

EDGAR S. DIAZ-CRUZ, PH.D.

Belmont University College of Pharmacy & Health Sciences
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EDUCATION

- August 2000 – June 2005 **Doctor of Philosophy in Pharmaceutical Sciences**
Specialty: Medicinal Chemistry
The Ohio State University, Columbus, Ohio
- August 1997 – February 2000 **Master of Sciences in Pharmaceutical Sciences**
Specialty: Medicinal Chemistry & Pharmacognosy
University of Puerto Rico, San Juan, Puerto Rico
- August 1992 – May 1997 **Bachelor of Science in Chemistry**
University of Puerto Rico, Río Piedras, Puerto Rico

PROFESSIONAL EXPERIENCE

- 8/2021 – present *Chair*
Department of Pharmaceutical, Social & Administrative Sciences
College of Pharmacy
Belmont University, Nashville, TN
- 8/2023 – present *Professor*
Department of Pharmaceutical, Social & Administrative Sciences
College of Pharmacy
Belmont University, Nashville, TN
- 8/2017 – 7/2023 *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 – 7/2017 *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

- September 2023 – July 2024 **Academic Leadership Fellows Program**
 American Association of Colleges of Pharmacy, Arlington,
 Virginia
- January 2022 – June 2022 **Emerging Leaders Institute**
 The New American College & Universities, Dayton, Ohio
- July 2020 **Diversity and Inclusion Certificate**
*Courses: Improving Engagement, Counteracting
 Unconscious Bias, Diversity, and Inclusion at Work,
 Fostering an Inclusive Climate*
 Cornell University, Ithaca, New York

Administrative and Professional Development Initiatives

- Spearheaded strategic planning and development of the mission, vision, values, goals, and strategic priorities for the College of Pharmacy & Health Sciences.
- Led a multi-disciplinary task force and developed documents outlining expectations and standards for the Professorial Tenure Track and Professor of Practice Track.
- Completed the American Association of Colleges of Pharmacy Academic Leadership Fellows Program.
- Earned the Phi Lambda Sigma Leader Academy Certification based on GiANT's 5 Voices™ self-awareness process and tool.
- Designed and received approval for an equity-minded faculty workload system based on transparency, clarity, and accountability for the Department of Pharmaceutical, Social & Administrative Sciences.

- Created and received approval for an annual performance evaluation tool that better aligns with the university's promotion and tenure requirements and the College of Pharmacy mission and strategic priorities.
- Collaborated with the executive team to institutionalize and operationalize behaviors that would help drive a successful organizational culture in the College of Pharmacy.
- Worked with faculty and staff to develop mission, vision, and values statements for the Department of Pharmaceutical, Social & Administrative Sciences.
- Developed a classroom observation and feedback process to encourage ongoing improvement in teaching excellence.
- Developed and implemented a workgroup approach to strategic plan implementation in the department.
- Assisted the Curriculum Committee with revisions of courses taught by the Department of Pharmaceutical, Social & Administrative Sciences.
- 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 two faculty members.
- Oversaw the budget and operations of the faculty research laboratories and the pharmaceuticals teaching laboratory facilities.

Student Affairs Initiatives

- Developed a holistic approach to pharmacy admissions for the college rather than depending so heavily on standardized test scores to evaluate applicants.
- 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 a pharmacy program in Puerto Rico 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 ASHP accredited Belmont University College of Pharmacy 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.
- Collaborated with local high schools to develop ways to incorporate pharmacy into their global health curriculum.

Academic Affairs Initiatives

- Designed a four-year co-curricular plan aligned with the competency areas of: 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 professional development training on Cultural Competency for the pharmacy continuing education program.

Diversity, Equity, and Inclusion Initiatives

- 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.
- Created a College of Pharmacy Diversity, Equity, and Inclusion syllabi statement.
- Served as a liaison between university faculty and executive team to address diversity and inclusion issues.
- Collaborated with the Belmont University Teaching Center to develop questions on Diversity, Equity, and Inclusion for course evaluations and formative reviews.
- 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

