

EDGAR S. DIAZ-CRUZ, PH.D.

EDUCATION

- 2000 – 2005 Doctor of Philosophy in Pharmaceutical Sciences The Ohio State University
Specialty: Medicinal Chemistry & Pharmacognosy
- 1997 – 2000 Master of Sciences in Pharmaceutical Sciences University of Puerto Rico
Specialty: Medicinal Chemistry & Pharmacognosy
- 1992 – 1997 Bachelor of Science in Chemistry University of Puerto Rico

PROFESSIONAL EXPERIENCE

- 8/2021 – present *Chair*
Department of Pharmaceutical, Social & Administrative Sciences
College of Pharmacy
Belmont University, Nashville, TN
- 8/2016 – present *Associate Professor*
Department of Pharmaceutical, Social & Administrative Sciences
College of Pharmacy
Belmont University, Nashville, TN
- 10/2019 – 8/2021 *Director of Co-Curricular Experiences*
College of Pharmacy
Belmont University, Nashville, TN
- 8/2011 – 7/2016 *Assistant Professor*
Department of Pharmaceutical, Social & Administrative Sciences
College of Pharmacy
Belmont University, Nashville, TN
- 9/2005 – 7/2011 *Postdoctoral Research Fellow and Lecturer*
Department of Oncology, Tumor Biology Program
Lombardi Comprehensive Cancer Center
Georgetown University, Washington, DC
- 9/2000 – 8/2005 *Researcher, Course Facilitator and Teaching Assistant*
Department of Medicinal Chemistry and Pharmacognosy
College of Pharmacy
The Ohio State University, Columbus, OH

9/1997 – 8/2000 *Researcher and Laboratory Instructor*
Department of Pharmaceutical Sciences
School of Pharmacy
University of Puerto Rico, San Juan, PR

HIGHER EDUCATION LEADERSHIP EXPERIENCE

Department Chair Leadership Initiatives

- Worked with faculty and staff to develop mission, vision, and values statements for the Department of Pharmaceutical, Social & Administrative Sciences, consistent with the updated College of Pharmacy and Belmont University mission and vision
- Developed a classroom observation process to encourage ongoing improvement in teaching
- Created working groups within the department to execute the strategic priorities of the College of Pharmacy
- Developed a faculty workload to meet the needs of the department, while ensuring that teaching and service loads are equitable
- Assisted the Curriculum Committee with revisions of courses taught by the department
- Assessed the educational outcomes in core courses taught within the department in accordance with the Center for the Advancement of Pharmaceutical Education and the Accreditation Council for Pharmacy Education standards
- Supervised 13 faculty members, four administrative staff personnel, and recruited one faculty member
- Oversaw the budget and operations of the faculty research laboratories, and the pharmaceuticals teaching laboratory facilities
- Revised the faculty performance evaluation tool to align with the updated College of Pharmacy mission and strategic priorities

Student Affairs Initiatives

- Developed a holistic approach to pharmacy admissions for the college
- Established partnerships with local high schools and universities nationwide for student pipeline and recruitment efforts
- Served as an admissions process interviewer and conducted admissions orientation
- Collaborated with the University of Puerto Rico School of Pharmacy to develop an exchange program for Advanced Pharmacy Practice Experiences
- Served as academic advisor for 35 pharmacy students
- Mentored two pharmacy residents as part of the Teaching Certificate Program
- Mentored four undergraduate students through the Bridges to Belmont Program
- Mentored two students under the Summer Undergraduate Research Fellowships in the Sciences Program
- Served as the founder and advisor of the Student National Pharmaceutical Association Chapter

- Served in the Academic & Professional Standards Committee of the College of Pharmacy and the Department of Physical Therapy
- Created a College of Pharmacy Diversity, Equity, and Inclusion syllabi statement
- Collaborated with Hillsboro High School to develop ways to incorporate pharmacy into their global health curriculum
- Collaborated with the Belmont University Teaching Center to develop questions on Diversity, Equity, and Inclusion for course evaluations and formative reviews

Academic Affairs Initiatives

- Designed a four-year co-curricular plan centered around four competency domain focus areas: professionalism, critical thinking, patient-centered care, and advancement of pharmacy practice
- Developed an assessment plan for the College of Pharmacy co-curricular plan
- Served in the Accreditation Council for Pharmacy Education Self Study Steering Committee and successfully led the program through accreditation in 2013 and 2018
- Served on the Remediation Policy Task Force to develop and implement a College of Pharmacy remediation policy
- Served on the College of Pharmacy Workload Calculation Task Force
- Developed three pharmacy core courses (Biochemistry for Pharmacy, Pharmacodynamics 2, Pharmacy Seminar), four elective courses (Natural Products, Health Disparities, HIV Prevention & Treatment, Cross Cultural Communications), and two advanced pharmacy practice experiences (Translational Research and Pharmacy Academia)
- Developed a certification program for student pharmacists on HIV testing and counseling through the Tennessee Department of Health in collaboration with the community-based HIV/AIDS organization Nashville CARES
- Served as a mentor for five faculty members through the Teaching Center New Faculty Mentorship Program
- Developed and facilitated a professional development training on Cultural Competency for the pharmacy continuing education program

