

BIOGRAPHICAL SKETCH

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NAME: Bandera, Elisa Victoria

eRA COMMONS USER NAME (credential, e.g., agency login): bandera

POSITION TITLE: Professor and Chief, Cancer Epidemiology and Health Outcomes; Co-Leader, Cancer Prevention and Control; Unilever Endowed Chair in Nutrition and Cancer Prevention; Director, Cancer Prevention and Outcomes Data Support (CPODS) Shared Resource

EDUCATION/TRAINING (*Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.*)

| INSTITUTION AND LOCATION | DEGREE (if applicable) | Completion Date MM/YYYY | FIELD OF STUDY |
|---|------------------------------|-------------------------------|--------------------------------------|
| University of Malaga, School of Medicine, Spain | M.D. | 06/1985 | Medicine and Surgery |
| State University of New York at Buffalo, NY | Post-Doc | 12/1991 | Cancer Epidemiology |
| State University of New York at Buffalo, NY | Ph.D. | 05/1995 | Epidemiology and Community Health |

A. Personal Statement

I joined the Rutgers Cancer Institute of New Jersey in 2002 and am currently a tenured professor. I was appointed CPC Co-Leader in 2016, Chief of Cancer Epidemiology and Health Outcomes in 2018, and Unilever Endowed Chair in Nutrition and Cancer Prevention in 2021. I have also served as Director of the Cancer Prevention and Outcomes Data Support (CPODS) Shared Resource since 2020. I have extensive research experience, being involved in cancer epidemiology studies for over two decades, in most cases leading the projects. I also served as Director of the Data Collection Core for the AMBER Consortium (P01CA151135) for over five years. My major research interests include the impact of obesity and body composition and related factors on breast and ovarian cancer risk, treatment outcomes and survival, focusing on cancer health disparities. I have led multiple NCI-funded transdisciplinary cancer epidemiologic studies. My research collaborations involve many national and international collaborations, including participation in several research consortia as study PI (e.g., OCAC, AMBER, OCWAA, LAGENO), leading to over 300 publications. I have served as PI in several epidemiologic cohort studies, including the Women's Circle of Health Follow-up Study (**R01CA185623**) and the New Jersey Breast Cancer Survivors Study of Black and Hispanic breast cancer survivors (funded by the NJ Commission on Cancer Research), both of which aim to evaluate factors impacting survivorship and prognosis in minority and medically underserved minority women; and KP-ROCS (Kaiser Permanente- Research in Ovarian Cancer Survival), a cohort study aiming to evaluate multi-level risk factors for racial/ethnic disparities in treatment outcomes and survival after a diagnosis of ovarian cancer (**R01CA24318**). I am also site PI in a multi-site study evaluating factors affecting ovarian cancer survival in Black women (**R01CA237318**). I have extensive experience in recruitment of minority and underserved populations, in-person interviewing for data collection, anthropometric and blood pressure measurements, dietary assessment methods, biospecimen collection, medical and pharmacy records acquisition (R01CA185623, R01CA237318) and abstraction and health services research using electronic medical records (R01CA243188). I am also fluent in Spanish, and during her 20+ years at Rutgers, she have developed strong relationships with the New Jersey State Cancer Registry, cancer advocates and community agencies, which facilitate recruitment, particularly for minority and underserved populations. I have served on numerous advisory boards and expert panels for several organizations, including the American Cancer Society, the National Cancer Institute, the American Institute for Cancer Research (AICR) and the World Cancer Research Fund International (WCRF), and the International Agency for Research on Cancer. I also served as Chair of the Lifestyle Behaviors, Energy Balance and Chemoprevention Special Interest Group of the American Society of Preventive Oncology (ASPO) and co-chaired the 2021 ASPO Meeting: Health Equity, Culture, and Cancer. I have an extensive successful history of mentoring diverse pre-doctoral and postdoctoral trainees, and junior faculty, serving as mentor in 3 NIH K01s, 2 K07s, and 1 K99/R00 grant, and four Research Supplements to Promote Diversity in Health-Related Research, which helped these junior investigators to obtain promotions and some of them, leadership positions. Given my extensive leadership,

mentoring and research experience, I am well qualified and honored to continue serving as Co-Leader of the Cancer Prevention and Control Program and Director of CPODS Shared Resource.

