

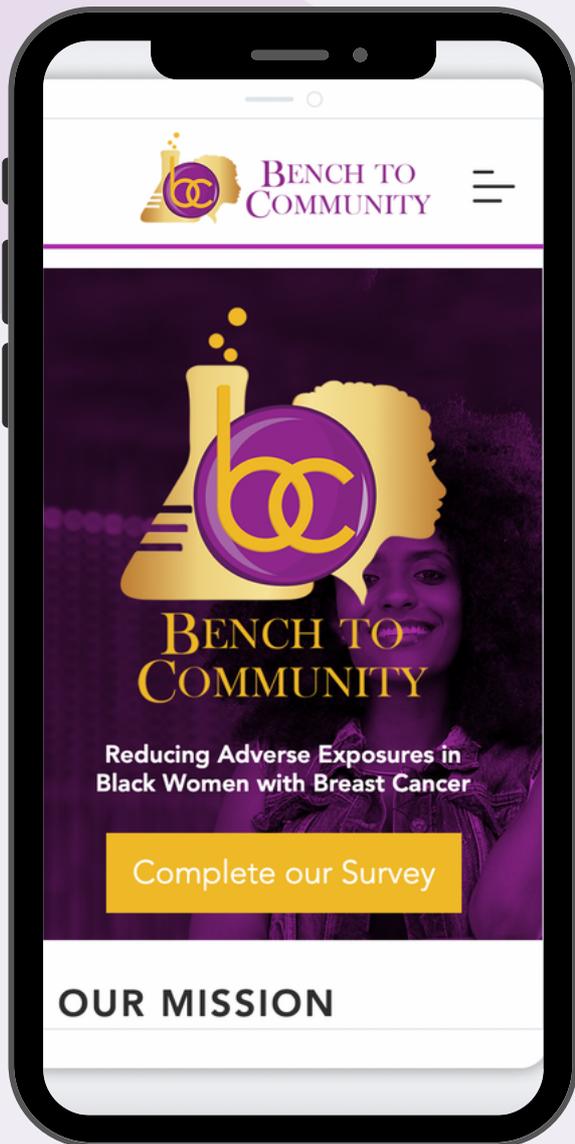


**BENCH TO COMMUNITY  
INITIATIVE (BCI)**

**IMPACT REPORT**

**2022**

# ABOUT BCI



## Mission

To develop community and policy interventions that reduce exposure of harmful chemicals from personal care products and breast cancer risk for Black people.

**For more information, visit [www.bench2community.org](http://www.bench2community.org)  
Have any questions? Email us at [bench2community@gmail.com](mailto:bench2community@gmail.com)**

# OVERVIEW OF 2022

**Abstract/Poster  
Presentations**

**4**

**Manuscripts**

1 Published  
**1** Pending  
Resubmission

**Salon  
Conversation  
Sessions**

**5**

**Bench to  
Community  
Symposium**

**1**

# ABSTRACT PRESENTATIONS

RF22 | PMON05  
**Parabens Promote Pro-Tumorigenic Effects in Luminal Breast Cancer Cell Lines with Diverse Genetic Ancestry**  
 Jazma L. Tapia<sup>1</sup>, Jillian C. McDonough<sup>1</sup>, Emily L. Cauble<sup>1</sup>, Dedee K. Teteh<sup>2</sup>, Lindsey S. Treviño<sup>1</sup>  
<sup>1</sup>Department of Population Sciences, Division of Health Equities, City of Hope, Duarte, CA, 91010, USA  
<sup>2</sup>Department of Health Sciences, Crean College of Health and Behavioral Sciences, Chapman University, Orange, CA, 92866, USA

**ABSTRACT**  
 In the United States, Black women are 20% more likely to die from breast cancer compared to White women (NCCN Cancer Carelines Progress Report 2020). While the underlying cause of these disparities is multifactorial, exposure to endocrine-disrupting chemicals (EDCs) in hair and personal care products has been associated with increased risk of breast cancer. Parabens are known EDCs that are commonly used as preservatives in hair and other personal care products. Studies have shown that parabens affect breast cancer cell proliferation, death, angiogenesis, and metastasis, as well as gene expression in vitro. However, these studies were conducted using cell lines of European ancestry. To date, no studies have assessed breast cancer cell lines of West African ancestry to examine effects of parabens. We hypothesize that unlike its white counterparts, breast cancer cell lines with conserved ancestry (genetics) will promote pro-tumorigenic effects in breast cancer cell lines with West African ancestry. To test this hypothesis, we treated MCF-7 (European ancestry) and HCC1598 (West African ancestry) luminal breast cancer cell lines with methyl-, propyl-, or butylparaben. Our results suggest that cell viability and gene expression are affected by paraben exposure.