Diversity, Equity and Inclusion Initiatives

6/2020 Diversity and Inclusion Certificate Cornell University
Courses: Improving Engagement, Counteracting Unconscious Bias, Diversity and Inclusion at Work, Fostering an Inclusive Climate

- Designed and facilitated a three-part diversity & inclusion training series (35 sessions) for university faculty, staff, and senior leadership (450 participants) on: cultural proficiency, privilege, implicit bias, macro- and micro-aggressions and cultural humility
- Served as a liaison between university faculty and executive team to address diversity and inclusion issues
- Created an evidence-based strategy document to help unit leaders foster diversity, equity and inclusion

- Designed and facilitated a cultural competence continuum training for pharmacy students during orientation
- Facilitated and engaged undergraduate students and residence life student leaders in productive conversations about diversity
- Participated as a speaker/panelist in a variety of university events titled: “The Cultural Leadership Cohort Group Initiative: Empowered Community-Building for Faculty of Color”, “Diversity Perspectives in the Classroom”, “Let’s Talk About Diversity: Hue is my neighbor?”, and “Believing: Exploring What Shapes Us”, and “Cultural Competency: The Missing Link to Personalized Medicine” (among others)

UNIVERSITY AND COLLEGE COMMITTEE SERVICE

Belmont University Executive Vice President for Academic Affairs and Provost Search Committee (2022-present)
 College of Pharmacy Curricular Revision Task Force (2022-present)
 Welcome Home Diversity Council (2020-present)
 College of Pharmacy Academic and Professional Standards Committee (2015-2018 & 2021-present)
 University Faculty Inclusion, Diversity & Equity Committee Chair (2018-present)
 Bridges to Belmont First-Generation College Student Advisor (2013-present)
 Physical Therapy Academic and Professional Standards Committee (2018-present)
 Student Pharmacist Advisor (2011-present)
 Hispanic/Latino(a) Engagement Task Force (2022)
 Belmont University President Inauguration Committee (2021)
 College of Pharmacy Co-Curricular Committee Chair (2018-2021)
 College of Pharmacy Interprofessional Education Committee (2020-2021)
 College of Pharmacy Awards Committee (2018-2021)
 Teaching Certificate for Pharmacy Residents Mentor (2015-2021)
 American Association of Colleges of Pharmacy Delegate (2019)
 College of Pharmacy Admissions Committee Member (2011-2013 & 2016-2018)
 Accreditation Council for Pharmacy Education Self Study Steering Committee (2016-2018)
 University Appointments Committee (2016-2018)
 College of Pharmacy Faculty Affairs Committee (2015-2016)
 Microbiology Faculty Search Committee Chair (2016)
 University Faculty Work-Life Committee (2014-2016)
 Continuing Education Program Administrator Search Committee (2016)
 Laboratory Manager Search Committee (2016)
 Founder and Faculty Advisor, Student National Pharmaceutical Association Chapter (2011-2016)
 Teaching Center New Faculty Mentor (2015-present)
 College of Pharmacy Curriculum Committee Chair (2012-2014)
 University Graduate Catalog and Curriculum Committee (2012-2013)

PROFESSIONAL AND PUBLIC SERVICE

ABE Justice, Equity, Diversity & Equity Committee Member (2022-present)
Association of Biochemistry Educators Board Member (ABE) (2019-present)
AIDS Clinical Trials Group Community Advisory Board Member (2020-present)
Centers for AIDS Research Developmental Core Awards Grant Reviewer (2021-present)
My Voice Research HIV Community Engagement Council Member (2017-present)
Currents in Pharmacy Teaching & Learning Peer Reviewer (2016-present)
Endocrine-Related Cancer Peer Reviewer (2010-present)
Journal of Visualized Experiments Peer Reviewer (2010-present)
Puerto Rico Science, Technology & Research Trust Grant Reviewer (2015-present)
Spanish-English Medical Interpreter (2012-present)
English as a Second Language Instructor, St. Ann's Catholic Church (2012-2018)
Tennessee State University Research Symposium Judge (2012-present)
Middle Tennessee Science & Engineering Fair Judge (2012-present)
HIV Prevention Testing and Counseling Facilitator, Nashville Cares (2011-present)
ACCP Student Community Engagement Award Reviewer (2016)
Academy of Global Health Science Advisory Board Member, Hillsboro High School (2012-2016)
The National Institute of Science Annual Scientific Fair Judge (2012)
ZonMw Rational Pharmacotherapy Grant Reviewer (2012-2013)
"Room in the Inn" Christ the King Parish Volunteer (2011-2012)
"The Conquest of Cancer and the Next Generation of Researchers" Mentor (2008)