Ongoing and recently completed projects that I would like to highlight include:

R01 CACA243188

Doherty/Bandera/Gomez/Kushi (MPI)

07/01/2020-06/30/2025

Racial/ethnic differences in ovarian cancer treatment and survival: an integrative approach

R01 CA185623

Bandera (contact)/Hong/Demissie (MPI)

09/11/2014-08/31/2022

Obesity, related comorbidities, and breast cancer outcomes in African Americans

R01 CA237318

Schildkraut (PI) Bandera (site PI)

07/01/2020-06/30/2025

Ovarian Cancer Survival in African American Women

R37CA222793 (formerly R01 CA222793)

Kantor (PI)

01/01/2018-12/31/2024

Obesity, chemotherapy dosing and breast cancer outcomes

P30 CA072720 NIH/NCI

Libutti (PI) Bandera (Cancer Prevention and Control Program Leader)

03/01/2019-02/28/2024

Cancer Center Support Grant (CCSG) - Cancer Prevention and Control Program

Relevant citations to this application that I would like to highlight:

- a. Qin B, Kim K, Goldman N, Rundle AG, Chanumolu D, Zeinomar N, Xu B, Pawlish KS, Ambrosone CB, Demissie K, Hong CC, Lovasi GS, **Bandera EV**. Multilevel factors for adiposity change in a population-based prospective study of Black breast cancer survivors. *J Clin Oncol*. 2022 Mar 25;JCO2102973. doi: 10.1200/JCO.21.02973. Online ahead of print. PMC9273374
- b. **Bandera EV**, Qin B, Lin Y, Zeinomar N, Xu B, Chanumolu D, Llanos A, Omene CO, Pawlish KS, Ambrosone CB, Demissie K, Hong CC. Association of body mass index, central obesity, and body composition with mortality among Black breast cancer survivors. *JAMA Oncol* 2021 Jun 4;7(8):1-10. PMC8377573
- c. **Bandera EV**, Demissie K, Qin B, Llanos AAM, Lin Y, Xu B, Pawlish K, Plascak JJ, Tsui J, Omilian AR, McCann W, Yao S, Ambrosone CB, Hong CC. The Women's Circle of Health Follow-Up Study: a population-based longitudinal study of Black breast cancer survivors in New Jersey. *J Cancer Surviv*. 2020 Jun;14(3):331-346; PMC7261243.

B. Positions, Scientific Appointments, and Honors

| | |
|--------------|---|
| 2021-present | Unilever Endowed Chair in Nutrition and Cancer Prevention, Robert Wood Johnson Medical School (RWJMS) |
| 2020-present | Director, Cancer Prevention and Outcomes Data Support (CPODS) Shared Resource, Rutgers Cancer Institute of New Jersey |
| 2018-present | Chief, Cancer Epidemiology and Health Outcomes, Rutgers Cancer Institute of NJ |
| 2016-present | Co-Leader, Cancer Prevention and Control Program, Rutgers Cancer Institute of NJ |
| 2015-present | <i>Professor with Tenure</i> , Rutgers Cancer Institute of New Jersey, Medical Oncology, Department of Medicine, RWJMS, New Brunswick, NJ |
| 2015-present | <i>Professor</i> , Rutgers School of Public Health, Department of Biostatistics and Epidemiology, Rutgers, The State University of New Jersey, Piscataway, NJ |
| 2012-2015 | <i>Associate Professor</i> , Rutgers Cancer Institute of New Jersey, Division of Medical Oncology, Department of Medicine, RWJMS, New Brunswick, NJ |
| 2009-2015 | <i>Associate Professor</i> , Rutgers School of Public Health, Department of Epidemiology, |