**INTRODUCTION**  
 • In the USA, 1 in 8 women will develop breast cancer.  
 • Black women are at a higher risk of developing breast cancer under the age of 45 than any other racial or ethnic group.  
 • Social-behavioral practices (i.e., hair and personal care product use) expose Black women to harmful chemicals that enter homes in the body.  
 • Parabens are endocrine-disrupting chemicals (EDCs) found in these products.  
 • The Environmental Working Group scores methylparaben (MP), propylparaben (PP), and butylparaben (BP) moderate (MP) to high (BP and PP) on a hazardous score of chemicals found in personal care products.  
 • Gap in knowledge: Studies have only been conducted in European ancestry cell lines.

**RESULTS**  
 Figure 1: Luminal breast cancer cell lines with conserved ancestry (West African) and European ancestry (White) were treated with methyl-, propyl-, or butylparaben. Cell viability and gene expression were measured. Figure 2: Gene expression analysis of breast cancer cell lines with conserved ancestry (West African) and European ancestry (White) treated with methyl-, propyl-, or butylparaben. Figure 3: Gene expression analysis of breast cancer cell lines with conserved ancestry (West African) and European ancestry (White) treated with methyl-, propyl-, or butylparaben.

**CONCLUSIONS**  
 • BP increases EDC100 cell survival and proliferation (CI 102, 76) does not inhibit the effect.  
 • BP and PP are not cell growth promoters of HCC1598 cells in HCC1598 treated in both cell lines.  
 • Consistency with literature demonstrates that parabens, including BP and PP, promote pro-tumorigenic effects in luminal breast cancer cell lines. However, paraben exposure synergizes the effect of EDC100 treatment.  
 • These findings have translational relevance as we are part of a community-led initiative called Black is Beautiful (BIB), which aims to reduce breast cancer disparities by increasing the genetic diversity of breast cancer cell lines used in research. We currently plan to include West African ancestry cell lines in our research to better assess exposure to EDCs in hair and other personal care products in Black women.  
 • Future studies will include assessing pro-tumorigenic effects on paraben exposure and increased use of EDC100 treated breast cancer.

**ACKNOWLEDGMENTS and REFERENCES**  
 • This work was supported by the City of Hope Cancer Research Program. We thank Dr. Dedee K. Teteh for her assistance with the cell lines. We thank Dr. Lindsey S. Treviño for her assistance with the cell lines. We thank Dr. Jillian C. McDonough for her assistance with the cell lines. We thank Dr. Emily L. Cauble for her assistance with the cell lines. We thank Dr. Jazma L. Tapia for her assistance with the cell lines. We thank Dr. Lindsey S. Treviño for her assistance with the cell lines. We thank Dr. Jillian C. McDonough for her assistance with the cell lines. We thank Dr. Emily L. Cauble for her assistance with the cell lines. We thank Dr. Jazma L. Tapia for her assistance with the cell lines.



**Jazma Tapia, PhD**  
 Postdoctoral Fellow  
 City of Hope Comprehensive Cancer Center

Click [here](#) for the e-Poster Presentation  
**Endocrine Society's Annual Meeting (June 2022 in Atlanta, GA) Rapid Fire e-Poster Presentation**



**Jared T. Bailey, BS**  
 Master of Public Health Candidate, Morehouse School of Medicine

Click [here](#) for a larger view of the poster.  
**San Antonio Breast Cancer Symposium (December 2022 in San Antonio, Texas)**