2024-present	Re-Imagine College of Pharmacy and Health Sciences Task Force Chair
2024-present	Belmont University School of Pharmacy Student Affairs Committee
2020-present	Hope Unity & Belonging Advisory Council (Former Welcome Home Diversity Council)
2018-present	Physical Therapy Academic and Professional Standards Committee
2015-present	Teaching Center New Faculty Mentor
2011-present	Student Pharmacist Advisor
2023-2024	College of Pharmacy Faculty Development & Awards Committee
2021-2024	College of Pharmacy Academic and Professional Standards Committee
2022-2023	Belmont University College of Pharmacy Dean Search Committee
2022	Belmont University Executive Vice President for Academic Affairs and Provost Search Committee
2022	College of Pharmacy Curricular Revision Task Force
2018-2022	University Faculty Inclusion, Diversity & Equity Committee Chair
2022	Hispanic/Latino(a) Engagement Task Force
2013-2022	Bridges to Belmont First-Generation College Student Advisor
2021	Belmont University President Inauguration Committee
2018-2021	College of Pharmacy Co-Curricular Committee Chair
2020-2021	College of Pharmacy Interprofessional Education Committee
2018-2021	College of Pharmacy Awards Committee
2015-2021	Teaching Certificate for Pharmacy Residents Mentor
2019	American Association of Colleges of Pharmacy Delegate
2016-2018	College of Pharmacy Admissions Committee Member
2016-2018	Accreditation Council for Pharmacy Education Self Study Steering Committee
2016-2018	University Appointments Committee
2015-2018	College of Pharmacy Academic and Professional Standards Committee
2015-2016	College of Pharmacy Faculty Affairs Committee
2016	Microbiology Faculty Search Committee Chair
2016	Continuing Education Program Administrator Search Committee
2016	Laboratory Manager Search Committee
2014-2016	University Faculty Work-Life Committee
2011-2016	Founder and Faculty Advisor, Student National Pharmaceutical Association Chapter
2012-2014	College of Pharmacy Curriculum Committee Chair
2012-2013	University Graduate Catalog and Curriculum Committee
2011-2013	College of Pharmacy Admissions Committee Member

PROFESSIONAL AND PUBLIC SERVICE

2022-present	Association of Biochemistry Educators: Justice, Equity, Diversity & Equity Committee Member
2019-present	Association of Biochemistry Educators Board Member

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

TEACHING EXPERIENCE

Graduate and Professional Education Courses

Fall 2024	Role: Course Designer, Developer, Coordinator, and Instructor PHM 6104: Integrated Pharmaceutical Sciences 1, 2 & 3 Belmont University, Nashville, TN 3 credit hours/each (9 total) Number of students per semester: 50-100
Spring 2012-2024 Summer 2022	Role: Course Co-developer, Coordinator, and Instructor PHM 6145: Pharmacodynamics 2 Belmont University, Nashville, TN 3 credit hours Number of students per semester: 50-100
Fall 2011-2023 Summer 2019	Role: Course Designer, Developer, Coordinator, and Instructor PHM 6115: Biochemistry for Pharmacy Belmont University, Nashville, TN 4 credit hours Number of students per semester: 50-100
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 Fall 2012-2018	Role: Course Designer, Developer, Coordinator, and Instructor PHM 6991: Natural Products Belmont University, Nashville, TN 2 credit hours Number of students per semester: 20-25
Fall 2017-2020 Spring 2019	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
Fall 2019-2021	Role: Course Designer, Developer, Coordinator, and Instructor PHM 6995: Advanced Pharmacy Practice Experience – Special Topics: Pharmacy Academia Belmont University, Nashville, TN 2 credit hours Total number of students: 5
Summer 2014-2022	Role: Course Designer, Developer, Coordinator, and Instructor PHM 6995: Advanced Pharmacy Practice Experience – Special Topics: Translational Research Belmont University, Nashville, TN 2 credit hours Total number of students: 8
Spring 2013-2019	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)
Spring 2012	Role: Course Designer, Developer, Coordinator, and Instructor PHM 6115: Medicinal Plants & Culture of Central American Rainforests Belmont University, Nashville, TN 2 credit hours Total number of students: 2
Fall 2014	Role: Course Designer, Developer, Coordinator, and Instructor PHM 6993: Cross-Cultural Communication

Belmont University, Nashville, TN
2 credit hours
Number of students: 16

Spring 2010/2011

Role: Course Developer and Instructor
Tumor Cell Biology Lecture Series
Georgetown University, Washington, DC
Lecture Title: “Mouse models of carcinogenesis”
1 contact hour
Number of students per semester: 20

Fall 2010

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

Fall 2003

Winter 2004

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

Undergraduate Courses

Fall 2018

BMB 4700: Research Biochemistry and Molecular Biology II
Role: Instructor
Belmont University, Nashville, TN

Spring 2004-2005

Pharmacy 694: “Puerto Rico- A Cultural Look at Health Care”
The Ohio State University, Columbus, OH

Spring 1998

FARM 7235: Research, Education, and Scientific Method
Laboratory III
Bachelor of Pharmaceutical Sciences program
University of Puerto Rico, San Juan, PR

Winter 1998

FARM 7136: Research, Education, and Scientific Method
Laboratory II

University of Puerto Rico, San Juan, PR

Fall 1997

FARM 7135: Research, Education, and Scientific Method
Laboratory I
University of Puerto Rico, San Juan, PR