| | |
|--------------|--|
| 2009-2012 | <i>Associate Professor, The Cancer Institute of New Jersey (CINJ), Division of Surgical Oncology, Department of Surgery, RWJMS, New Brunswick, NJ</i> |
| 2007-present | <i>Member, NIEHS Center for Environmental Exposures and Disease, Environmental Cancer Core, Environmental and Occupational Health Sciences Institute, Piscataway, NJ</i> |
| 2003-2009 | <i>Assistant Professor, School of Public Health, Department of Epidemiology, University of Medicine and Dentistry of New Jersey, Piscataway, NJ</i> |
| 2002-present | <i>Member, Graduate Faculty, Rutgers University, Department of Nutritional Sciences, New Brunswick, NJ</i> |
| 2002-present | <i>Full Member, Cancer Prevention and Control Program, Rutgers CINJ</i> |
| 2002-2009 | <i>Assistant Professor, The Cancer Institute of New Jersey (CINJ), Division of Surgical Oncology, Department of Surgery, UMDNJ-Robert Wood Johnson Medical School (RWJMS), New Brunswick, NJ</i> |
| 2000-2002 | <i>Research Scientist, Rutgers University, Nutritional Sciences, New Brunswick, NJ</i> |
| 1995-1999 | <i>Principal Investigator, Epidemiology Surveillance Program (monitoring health effects of cell phone use), Wireless Technology Research, Washington, DC</i> |
| 1993-1999 | <i>Research Instructor, State University of New York at Buffalo, Department of Social and Preventive Medicine, School of Medicine and Biomedical Sciences, Buffalo, NY</i> |
| 1989-1991 | <i>Postdoctoral Fellow, State University of New York at Buffalo, Department of Social and Preventive Medicine, School of Medicine and Biomedical Sciences, Buffalo, NY</i> |

Professional Memberships/Service (Selected)

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|-----------------|--|
| February 2023 | <i>Ad Hoc Reviewer, NCI Outstanding Investigator Award (R35)</i> |
| October 2022 | <i>Ad Hoc Reviewer, Cancer Centers Study Section (A); NCI-A RTRB-Y (E2)</i> |
| 2020-2023 | <i>Member, World Cancer Research Fund International /American Institute for Cancer Research Global Cancer Update Expert Committee on the impact of nutrition and physical activity on cancer incidence, London, UK</i> |
| November 2021 | <i>External Reviewer, NIH Integrative Tumor Epidemiology Branch (ITEB) of the National Cancer Institute Intramural Program, Rockville, MD.</i> |
| 2020-2021 | <i>Program Chair, 2021 American Society of Preventive Oncology Annual Meeting: Health Equity, Culture, and Cancer, March 29-April 1, 2021.</i> |
| May 2018 | <i>External Reviewer, NIH-National Cancer Institute Intramural Program in Metabolic Epidemiology, Rockville, MD.</i> |
| January 2018 | <i>Member, External Review Panel of the Section of Nutrition and Metabolism, International Agency for Research on Cancer (IARC)/World Health Organization, Lyon, France.</i> |
| 2017-2021 | <i>Committee Member, American Cancer Society's Guidelines on Nutrition and Physical Activity for Cancer Prevention and Survival 2019</i> |
| February 2017 | <i>Ad Hoc Member, NIH- National Cancer Institute Special Emphasis Panel-Program Project II (P01) ZCA1 RPRB-F (M1) P</i> |
| 2016-2020 | <i>Member, NIH Study Section - Cancer, Heart, and Sleep Epidemiology Panel B (CHSB)</i> |
| 2015-2019 | <i>Chair (2017-2019), Lifestyle Behaviors, Energy Balance and Chemoprevention Special Interest Group of the American Society of Preventive Oncology. Vice Chair (2015-2017)</i> |
| October 2015 | <i>Ad Hoc Member, National Cancer Institute CASE-EPIC Panel B (NIH /CSR/ ZRG1 PSE-U90S Study Section)</i> |
| 2013-present | <i>Member, Scientific Advisory Panel, Breast Cancer Fund (renamed Breast Cancer Prevention Partners since 2017)</i> |
| 2013 | <i>Ad Hoc Member, National Cancer Institute Special Emphasis Panel/Scientific Review Group ZCA1 SRLB-B for Cancer Management, Epidemiology, and Health Behavior</i> |
| 2010-2015 | <i>Ad Hoc Member, National Cancer Institute Special Emphasis Panel (SEP) Loan Repayment Program for Clinical Research</i> |
| 2010-2011 | <i>Committee Member, American Cancer Society's Guidelines on Nutrition and Physical Activity for Cancer Prevention and Survival 2011</i> |
| 2009-2010 | <i>Member, World Cancer Research Fund International RFA on Biomarkers Research/Grant Review International Panel</i> |
| 2007-2019 | <i>Member, World Cancer Research Fund International /American Institute for Cancer Research Continuous Update Expert Panel, London, UK</i> |
| 2006-2012 | <i>Member, Grant Review Panel I, American Institute for Cancer Research, Washington, DC</i> |
| 2005-2009 | <i>Standing Member, National Cancer Institute Initial Review Group Subcommittee J for Population and Patient-Oriented Training, National Institutes of Health</i> |
| 2003-2005, 2010 | <i>Ad Hoc Member, NCI Initial Review Group Subcommittee G for Education, NIH</i> |