TEACHING EXPERIENCE

Graduate and Professional Education Courses

Fall 2011-2021	Role: Course Designer, Developer, Coordinator, and Instructor PHM 6115: Biochemistry for Pharmacy Belmont University, Nashville, TN 4 credit hours Number of students per semester: >75
Spring 2012-2022	Role: Course Co-developer, Coordinator, and Instructor PHM 6145: Pharmacodynamics 2 Belmont University, Nashville, TN 3 credit hours Number of students per semester: >75
Spring 2014-2021 Fall 2015-2019	Role: Course Designer, Developer, Coordinator, and Instructor PHM 6993: Healthcare Disparities Belmont University, Nashville, TN 2 credit hours Number of students per semester: 15-25
Spring 2012-2020	Role: Course Designer, Developer, Coordinator, and Instructor

Fall 2012-2018	<p>PHM 6991: Natural Products Belmont University, Nashville, TN 2 credit hours Number of students per semester: 20-25</p>
Fall 2017-2020 Spring 2019	<p>Role: Course Designer, Developer, Coordinator, and Instructor PHM 6993: HIV Prevention & Treatment Belmont University, Nashville, TN 2 credit hours Number of students per semester: 12-15</p>
Fall 2019-2021	<p>Role: Course Designer, Developer, Coordinator, and Instructor PHM 6995: Advanced Pharmacy Practice Experience – Special Topics: Pharmacy Academia Belmont University, Nashville, TN 2 credit hours Number of students: 5</p>
Summer 2014-2022	<p>Role: Course Designer, Developer, Coordinator, and Instructor PHM 6995: Advanced Pharmacy Practice Experience – Special Topics: Translational Research Belmont University, Nashville, TN 2 credit hours Number of students: 8</p>
Spring 2013-2019	<p>Role: Course Developer, Coordinator, and Instructor PHM 6360: Seminar Belmont University, Nashville, TN 1 credit hour Number of students per semester: 40 (20 per section)</p>
Spring 2012	<p>Role: Course Designer, Developer, Coordinator, and Instructor PHM 6115: Medicinal Plants & Culture of Central American Rainforests Belmont University, Nashville, TN 2 credit hours Number of students: 2</p>
Fall 2014	<p>Role: Course Designer, Developer, Coordinator, and Instructor PHM 6993: Cross-Cultural Communication Belmont University, Nashville, TN 2 credit hours Number of students: 16</p>
Spring 2010/2011	<p>Role: Course Developer and Instructor Tumor Cell Biology Lecture Series</p>

Fall 2010	<p>Georgetown University, Washington, DC Lecture Title: "Mouse models of carcinogenesis" 1 contact hour Number of students per semester: 20 Role: Instructor TBIO 508: Tumor Biology I, Cellular and Molecular Aspects of the Transformed Cell Tumor Biology Doctoral and Master's Program Georgetown University, Washington, DC Lecture Title: "Role of apoptosis in cancer development and therapeutic response" 2 contact hours Number of students: 26</p>
Fall 2003 Winter 2004	<p>Role: Teacher Assistant Pharmacy 410: Introduction to Medicinal Chemistry I Pharmacy 411: Introduction to Medicinal Chemistry II Pharm. D. Program The Ohio State University, Columbus, OH 3 credit hours Number of students: 30</p>

Undergraduate Courses

Fall 2018	<p>BMB 4700: Research Biochemistry and Molecular Biology II Role: Instructor Belmont University, Nashville, TN</p>
Spring 2004-2005	<p>Pharmacy 694: "Puerto Rico- A Cultural Look at Health Care" The Ohio State University, Columbus, OH</p>
Spring 1998	<p>FARM 7235: Research, Education, and Scientific Method Laboratory III Bachelor of Pharmaceutical Sciences program University of Puerto Rico, San Juan, PR</p>
Winter 1998	<p>FARM 7136: Research, Education, and Scientific Method Laboratory II University of Puerto Rico, San Juan, PR</p>
Fall 1997	<p>FARM 7135: Research, Education, and Scientific Method Laboratory I University of Puerto Rico, San Juan, PR</p>