**Black Breast Cancer Survivors' Sociocultural Perspectives of Beauty, and Use of Personal Care Products Containing Endocrine Disrupting Chemicals**  
 Jared Thomas Bailey BS<sup>1</sup>, Marissa Ericson PhD<sup>2</sup>, Tah Teanlin-Harris<sup>3</sup>, Dorothy Galloway BS<sup>4</sup>, Lena Dawkins-Moslin PhD<sup>5</sup>, Adana A.M. Llanos PhD<sup>6</sup>, Lindsey S. Treviño PhD<sup>7</sup>, Simone Montgomery PhD<sup>8</sup>, Dedee K. Teteh PhD<sup>9</sup>, Morehouse School of Medicine<sup>1</sup>, University of Southern California<sup>2</sup>, My Style Matters<sup>3</sup>, City of Hope Comprehensive Cancer Center<sup>4</sup>, MD Anderson Cancer Center<sup>5</sup>, Columbia University<sup>6</sup>, City of Hope Comprehensive Cancer Center<sup>7</sup>, Loma Linda University<sup>8</sup>, Chapman University<sup>9</sup>

**Background**  
 The passage of H.R. 2116 (CROWN Act) prohibits hair texture and style discrimination based on race or national origin thus theoretically reducing structural barriers to economic mobility<sup>1</sup>. Regardless, hair is synonymous with Black women's identities.  
 Possibly due to society's afro-political ideologies of beauty, Black women tend to use more hair products compared to other racial groups. These standards include social structures that affect self-mediated worth, as well as structural and interpersonal racism based on appearance and societal status.  
 The use of personal care products containing endocrine disrupting chemicals (EDCs) has been shown to increase Black women's breast cancer risk. The *Black identity, hair product use, and breast cancer scale* (BHBS) was developed to measure the sociocultural constructs associated with Black women's hair product use and perceived breast cancer risk. The purpose of the current study was to validate the BHBS and examine hair product use among Black breast cancer survivors.

**Methods**  
 Participants (N=162) completed a 27-item survey between 2020-2022 via a community-based participatory research project<sup>2</sup>. Principal Component Analyses (PCA) and confirmatory factor analysis (CFA) were used to establish the underlying component structures and determine model fit.  
 Chi-square tests were used to determine associations between BHBS subscales and product use with p-values  $\geq 0.05$  defined as statistically significant. Products evaluated included washout and leave-in conditioners, salon and do-it-yourself (DIY) relaxers, and salon and DIY hair dyes. Response options were used daily through several times a year (Daily-yearly), used but stopped, and never used.

**Results**  
**Demographics:** Participants were African American (90%), African or Caribbean (10%) Black breast cancer survivors. The average age and stage of diagnosis was 37.41  $\pm$  8.75 and 1.88  $\pm$  0.97, respectively.  
 Figure 1: PCA yielded two components that accounted for 63% of total variance. Five items measuring sociocultural perspectives about hair and identity (subscales 1, S1) accounted for 28% of total variance ( $\alpha = 0.71$ ; 95% CI = 0.71-0.82). Six items assessing perceived breast cancer risk related to hair product use (subscales 2, S2) accounted for 35% of total variance ( $\alpha = 0.84$ ; 95% CI = 0.81-0.94). CFA confirmed the two-component structure (Root Mean Square Error of Approximation = 0.034; Comparative Fit Index = 0.93; Tucker Lewis Index = 0.89).  
 Figure 2: On average, participants used hair products daily-yearly including conditioners (64%), relaxers (32%), and hair dyes (33%). The use of salon relaxers (S1) and salon relaxers and hair dyes (S2) were significantly associated with the BHBS subscales.  
**Discussion**  
 The BHBS is a valid measure of sociocultural perspectives associated with hair product use and perceived risk for Black breast cancer survivors. Hair remains an important cultural expression within the afro-political confines of identity, and the health impacts of hair products containing EDCs used to craft these identities should be considered in intervention planning.