Other Professional Activities

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|--------------|---|
| 2021-present | Member, Clinical Trial Diversity Advisory Board, Pfizer Inc |
| 2020-2022 | Member, NJ Department of Health, Commissioner of Health's Health Equity Professional Advisory Committee on the promotion of equity in the health response to COVID-19 |

C. Contribution to Science

1. **Breast cancer in African American (AA) women.** I was one of the PIs in the Women's Circle of Health Study (WCHS), a case-control study designed to evaluate risk factors for early onset and aggressive breast cancer in Black women. We have published more than 30 manuscripts from the study reporting on the impact of reproductive, nutrition and genetic factors on breast cancer risk in AA women. More recently, we pooled data with three other studies forming the AMBER Consortium, which has led to >25 publications, with many others under review or in preparation. I published two manuscripts on the association with BMI and body fat distribution in WCHS and one evaluating the impact of obesity and body fat distribution on breast cancer subtypes in the AMBER consortium. This was novel because, while there was an extensive body of literature on obesity and breast cancer in whites, not much was known about the impact in AA women. I have also led the Women's Circle of Health Follow-up Study, a cohort of Black breast cancer survivors and published several manuscripts evaluating the impact of obesity and body composition and other factors on survival.
 - a. **Bandera EV**, Qin B, Lin Y, Zeinomar N, Xu B, Chanumolu D, Llanos A, Omene CO, Pawlish KS, Ambrosone CB, Demissie K, Hong CC. Association of body mass index, central obesity, and body composition with mortality among Black breast cancer survivors. *JAMA Oncol* 2021; 7(8):1-10.. PMC8377573
 - b. **Bandera EV**, Chandran U, Hong CC, Troester MA, Bethea TN, Adams-Campbell LL, Haiman CA, Park SY, Olshan AF, Ambrosone CB, Palmer JR, Rosenberg L. Obesity, body fat distribution, and risk of breast cancer subtypes in African American women participating in the AMBER Consortium. *Breast Cancer Res Treat.* 2015;150(3):655-66. PMC4440799.
 - c. **Bandera EV**, Chandran U, Zirpoli G, Gong Z, McCann SE, Hong CC, Ciupak G, Pawlish K, Ambrosone CB. Body fatness and breast cancer risk in women of African ancestry. *BMC Cancer.* 2013;13:475. doi: 10.1186/1471-2407-13-475. PMC3853021.
 - d. **Bandera EV**, Chandran U, Zirpoli G, Ciupak G, Bovbjerg DH, Jandorf L, Pawlish K, Freudenheim JL, Ambrosone CB. Body size in early life and breast cancer risk in African American and European American women. *Cancer Causes Control.* 2013;24(12):2231-43. PMC3886722.
2. **Role of obesity on chemotherapy dosing and ovarian cancer survival.** I conducted the first study to evaluate the impact of obesity on chemotherapy dosing and survival after an ovarian cancer diagnosis in a large cohort study based at Kaiser Permanente Northern California (K22CA138563, PI: Bandera). We demonstrated that body size should not influence chemotherapy dose decisions. We also evaluated disparities in chemotherapy dosing and survival in this study. I was also involved in analyses evaluating the impact of obesity on ovarian cancer survival in the *Ovarian Cancer Association International Consortium (OCAC)*, a collaborative group of the leading international experts in ovarian cancer research.