HONORS AND AWARDS

- 5/2022 Pharmaceutical, Social & Administrative Faculty of the Year Award, Nashville, TN
- 5/2020 Outstanding Faculty Member, Nashville, TN
- 4/2019 Professor of the Year Award, Nashville, TN
- 4/2018 Presidential Faculty Achievement Award, Nashville, TN
- 4/2017 Presidential Faculty Achievement Award Finalist, Nashville, TN
- 2/2017 Belmont University Homecoming Spirit Court Finalist, Nashville, TN
- 1/2017 Professional Stewardship Award, Nashville, TN
- 5/2016 Most Influential Faculty Member, Nashville, TN
- 2/2016 Pharmacy Leadership Society Inductee, Nashville, TN
- 7/2015 AACP Walmart Student-Mentor Scholarship, National Harbor, MD
- 3/2015 Presidential Faculty Achievement Award Finalist, Nashville, TN
- 2/2015 Harold Love Outstanding Community Service Award Finalist, Nashville, TN
- 4/2011 Excellence as a Postdoctoral Fellow in Molecular and Cellular Oncology Award at the Georgetown University and Lombardi Comprehensive Cancer Center, Washington, DC
- 9/2010 14th International Congress on Hormonal Steroids, Hormones & Cancer Best Poster Award, Edinburgh, Scotland
- 12/2008 Susan G. Komen for the Cure-AACR Minority Scholar Award, San Antonio, TX
- 5/2008 41st Annual Meeting of the Society for the Study of Reproduction Best Poster Award, Kona, HI
- 6/2004 Jack L. Beal Graduate Student Award in Medicinal Chemistry and Pharmacognosy, The Ohio State University
- 4/2004 Professional Biological Sciences Oral Research Presentation Third Place Award, 2004 Edward F. Hayes Graduate Research Forum, The Ohio

State University

6/2004 Bristol-Myers Squibb-AFPE Pre-Doctoral Fellowship in Pharmaceutical Science, The Ohio State University

6/2001 Rho Chi Honor Society in Pharmacy Inductee, The Ohio State University

9/2000 Molecular Life Sciences Fellowship, The Ohio State University

5/1997 American Chemical Society Analytical Chemistry Award, Buffalo State College, Buffalo, NY

PATENTS

Brueggemeier R.W., Su, B., **Diaz-Cruz E.S.**, Landini S. Novel sulfonanilide analogs as selective aromatase modulators, WO 2007/120379.

GRANTS

KG090187 Susan G. Komen for the Cure Postdoctoral Fellowship <i>“Disrupted estrogen signaling pathways collaborate with loss of p53 in the development of preneoplasia in breast cancer”</i>	Furth (PI); Diaz-Cruz (Fellow) \$180,000 direct costs	9/2008 - 9/2011
R01 CA112176 NIH Diversity Grant <i>“Progression and Regression of Mammary Preneoplasia”</i>	Furth (PI); Diaz-Cruz (Fellow) \$90,000 direct costs	4/2008 - 3/2010
R01 CA112176 NIH Supplement <i>“Generation of a transgenic mouse model with a conditional over-expression of aromatase in the mammary gland”</i>	Furth (PI); Diaz-Cruz (Fellow) \$20,000 direct costs	8/2007 - 11/2008
CA09686-09 NIH T32 Training Grant in Tumor Biology Advisor: Priscilla A. Furth	Riegel (PI); Diaz-Cruz (Fellow)	9/2005 - 8/2007
GM08512 NIH T32 Chemistry and Biology Interface Training Program Grant Advisor: Robert W. Brueggemeier	Tsai (PI); Diaz-Cruz (Fellow)	8/2001 - 7/2004
NIH R25 NIH-Bridges to the Doctorate for Underrepresented Students	Ghaly (PI); Diaz-Cruz (Fellow)	5/1998 - 6/2000

Advisor: Mikhail Antoun

COLLABORATIVE ACTIVITIES

Joint Research Activities

- 12/2020 – present Dismantling Disparities: Using a Social Determinants of Health Framework to Teach Health Disparities to Pharmacy Students
Associate investigators: Thompson S., and Long, S.
- 3/2019 – present Using the socio-ecological model to develop pharmacist-led interventions in the prevention of public health issues.
Associate investigators: Bynum L.A. and Hagan A.
- 5/2017 – 8/2017 Student's Well-being in Professional Programs
Principal Investigator: DeBlassis A
Associate investigators: Gilbert L., Giordano P., Hagan A.
- 10/2012 – 6/2016 Trans-Discipline Classroom Swaps
Associate investigators: McCoy M., Mueller J., Watson J., Deblassis A., and Neophytou M.
- 8/2008 – 7/2011 The Translational Breast Cancer Research Consortium, "Locoregional Disease Discussion Group"
Principal Investigator: Liu M.C.

PUBLICATIONS

Diaz-Cruz E.S., Thompson, S., Hawkins M., Jefferson K., Zengotita-Borges R. Leveraging Expertise from Community Resources to Improve the Role of the Pharmacist in HIV Testing and Counseling. Innov Pharm. 12(4), Article 21, 2021.

