. |
| 2016-2017 | Story Teller: Head-Start Preschool, Brookings SD. |
| 2016-2017 | Book Reading: Head-Start Preschool, Brookings SD. |
| 2015 | Scientist of the week demonstration: Medary Elementary School, Brookings, SD. |
| 2014/2015 | Parking services during Hobo-Day Parade, South Dakota State University. |

RESEARCH INTEREST

ATP-Binding Cassette transporters are a superfamily of integral membrane proteins some sub-family members of which have been linked to multidrug resistance in cancer. Discovery of substrates and inhibitors of Multidrug resistance proteins through Molecular biology, FRET, ATPase assay and Vesicular transport-coupled-LC-MS/MS-based approaches arouse my enthusiasm for Biochemistry research. I plan to develop an interventional research approach which merge clinical-based research with classical biochemistry in pursuit of improving the battle against cancer. Alongside my teaching load, an opportunity to work with interested undergraduates with regards to my research interests is relished.

PUBLICATIONS

Peer-Review Published Manuscripts (5)

1. **Osa-Andrews B.**, Tan K. W., Sampson A., Iram S. H. Development of Novel Intramolecular FRET-Based ABC Transporter Biosensors to Identify New Substrates and Modulators. *Pharmaceutics* (10) 4 (2018) 186.
2. Tan W. K., Sampson A. **Osa-Andrews B.**, Iram H. S., Calcitriol and Calcipotriol Modulate Transport Activity of ABC Transporters and Exhibit Selective Cytotoxicity in MRP1 overexpressing Cells. *Drug metabolism and disposition* (2018) DOI: <https://doi.org/10.1124/dmd.118.081612>
3. Peterson B. G., Tan K. W., **Osa-Andrews B.**, Iram S. H. High-content screening of clinically tested anticancer drugs identifies novel inhibitors of human MRP1 (ABCC1). *Pharmacological Research* 119 (2017) 313–326.
4. **Osa-Andrews B.**, Asare-Anane H, Oppong S. Y, Nyarko A.K., Kpentey G., Tetteh J., Gyan B. A. Role of Circulating Endothelial Progenitor Cells in Micro Vascular Damage in Sickel Cell Patients; *J Blood Disord Transfus* 8(2017)4.
5. Asare-Anane H., Bawah A.T., **Osa-Andrews B.**, Adanu R., Ofori E. K., Bani S. A., Ateko R. O., Tagoe E. A., Nyarko A. K. Lipid Profile in Ghanaian Women with Gestational Diabetes Mellitus. *International journal of scientific & technology research* 2 (2013) 4.

Published Abstracts (1)

1. **Osa-Andrews B.**, Oppong S. Y, Asare-Anane H., Kpentey G., John T., Gyan B. A Study of Circulating Endothelial Progenitor Cells and microvascular damage in Sickel Cell Patients; *University of Ghana Abstracts*.

Manuscripts in Preparation (3)

1. **Osa-Andrews B.**, Tan K. W., Sampson A., Iram S. H. Engineering of 2-color p-glycoprotein biosensor for fluorescence-based profiling of drug interaction.
2. **Osa-Andrews B.**, Iram S. H. Current trends in fluorescence spectroscopy for investigation of ABC transporter proteins. Review article.
3. Sampson A., Tan K. W., **Osa-Andrews B.**, Iram S. H. Identification of novel inhibitors of multidrug resistance-associated protein-1 using doxorubicin as fluorescent probe.

PRESENTATIONS

Oral presentations (3)

1. **Osa-Andrews B.**, Tan K. W., Iram S. H. “Interaction between 2-color Multidrug resistance protein-1 biosensor with potential substrates in ensemble FRET-based assay.” (*Presented at the 2017 American Chemical Society, Midwest Regional meeting, Lawrence, KS*) October 19, 2017.