**References**  
 H.R.2116 - 117th Congress (2021-2022): Creating a Respectful and Open World for Natural Hair Act of 2022. (2022, March 21). <https://www.congress.gov/bills/117/house/2116>.  
 Teteh, D., Ericson, M., Monice, S., Dawkins-Moslin, L., Bahadrori, N., Clark, P., Mitchell, E., Treviño, L. S., Llanos, A., Kettle, R., & Montgomery, S. (2019). The Black identity, hair product use, and breast cancer scale. *PLoS one*, 14(12), e0225305. <https://doi.org/10.1371/journal.pone.0225305>

# MANUSCRIPTS

Published

1

Pending Resubmission

1

**Note: Click on each title to view the article.**

PUBLISHED

**Endocrine-Disrupting Chemicals and Breast Cancer: Disparities in Exposure and Importance of Research Inclusivity**

Ashlie Santaliz Casiano, Annah Lee, Dede Teteh\*, Zeynep Madak Erdogan, Lindsey Treviño\*

\*Included BCI investigators as co-authors only

PENDING RESUBMISSION

**The Bench to Community Initiative : A community-based participatory research model for translating research discoveries into community solutions**

Jazma Tapia, Abigail Lopez, D. Bing Turner, Tonya Fairley, Tiah Tomlin-Harris, Maggie Hawkins, Lindsey S. Treviño, and Dede Teteh

Articles on EDCs and Breast Cancer

Click the button for articles on Endocrine Disrupting Chemicals (EDCs) and breast cancer.

# SALON CONVERSATIONS

Salon Conversations is a safe space for community members to interact with researchers, policy makers, and other stakeholders on the topic of EDCs (endocrine disrupting chemicals), personal care products and health risks with a focus on breast cancer.

The Virtual Watch Party for the Not So Pretty Docuseries hosted by My Style Matters and BCI was a part of the Salon Conversations (SA) series for 2022.



**Note: Click on each episode title to view the video recording.**



### **Episode 0: Kickoff of virtual watch party.**

Speakers:

- Alexandra Marske, Producer | Jane Doe Films
- Amit Rosner, Co-Founder | Clearya
- Janet Nudelman, Senior Director of Program and Policy | BCPP



### **Episode 1: Makeup**

Speaker: Toni Buford, Founder and CEO | Organic Graffiti Cosmetics



### **Episode 2: Nails**

Speaker: Michelle Robinson, Founder and CEO | Demiblue Natural Nails



### **Episode 3: Skincare**

Speaker: Dr. Robin Dodson, Environmental Exposure Scientist | Silent Spring Institute



### **Episode 4: Haircare**

Speaker: Dr. Astrid Williams, Program Manager | Black Women for Wellness

# BENCH TO COMMUNITY SYMPOSIUM

The virtual Bench to Community Symposium was curated by a planning committee with guidance from Community Advisory Board members: Tonya Fairley, Tiah Tomlin-Harris, Bing Turner, and Maggie Hawkins. The planning committee included Dr. Dede Tete, Abigail Lopez, Dr. Jazma Tapia, Dorothy Galloway, and Vierra Chakravarti.

The goal for the symposium was to build awareness, educate, and share advocacy efforts related to endocrine disrupting chemical exposures in hair and other personal care products and associated health risks.

Total Registrants

**180**

Total Participants

**76**

**Date: Friday, September 16, 2022**

**Time: 12 PM - 4 PM**

**Location: Virtual, Whova**

# BENCH TO COMMUNITY SYMPOSIUM

## Planning Committee



(Top row left to right): Dr. Dede Tete, Abigail Lopez, Dr. Jazma Tapia, Dorothy Galloway, and Vierra Chakravarti.

(Bottom row left to right): Tiah Tomlin-Harris, Tonya Fairley, Maggie Hawkins, and D. Bing Turner

Click [here](#) for a larger view of the image.