Simmons J.M., Franklin D.S., Dahlman K.B., Symes K., Viselli S.M., **Diaz-Cruz E.S.**, Fong S.F.T., Spicer D.B. Teaching Biochemistry to Students of Dentistry, Medicine, and Pharmacy: 8th International Conference of the Association of Biochemistry Educators (ABE) Virtual Conference, May 3-7, 2021. Med Sci Educ. 2021 Sep 20;31(6):1-4.

Diaz-Cruz E.S., Harland, M.D., Darensbourg, C. Using biochemistry to educate students on the causal link between social epigenetics and health disparities. Innov Pharm. 11(3), Article 13, 2020.

Diaz-Cruz E.S., Hagan, A.M. Developing a co-curricular activity to introduce student pharmacists to the cultural proficiency continuum framework. Innov Pharm., 11(1), Article 1, 2020.

Diaz-Cruz E.S. If cultural sensitivity is not enough to reduce health disparities, what will pharmacy education do next? Curr Pharm Teach Learn., 11(5):538-540, 2019.

McDonnell A.M., Pyles H., **Diaz-Cruz E.S.**, Barton C.E. Enoxacin and epigallocatechin gallate (EGCG) act synergistically to inhibit the growth of cervical cancer cells in culture. Molecules. 24(8):1580, 2019.

Alothman S.J., Wang W., Chao S., Kallakury B.V., **Diaz-Cruz E.S.**, Furth P.A. Differential efatutazone's impact on mammary neoplasia dependent upon Brca1 dose. Endocr Relat Cancer. 25(12): L53-L57, 2018.

Slay Carr C., Campbell H., **Diaz-Cruz E.S.**, Guinn M., Kodali L., Lee H., Turner B. The Cultural Leadership Cohort Group Initiative: Empowered Community-Building for Faculty of Color. J Interdiscipl Educ. 14(1): 163-197, 2016.

Diaz-Cruz, E.S., Bolten B.C. An elective course to enhance students' knowledge and confidence in natural products. Curr Pharm Teach Learn. 8(5): 688-697, 2016.

Diaz-Cruz, E.S., Bynum L.A., Thompson S.A. Student pharmacists' perceptions on their preparedness and comfort level in counseling on HIV transmission risk factors and over-the-counter HIV tests. Curr Pharm Teach Learn. 8(6): 757-766, 2016.

Dabydeen S.A.*, Kang K.*, **Diaz-Cruz E.S.*** Alamri A., Axelrod M.L., Bouker K.B., Al-Kharboosh R., Clarke R., Hennighausen L., Furth P.A. Comparison of tamoxifen and letrozole response in mammary preneoplasia of ER and aromatase overexpressing mice defines an immune-associated gene signature linked to tamoxifen resistance. Carcinogenesis. 2015: 36(1):122-32. (*authors contributed equally).

Cabrera M.C., Tilahun E., Nakles R., **Diaz-Cruz E.S.** Charabaty A., Suy S., Jackson P., Ley L., Slack R., Jha R., Collins S.P., Haddad N., Kallakury B.V., Schroeder T., Pishvaian M.J., Furth P.A. Human Pancreatic Cancer-Associated Stellate Cells Remain Activated after in vivo Chemoradiation. Front Oncol. 4:102, 1-8, 2014.

Cabrera M.C., **Diaz-Cruz E.S.**, Pishvaian M.J., Grubbs C., Muccio D., Furth P.A. The CDK4/6 inhibitor PD0332991 reverses epithelial dysplasia associated with abnormal activation of the Cyclin-CDK-Rb pathway. Cancer Res. Prev. 5: 810-821, 2012.

Miermont A.M., Cabrera M.C., Frech S.M., Nakles R.E., **Diaz-Cruz E.S.**, Shiffert M.T., Furth P.A. Association of over-expressed estrogen receptor alpha with development of tamoxifen resistant hyperplasia and adenocarcinomas in genetically engineered mice. Anat Physiol. Suppl 12: 1-12, 2012.

Furth P.A., Nakles R.E., Millman S., **Diaz-Cruz E.S.**, Cabrera M.C. Signal transducer and activator of transcription 5 as a key signaling pathway in normal mammary gland developmental biology and breast cancer. Breast Cancer Res. 13: 220-233, 2011.

Diaz-Cruz E.S., Sugimoto Y., Brueggemeier R.W., Furth P.A. Comparison of increased aromatase versus ER α in the generation of mammary hyperplasia and cancer. Cancer Res. 71: 5477-5487, 2011.

Furth P.A., Cabrera M.C., **Diaz-Cruz E.S.**, Millman S., Nakles R.E. Assessing estrogen signaling aberrations in breast cancer risk using genetically engineered mouse models. Ann N Y Acad Sci. 1229: 147-155, 2011.