HONORS AND AWARDS

- 5/2024 Faculty Award for Teaching Excellence, Belmont University Pharmacy Program, Nashville, TN
- 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 Recipient, 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 American Association of Colleges of Pharmacy 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

Kern Family Fund Belmont University	Diaz-Cruz (PI) \$15,000 direct costs	2/2024 - 3/2025
<i>"Using the Transformational Leadership Model to Advance Human Potential"</i>		
KG090187 Susan G. Komen for the Cure Postdoctoral Fellowship	Furth (PI); Diaz-Cruz (Fellow) \$180,000 direct costs	9/2008 - 9/2011
<i>"Disrupted estrogen signaling pathways collaborate with loss of p53 in the development of preneoplasia in breast cancer"</i>		
R01 CA112176 NIH Diversity Grant	Furth (PI); Diaz-Cruz (Fellow) \$90,000 direct costs	4/2008 - 3/2010
<i>"Progression and Regression of Mammary Preneoplasia"</i>		
R01 CA112176	Furth (PI); Diaz-Cruz (Fellow)	8/2007 - 11/2008

NIH Supplement	\$20,000 direct costs	
<i>“Generation of a transgenic mouse model with a conditional over-expression of aromatase in the mammary gland”</i>		
CA09686-09	Riegel (PI); Diaz-Cruz (Fellow)	9/2005 - 8/2007
NIH T32 Training Grant in Tumor Biology		
Advisor: Priscilla A. Furth		
GM08512	Tsai (PI); Diaz-Cruz (Fellow)	8/2001 - 7/2004
NIH T32 Chemistry and Biology Interface Training Program Grant		
Advisor: Robert W. Brueggemeier		
NIH R25	Ghaly (PI); Diaz-Cruz (Fellow)	5/1998 - 6/2000
NIH-Bridges to the Doctorate for Underrepresented Students		
Advisor: Mikhail Antoun		

COLLABORATIVE ACTIVITIES

Joint Research Activities

12/2020 – 5/2024	Dismantling Disparities: Using a Social Determinants of Health Framework to Teach Health Disparities to Pharmacy Students Associate investigator: Long, S.
3/2019 – 5/2023	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.

PEER-REVIEWED JOURNAL ARTICLES & PUBLICATIONS

Diaz-Cruz E.S., Long S.A. Educational Tools to Dismantle Disparities by Addressing Social Determinants of Health. Pharmacy Education. 23 (1):252-261, 2023.

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. Sep 20;31(6):1-4, 2021.

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.

Allothman 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: 104-11, 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 sulfonamide 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.

CONFERENCE PRESENTATIONS (PEER-REVIEWED)

McCoy E., **Diaz-Cruz E.S.**, Hess M., Fadda H., Gonyeau M.J., Grindrod K., Gumina G., Kahaleh A.A., Nagel A., Phillip A., Prudencio J., Sampognaro L., Shealy K.M., Strachan D.A., Van Amburgh J.A., Edwards K.L. ALFP Debate: Schools/Colleges of Pharmacy Have an Obligation to Train Their Students to Use Artificial Intelligence Tools for Pharmacy Practice. American Association of Colleges of Pharmacy Annual Meeting. Boston, MA, 2024.

Henin N., **Diaz-Cruz E.S.** Signaling Pathways Underlying the Antiproliferative Effects of Metformin and Lovastatin in Triple-Negative Breast Cancer Cells. American Pharmacists Association Annual Meeting, Atlanta, GA, 2023.

Richardson C., **Diaz-Cruz E.S.**, Yodh, J., Fulton, T. Advancing Diversity, Equity, and Inclusion in Biochemistry Education. Association of Biochemistry Educators Annual Meeting. Kiawah Island, SC, 2023.

Diaz-Cruz E.S. Creating an Inclusive Biochemistry Learning Environment. Association of Biochemistry Educators Annual Meeting. Kiawah Island, SC, 2023.

Harvin A., **Diaz-Cruz E.S.**, Green S., Oyeyemi T., Quince S., Winkfield K. Developing workforce diversity in cancer care. Advanced Topics for Oncology Pharmacy Professionals Summit. San Diego, CA, 2022.

Diaz-Cruz E.S., Campbell H., Butler L. Daring to teach the whole truth: Structural racism, structural competence, and health inequities. Pharmacy Education 2021: American Association of Colleges of Pharmacy 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 American Association for Cancer Research-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 American Association for Colleges of Pharmacy 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 American Association for Cancer Research 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 American Association for Cancer Research 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 American Association for Cancer Research 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 Icacinaceae 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? American Association of Colleges of Pharmacy 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
Association of Biochemistry Educators
National Association for the Advancement of Colored People
Phi Lambda Sigma Pharmacy Leadership Society
The Rho Chi Society