2. **Osa-Andrews B.**, Oppong S. Y, Asare-Anane H., Gyan B., “Circulating Endothelial Progenitor Cells and Vasculopathy in Sickle Disease” (*Presented at the University of Ghana Medical School Research Symposium*), April 10, 2013.
3. **Osa-Andrews B.**, Oppong S. Y, Gyan B., “A Study of Circulating Endothelial Progenitor Cells and microvascular damage in Sickle Cell Patients” (*Presented at the 4th College of Health Sciences Annual Scientific Conference, College of Surgeons and Physicians Centre, Accra-Ghana*), September 20-23, 2010.

Poster Presentations (14)

1. **Osa-Andrews B.**, Tan K. W., Iram S. H. “Novel P-glycoprotein Biosensor Technology Detects Six Anticancer Modulators of the Transporter through a Fluorescence-Based Drug Profiling.” (*Presented at the 71st American Association of Clinical Chemists Annual National Meeting - 2019, Anaheim Convention Center, Anaheim, California*), August 6th and 7th, 2019.
2. **Osa-Andrews B.**, Tan K. W., Iram S. H. “Two-color biosensor-based ensemble FRET assay identifies ten potential substrates of the cancer-implicated human multidrug resistance protein-1.” (*Presented at the 2018 American Chemical Society, Midwest Regional meeting, Ames, IA*) October 21 and October 23, 2018.
3. **Osa-Andrews B.**, Tan K. W., Sampson A., Iram S. H. “Development of a 2-Color biosensor-based ensemble FRET assay for discovery of potential substrates of the Cancer-implicated Human Multidrug Resistance Protein-1.” (*Presented at the 70th American Association of Clinical Chemists Annual National Meeting -2018, McCormick, Chicago, IL*) July 31, and August 1, 2018.
4. **Osa-Andrews B.**, Tan K. W., Iram S. H. “Dynamic ligand-dependent FRET changes of 2-color Multidrug resistance protein-1 biosensor.” (*Presented at the 2017 American Chemical Society, Midwest Regional meeting, Lawrence, KS*) October 20, 2017.
5. **Osa-Andrews B.**, Tan K. W., Iram S. H. “Dynamic ligand-dependent FRET changes of 2-color Multidrug resistance protein-1 biosensor.” (*Presented at the Eastern South Dakota Research Symposium Sanford Center Sioux Falls, SD*), May 31, 2017.
6. **Osa-Andrews B.**, Tan K. W., Iram S. H. “Dynamic ligand-dependent FRET changes of 2-color Multidrug resistance protein-1 biosensor.” (*Presented at the Eastern South Dakota Research Symposium Sanford Center Sioux Falls, SD*), May 31, 2017.
7. **Osa-Andrews B.**, Tan K. W., Noman T., Iram S. H. “Genetic engineering of Novel Human Multidrug Transporter Biosensor for Drug discovery and Development” (*Presented at Sanford Health/SDSU Research Symposium, South Dakota State University students’ Union, Brookings, SD*), December 10, 2016.
8. Tan, K.W., **Osa-Andrews B.**, Iram, S.H. “Discovery of novel modulators of human multidrug resistance protein 1 (MRP1) using a 2-color FRET biosensor”. (*Presented at Gordon Research Conference: The precision medicine revolution: new frontiers for scientists in drug metabolism, transport, and pharmacokinetics. Holderness, NH, USA*), July 10-15, 2016.