 - a. **Bandera EV**, Lee VS, Qin B, Rodriguez-Rodriguez L, Powell CB, Kushi LH. Impact of body mass index on ovarian cancer survival varies by stage. *Br J Cancer.* 2017;117(2):282-289. PMC5520512.
 - b. **Bandera EV**, Lee V, Rodriguez-Rodriguez L, Powell B, Kushi LH. Racial/ethnic disparities in ovarian cancer treatment and survival. *Clinical Cancer Research* 2016; 22(23):5909-5914. PMC5135649.
 - c. **Bandera EV**, Lee VS, Rodriguez-Rodriguez L, Powell CB, Kushi LH. Chemotherapy dosing and ovarian cancer survival in relation to body mass index. *JAMA Oncology* 2015 Sep 1;1(6):737-45. PMC4567489.
3. **Epidemiology of ovarian cancer in African American women.** I served as site PI (leading the NJ site) in an NCI-funded multi-site case-control study, which includes participants in eleven states (AACES: African American Cancer Epidemiology Study), the largest study to date evaluating risk factors for ovarian cancer in AA women. Specifically, I played a leading role on nutritional epidemiology analyses. Over 30 manuscripts have already been published from this study.
 - a. **Bandera EV**, Qin B, Alberg AJ, Barnholtz-Sloan J, Bondy M, Cote ML, Funkhouser E, Peters E, Schwartz A, Terry P, Moorman PG, Schildkraut JM. Obesity, weight gain, and ovarian cancer risk in African Americans. *International Journal of Cancer* 2016 139(3):593-600. PMC4982766.

- b. Qin B, Alberg AJ, Barnholtz-Sloan J, Bondy M, Cote ML, Funkhouser E, Peters E, Schwartz A, Terry P, Moorman PG, Schildkraut JM, **Bandera EV**. Dairy, calcium, vitamin D and ovarian cancer risk in African-American women. *British Journal of Cancer* 2016; 115(9):1122-1130. PMC5117784.
- c. Qin B, Moorman PG, Kelemen LE, Alberg AJ, Barnholtz-Sloan JS, Bondy M, Cote ML, Funkhouser E, Peters ES, Schwartz AG, Terry P, Schildkraut JM, **Bandera EV**. Dietary Quality and Ovarian Cancer Risk in African-American Women. *Am J Epidemiol.* 2017;185(12):1281-1289. PMC5860470.

4. Food estrogens in women's health. I published two of the first studies suggesting possible beneficial effects for phytoestrogen consumption on endometrial and ovarian cancer risk. The results have important public health implications given the strong hormonal influences on the two cancers, as they provide reassurance that women do not need to avoid soy products and other sources of phytoestrogens to avoid those cancers. I also published the first study evaluating the impact of mycoestrogens and puberty in healthy girls participating in the Jersey Girl Study (PI: Bandera). Specifically, we evaluated the impact of zearalenone mycotoxins and their metabolites (produced by fungal contamination of grains and other food products), as well as zeranol (a synthetic derivative of the mycotoxin zearalenone, banned in other countries but routinely used in the US in cows to increase meat production).