Nakles R.E., Tilli-Shiffert M., **Diaz-Cruz E.S.**, Cabrera M.C., Riegel A., Furth P.A. Altered expression levels of AIB1 or AIB1 Δ 3 with ER α impact mammary gland stromal and epithelial content in a hormone-dependent manner. Mol Endocrinol. 25: 549-63, 2011.

Diaz-Cruz E.S., Cabrera M.C., Nakles R.E., Rutstein B., Furth P.A. Brca1 deficient mouse models to study pathogenesis and therapy of triple negative breast cancer. Breast Dis. 32: 85-97, 2010.

Diaz-Cruz E.S., Furth P.A. Deregulated Estrogen Receptor alpha and p53 heterozygosity collaborate in the development of mammary hyperplasia. Cancer Res. 70: 3965-74, 2010.

Su B., **Diaz-Cruz E.S.**, Landini S., Brueggemeier R.W. Suppression of aromatase in human breast cells by a cyclooxygenase-2 inhibitor and its analog involves multiple mechanisms independent of cyclooxygenase-2 inhibition. Steroids. 73: 104-111, 2008.

Davis D.D., **Diaz-Cruz E.S.**, Landini S., Kim Y.W., Brueggemeier R.W. Evaluation of synthetic isoflavones on cell proliferation, estrogen receptor binding affinity, and apoptosis in human breast cancer cells. J Steroid Biochem Mol Biol. 108: 23-31, 2008.

Brueggemeier R.W., Su B., Sugimoto Y., **Diaz-Cruz E.S.**, Davis D.D. Aromatase and COX in breast cancer: Enzyme inhibitors and beyond. J Steroid Biochem Mol Biol. 106: 16-23, 2007.

Diaz-Cruz E.S., Brueggemeier R.W. Interrelationships between cyclooxygenases and aromatase: unraveling the relevance of cyclooxygenase inhibitors in breast cancer. Anticancer Agents Med Chem. 6: 221-232, 2006.

Brueggemeier R.W., **Diaz-Cruz E.S.** Relationship between aromatase and cyclooxygenases in breast cancer: potential for new therapeutic approaches. Minerva Endocrinol. 31: 13-26, 2006.

Su B., **Diaz-Cruz E.S.**, Landini S., Brueggemeier R.W. Novel sulfonanilide analogues suppress aromatase expression and activity in breast cancer cells independent of COX-2 inhibition. J Med Chem. 49: 1413-1419, 2006.

Su B., Hackett J.C., **Diaz-Cruz E.S.**, Kim Y.W., Brueggemeier R.W. Lead optimization of 7-benzyloxy 2-(4'-pyridylmethyl)thio isoflavones aromatase inhibitors. Bioorg Med Chem. 13: 6571-6577, 2005.

Brueggemeier R.W., **Diaz-Cruz E.S.**, Li P.K., Sugimoto Y., Lin Y.C., Shapiro C.L. Translational studies on aromatase, cyclooxygenases, and enzyme inhibitors in breast cancer. J Steroid Biochem Mol Biol. 95: 129-36, 2005.

Brueggemeier R.W., Hackett J.C, **Diaz-Cruz E.S.** Aromatase Inhibitors in the Treatment of Breast Cancer. Endocr. Rev. 26: 331-345, 2005.

Diaz-Cruz E.S., Shapiro C., Brueggemeier R.W. Cyclooxygenase Inhibitors Suppress Aromatase Expression and Activity in Breast Cancer Cells. J Clin Endocrinol Metab. 90: 2563-2570, 2005.

Coleman R.S., Burk C.H., Navarro A., Brueggemeier R.W., **Diaz-Cruz E.S.** Role of the azinomycin naphthoate and central amide in sequence-dependent DNA alkylation and cytotoxicity of epoxide-bearing substructures, Organic Letters 4: 3545-3548, 2002.

Dissertations

Diaz-Cruz E.S. Interrelationships between aromatase and cyclooxygenase-2 and their role in the autocrine and paracrine mechanisms in breast cancer. The Ohio State University, 2005.

Diaz-Cruz E.S. *Mappia Racemosa* a Rare Species from the Family Icacinaceae as a Potential Source of Anticancer Agents. University of Puerto Rico, 2001.

SELECTED ABSTRACTS

Diaz-Cruz E.S., Campbell H., Butler L. Daring to teach the whole truth: Structural racism, structural competence and health inequities. Pharmacy Education 2021: AACP Annual Meeting. Virtual, 2021.

Diaz-Cruz E.S. Using biochemistry to educate students on the causal link between social epigenetics and health disparities. Association of Biochemistry Educators Conference, Tucson, AR, 2019.

Diaz-Cruz E.S. An elective course to increase students' knowledge and awareness of health disparities in the United States. 10th Health Disparities Conference, New Orleans, LA, 2017.