9. **Osa-Andrews B.**, Tan K. W., Iram S. H. “Dynamic ligand-dependent FRET changes of 2-color Multidrug resistance protein-1 biosensor.” (*Presented at Sanford Health/SDSU Research Symposium, South Dakota State University students’ Union, Brookings, SD*), November 10, 2016.
10. **Osa-Andrews B.**, Tan K. W., Noman T., Iram S. H., “Development of novel human ATP-binding cassette membrane transporter biosensors for drug discovery and development.” (*Presented at the Midwest American Chemical Society, Regional meeting, St. Joseph, MO*), October 21&22, 2015.
11. **Osa-Andrews B.**, Tan K. W., Noman T., Iram S. H., “Development of novel human ATP-binding cassette membrane transporter biosensors for drug discovery and development.” (*Presented at the 7th Annual Avera Health/South Dakota State University Research Symposium, McCrory Gardens Education, and Visitor Center, Brookings, SD*), September 30, 2015.
12. Peterson B. G., **Osa-Andrews B.**, Iram S. H. “Engineering Novel Human Multidrug Resistant Protein Biosensors for Structure-function and Drug Discovery Studies” (*Presented at the SD EPSCoR Undergraduate Research Symposium, Pierre, SD*), July 2015.
13. Peterson B. G., **Osa-Andrews B.**, Iram S. H. “Engineering Novel Human Multidrug Resistant Protein Biosensors for Structure-function and Drug Discovery Studies” (*Presented at the 7th Annual Avera Health/South Dakota State University Research Symposium, McCrory Gardens Education, and Visitor Center, Brookings, SD*), September 30, 2015.
14. **Osa-Andrews B.**, Oppong S. Y, Gyan B., “A Study of Circulating Endothelial Progenitor Cells and microvascular damage in Sickle Cell Patients” (*Presented at the 1st Global congress/Symposium on Sickle Cell disease, Accra International Conference Centre, Accra-Ghana*), July 2010.

INVITED PRESENTATIONS (5)

1. **Host:** Proteomics and Metabolomics Division of AACC
Event: 71st American Association of Clinical Chemists Annual National Meeting -2019, Anaheim Convention Center-Hall A, Anaheim, California), August 7th, 2019.
Paper: Osa-Andrews B., Tan K. W., Iram S. H Novel P-glycoprotein Biosensor Technology Detects Six Anticancer Modulators of the Transporter through a Fluorescence-Based Drug Profiling.
2. **Host:** Personalized Medicine Division of AACC
Event: 71st American Association of Clinical Chemists Annual National Meeting -2019, Anaheim Convention Center: Hall A, Anaheim, California), August 6th, 2019.
Paper: Osa-Andrews B., Tan K. W., Iram S. H Novel P-glycoprotein Biosensor Technology Detects Six Anticancer Modulators of the Transporter through a Fluorescence-Based Drug Profiling.
3. **Host:** Tumor markers and Cancer Diagnostics Division of AACC

- Event:** 71st American Association of Clinical Chemists Annual National Meeting -2019, Anaheim Convention Center, Anaheim-Hall A, California), August 6th, 2019.
Paper: Osa-Andrews B., Tan K. W., Iram S. H Novel P-glycoprotein Biosensor Technology Detects Six Anticancer Modulators of the Transporter through a Fluorescence-Based Drug Profiling.
4. **Host:** Hematology and Coagulation Division of AACC
Event: 71st American Association of Clinical Chemists Annual National Meeting -2019, Anaheim Marriott- Platinum Room1-lobby level, Anaheim, California), August 5th, 2019.
Paper: Osa-Andrews B., Tan K. W., Iram S. H Novel P-glycoprotein Biosensor Technology Detects Six Anticancer Modulators of the Transporter through a Fluorescence-Based Drug Profiling.
5. **Host:** Clinical Traditional Science Division of AACC
Event: 71st American Association of Clinical Chemists Annual National Meeting -2019, Anaheim Convention Center-Hall A, Anaheim, California), August 7th, 2019.
Paper: Osa-Andrews B., Tan K. W., Iram S. H Novel P-glycoprotein Biosensor Technology Detects Six Anticancer Modulators of the Transporter through a Fluorescence-Based Drug Profiling.

WEBINAR PRESENTATION

1. **Webinar Event:** American Association of Clinical Chemists- *Midwest Section Webinar Series*
Title: Development of a 2-Color biosensor-based ensemble FRET assay for discovery of
Potential Substrates of the Cancer-implicated Human Multidrug Resistance Protein-1
Speaker: Bremansu Osa-Andrews
Date: November 15, 2018.