- a. **Bandera EV**, Williams MG, Sima C, Bayuga S, Pulick K, Wilcox H, Soslow R, Zauber AG, Olson SH. Phytoestrogen consumption and endometrial cancer risk: a population-based case-control study in New Jersey. *Cancer Causes Control.* 2009;20(7):1117-27. PMC2761755.
- b. **Bandera EV**, King M, Chandran U, Paddock LE, Rodriguez-Rodriguez L, Olson SH. Phytoestrogen consumption from foods and supplements and epithelial ovarian cancer risk: a population-based case control study. *BMC Womens Health.* 2011;11:40. PMC3196697.
- c. **Bandera EV**, Chandran U, Buckley B, Lin Y, Isukapalli S, Marshall I, King M, Zarbl H. Urinary mycoestrogens, body size and breast development in New Jersey girls. *Sci Total Environ.* 2011;409(24):5221-7. PMC3312601.
- d. Rivera-Núñez Z, Barrett ES, Szamreta EA, Shapses SA, Qin B, Lin Y, Zarbl H, Buckley B, **Bandera EV**. Urinary mycoestrogens and age and height at menarche in New Jersey girls. *Environ Health.* 2019 Mar 22;18(1):24. doi: 10.1186/s12940-019-0464-8. PMC6431018

5. Involvement in the development of national and international dietary guidelines for cancer prevention and survival. I have contributed substantially to public policy by playing a major role in the development of nutritional guidelines for cancer prevention and survival at a national and global scale. I led one of the Systematic Literature Reviews Centers funded by the World Cancer Research Fund (WCRF) to support the 2007 WCRF/AICR (American Institute for Cancer Research) Second Report on Diet, Nutrition, Physical Activity, and Cancer. This publication provided the most comprehensive review of the epidemiologic literature relating dietary factors and cancer published to date, and issued dietary guidelines for cancer prevention. After the report was published, I was invited to serve in the WCRF Continuous Update Expert International Panel, an effort to continue updating the database of relevant literature and providing evidence-based recommendations for global cancer prevention and survival in support of the WCRF/AICR Third Expert Report, released in May 2018. I have also been involved in the American Cancer Society (ACS)'s Guidelines on Nutrition and Physical Activity for Cancer Prevention and Survival Advisory Committees since 2006.

- a. **Bandera EV**, Fay SH, Giovannucci E, Leitzmann MF, Marklew R, McTiernan A, Mullee A, Romieu I, Thune I, Uauy R, Wiseman MJ, World Cancer Research Fund International Continuous Update Project Panel. The use and interpretation of anthropometric measures in cancer epidemiology: A perspective from the World Cancer Research Fund International Continuous Update Project. *International Journal of Cancer* 2016;139(11):2391-2397; PMID: 27352197.
- b. Chan DS, Vieira AR, Aune D, **Bandera EV**, Greenwood DC, McTiernan A, Navarro Rosenblatt D, Thune I, Vieira R, Norat T. Body mass index and survival in women with breast cancer-systematic literature review and meta-analysis of 82 follow-up studies. *Ann Oncol.* 2014;25(10):1901-14. PMC4176449.
- c. Chan DSM, Abar L, Cariolou M, Nanu N, Greenwood DC, **Bandera EV**, McTiernan A, Norat T. World Cancer Research Fund International: Continuous Update Project-systematic literature review and meta-analysis of observational cohort studies on physical activity, sedentary behavior, adiposity, and weight change and breast cancer risk. *Cancer Causes Control.* 2019;30(11):1183-1200.
- d. Rock CL, Thomson CA, Sullivan KR, Howe CL, Kushi LH, Caan BJ, Neuhaus ML, **Bandera EV**, et al. American Cancer Society nutrition and physical activity guidelines for cancer survivors. *CA Cancer J Clin.* 2022;72(3):230-262.

Complete List of Published Work in MyBibliography (>300 publications):

<https://www.ncbi.nlm.nih.gov/myncbi/elisa.bandera.2/bibliography/public/>