Hayes B., **Diaz-Cruz E.S.** Cholesterol medications and breast cancer: Unraveling the potential value of statins in breast cancer treatment. ASHP Midyear 2016, Las Vegas, NV, 2016.

Watson J., McCoy M., **Diaz-Cruz E.S.**, DeBlasis A., Mueller J., Neophytou M. Teaching students who don't expect you: Trans-discipline classroom swaps. 35th Lilly International Conference on College Teaching, Oxford, OH, 2015.

Harris D.W., **Diaz-Cruz E.S.** Elucidating signaling pathways involved in lovastatin-mediated growth arrest and apoptosis in hormone receptor-negative breast cancer cell lines. 49th American Society of Health-Systems Pharmacists Midyear Clinical Meeting, Anaheim, CA, 2014.

Watson J., McCoy M., **Diaz-Cruz E.S.**, DeBlasis A., Mueller J., Neophytou M. Trans-disciplinary teaching exchange: Forging faculty connections to broaden student perspectives. 34th Lilly International Conference on College Teaching, Oxford, OH, 2014.

Diaz-Cruz E.S., Dabydeen S.A., Wang W., Furth P.A. Effect of letrozole is superior to tamoxifen in limiting preneoplasia in both ER α and aromatase over-expressing mice. 2013 Annual San Antonio Breast Cancer Symposium, San Antonio, TX, 2013.

Dabydeen S.A., Wang W., **Diaz-Cruz E.S.**, Kopelovich L., Glazer R.I., Furth P.A. Reduction in lobular but not ductal hyperplasia by the PGR inhibitor ORG33628 in a *CYP19A1* over-expressing mouse model of breast cancer risk. AACR Annual Meeting, Washington, DC, 2013.

Dabydeen S.A., Gantulga A., Kang K., **Diaz-Cruz E.S.**, Sejong Oh S., Hennighausen L., Furth P.A. **Discovery of gene expression patterns correlated with increased breast cancer risk using genetically engineered mouse model.** 9th AACR-Japanese Cancer Association Joint Conference: Breakthroughs in Basic and Translational Cancer Research, Maui, HI.

Diaz-Cruz E.S., Hagan A., Johnston P.E. Student organizational impact on minority pharmacy students and diversity awareness through community service. 2012 AACP Annual Meeting, Kissimmee, FL, 2012.

Diaz-Cruz E.S., Sugimoto Y., Miermont A.M., Brueggemeier R.W., Furth P.A. Comparison of increased aromatase versus estrogen receptor α in the generation of mammary hyperplasia, cancer and response to tamoxifen. 14th International Congress on Hormonal Steroids and Hormones & Cancer, Edinburgh, Scotland, 2010.

Diaz-Cruz E.S., Nakles R.E., Sugimoto Y., Brueggemeier R.W., Furth P.A. Aromatase over-expression results in the development of ductal growth abnormalities in the mammary gland of a conditional transgenic mouse model. AACR-NCI-EORTC Molecular Targets and Cancer Therapeutics, Boston, MA, 2009.

Diaz-Cruz E.S., Furth P.A. Disrupted estrogen signaling pathways and loss of p53 in the development of mammary gland preneoplasia. 41st Annual Meeting of the Society for the Study of Reproduction, Kona, HI, 2008.

Diaz-Cruz E.S., Sugimoto Y., Brueggemeier R.W., Furth P.A. A conditional aromatase over-expressing in the mammary gland transgenic mouse as a potential model in cancer prevention research. 7th Annual AACR International Conference on Frontiers in Cancer Prevention Research, Washington, DC, 2008.

Diaz-Cruz E.S., Furth P.A. p53 heterozygosity leads to deregulated apoptosis and cell proliferation in the mammary gland of ER α over-expressing mice. 31st Annual San Antonio Breast Cancer Symposium, San Antonio, TX, 2008.

Diaz-Cruz E.S., Furth P.A. Developing animal models to study estrogen signaling pathways in mammary gland carcinogenesis. American Association for Cancer Research Edward A. Smuckler Memorial Pathobiology of Cancer Workshop. Aspen, CO, 2007.

Diaz-Cruz E.S., Brueggemeier R.W., Sugimoto Y., Furth P.A. Generation of a transgenic mouse model with conditional over-expression of aromatase: an *in vivo* model to examine the role of aromatase in cancer development and progression in the mammary gland. VIII International Aromatase Conference, Baltimore, MD, 2006.

Diaz-Cruz E.S., Rosen E.M., Grubbs C.J., Furth P.A. The effect of the PPAR γ Rosiglitazone on BRCA1 gene expression in mice. 97th AACR Annual Meeting, Washington, DC, 2006.