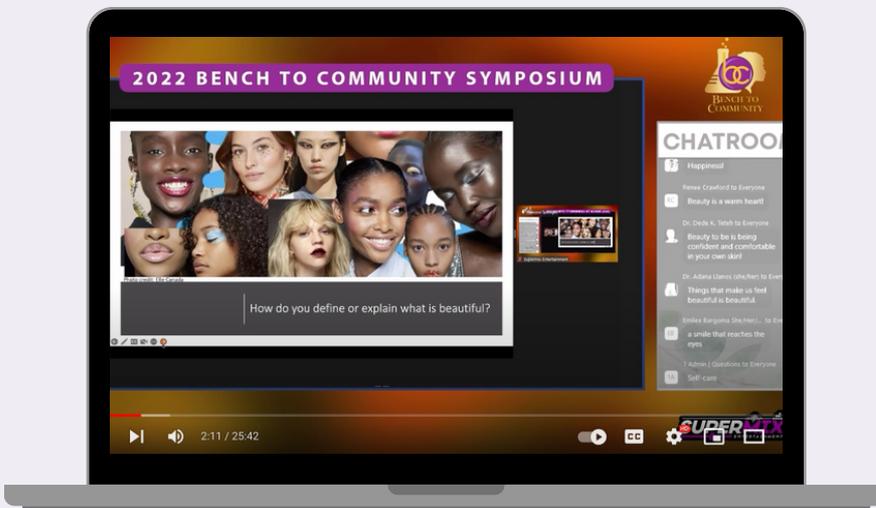
**In the picture:**  
(Top row left to right): Dr. Jazma Tapia and Tonya Fairley  
(Bottom row left to right): D. Bing Turner and Emily Cauble

# BENCH TO COMMUNITY SYMPOSIUM

Click on the underlined session titles to view the session recording.

Session Title	Speaker(s)	Affiliation(s)
<a href="#"><u>About the Bench to Community Initiative</u></a>	Dede Tete, DrPH Bing Turner, MPH	Investigator, BCI Assistant Professor, Chapman University Co-Founder, Heritage Wellness Collective
<a href="#"><u>Beauty Justice and Pregnancy Health Disparities: Moving from Documenting to Taking Action</u></a>	Tamarra James-Todd, Ph.D., MPH	Mark and Catherine Winkler Associate Professor Harvard T.H. Chan School of Public Health
<a href="#"><u>From Yelling to Yoga</u></a>	James Woods, MFT, Certified Yoga Instructor	Dat Yoga Dude
<a href="#"><u>Hair Product Use and Breast Cancer Risk</u></a>	Adana Llanos, PhD, MPH	Associate Professor, Columbia University
<a href="#"><u>The Power of Your Vote!</u></a>	Shannon Lawrence	Founder, I Can Lead!
<a href="#"><u>The Safer Beauty Bill Package and the Black Beauty Red List</u></a>	Janet Nudelman, MA	Senior Director of Program & Policy, Breast Cancer Prevention Partners
<a href="#"><u>Clearya: Nontoxic Shopping Made Easy</u></a>	Amit Rosner, B.SC, MBA	Co-founder, Clearya
<a href="#"><u>Bench to Community's Laboratory Findings</u></a>	Lindsey Treviño, PhD	Investigator, BCI Assistant Professor, City of Hope Comprehensive Cancer Center
(Closing) What's Next	Tiah Tomlin-Harris, MS Maggie Hawkins, MPH	Co-founder, My Style Matters, Inc Lecturer, California State University, Fullerton

# BENCH TO COMMUNITY SYMPOSIUM



Click [here](#) for the event flyer



21% of participants were > or = 60 years old

59.7% of participants self-identified as Black or African American.

74.2% of participants self-identified as Female

41.9% of participants have a graduate degree

42% of participants self-identified as an advocate.

43% of participants learned about the symposium via email.



California



Georgia



New Jersey

Top 3 Participants' State of Residency

# BCI WEBSITE & MEDIA

## Website



15,593  
**Unique Visitors**

The most popular page visitors navigate to is the **resources page**.

## Media

The work BCI is doing received media attention with recent features in popular outlets such as CBS, BET, and INSIDER.



17 Articles



4 Radio Mentions



13 News Segments

United States

Jamaica

Canada

United Kingdom

South Africa

Trinidad and Tobago

Barbados

Website traffic by Location  
Top Unique Visitors' Country of Residency



# SOCIAL MEDIA AND LINKTREE

## Linktree

Linktree allows users to share links all on one site.

<https://linktr.ee/Bench2community>

503  
Views

241  
Clicks



## Social Media



61 followers



Reach: 4,754



608 followers



Reach: 5,875