Diaz-Cruz E.S., Brueggemeier R.W. The effect of cyclooxygenase inhibitors on aromatase expression and activity in breast cancer cells. X International Aromatase Conference, Edinburgh, Scotland, 2004.

Sugimoto Y., **Diaz-Cruz E.S.**, Park K.Y., Lin Y.C., Brueggemeier R.W. Regulation of aromatase, COX-2 mRNA and protein expression in breast cancer cells using small interfering RNAs. 95th Annual AACR Meeting, Orlando, FL, 2004.

Diaz-Cruz E.S., Brueggemeier R.W. The effect of nonsteroidal anti-inflammatory drugs and cyclooxygenase 1 and -2 specific inhibitors in aromatase expression and activity in breast cancer. 2004 Edward F. Hayes Graduate Research Forum, Columbus, OH, 2004.

Diaz-Cruz E.S., Brueggemeier R.W. Aromatase activity and expression: Unraveling the relevance of cyclooxygenase inhibitors. 95th Annual AACR Meeting, Orlando, FL, 2004.

Diaz-Cruz E.S., Brueggemeier R.W. The effect of nonsteroidal anti-inflammatory drugs and cyclooxygenase-2 specific inhibitors on aromatase activity and expression in breast cancer cells. Hormonal Carcinogenesis Gordon Research Conference, Meriden, NH, 2003.

Diaz-Cruz E.S., Ramos Z.H., Antoun M.D. A rare species from the family Icacinacea as a potential source of anticancer agents. Research and Education Forum XX1, San Juan, PR, 2000.

HONORARY PRESENTATIONS

“Building a People-Centered World Through Service and Cultural Humility.” Summer Commencement Speech, Belmont University, Nashville, TN, 2018.

“Transforming Pharmacy Practice Through Service and Humility.” Rho Chi Honor Society Induction Speech, Belmont University, Nashville, TN, 2018.

“Transforming the World Through Exemplary Character.” Alpha Chi Honor Society Induction Speech, Belmont University, Nashville, TN, 2018.

SELECTED INVITED PRESENTATIONS

Equality, Equity, Inclusion & Anti-Racism. Belmont University, Nashville, TN, 2020.

Cultural Proficiency Continuum, Privilege, Implicit Bias & Life-Long Cultural Humility. Diversity & Inclusion Faculty and Staff Training Series. Belmont University, Nashville, TN, 2018.

Using Biochemistry to Educate Students on the Casual Link Between Social Epigenetics and Health Disparities. Association of Biochemistry Educators Annual Meeting, Tucson, AZ, 2019.

Elucidating the anti-tumor properties of statins in breast cancer. Belmont University College of Sciences and Mathematics Seminar Series, Nashville, TN, 2018.

Medical Mistrust in Black Communities. Nashville PrEP Summit, Nashville, TN, 2017.

Diversity: Celebrated or Integrated? AACR Annual Meeting. Orlando, FL, 2017.

Teaching students who don't expect you: Trans-discipline classroom swaps. Lilly International Conference on College Teaching, Oxford, OH, 2015.

Sculpture: In sickness and in health. Belmont University Department of Arts, Nashville, TN, 2015.

Belmont University College of Pharmacy: From here to anywhere!!! Belmont University Pre-pharmacy Club, Nashville, TN, 2015.

Yerbatero: La importancia del idioma español en farmacia. Spanish 3100 lecture series. Belmont University Department of Foreign Languages, Nashville, TN, 2013.

Tamoxifen or letrozole ... Which drug will better treat my breast cancer? The Tennessee Physiological Society, Nashville, TN, 2013.

The role of the health care provider in the management of dietary supplement use. Meharry Medical College, Nashville, TN, 2013.

Establishing an experiential education collaboration between Belmont University College of Pharmacy and the University of Puerto Rico, School of Pharmacy, San Juan, PR, 2013.

Establishing collaborations between Belmont University College of Pharmacy and the University of Puerto Rico, School of Pharmacy, University of Puerto Rico Medical Sciences Campus, San Juan, PR, 2013.

Comparison of increased local estrogen versus estrogen receptor alpha in the initiation of mammary gland carcinogenesis. Department of Chemistry and Biochemistry, University of California San Diego, San Diego, CA, 2011.

Role of aromatase and estrogen receptor alpha in cell cycle regulation and signaling in the initiation of mammary gland carcinogenesis. Department of Chemistry, Northeastern Illinois University, Chicago, IL, 2011.

Comparison of increased local estrogen versus estrogen receptor alpha in the initiation of mammary gland carcinogenesis. University of Dayton, Dayton, OH, 2011.

PROFESSIONAL SOCIETIES

American Association of Colleges of Pharmacy
American Association for Cancer Research
Association of Biochemistry Educators
National Association for the Advancement of Colored People
Phi Lambda Sigma Pharmacy Leadership Society
The Rho Chi Society