



# HEALTH Research Institute ANNUAL REPORT



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**HEALTH**  
Research Institute

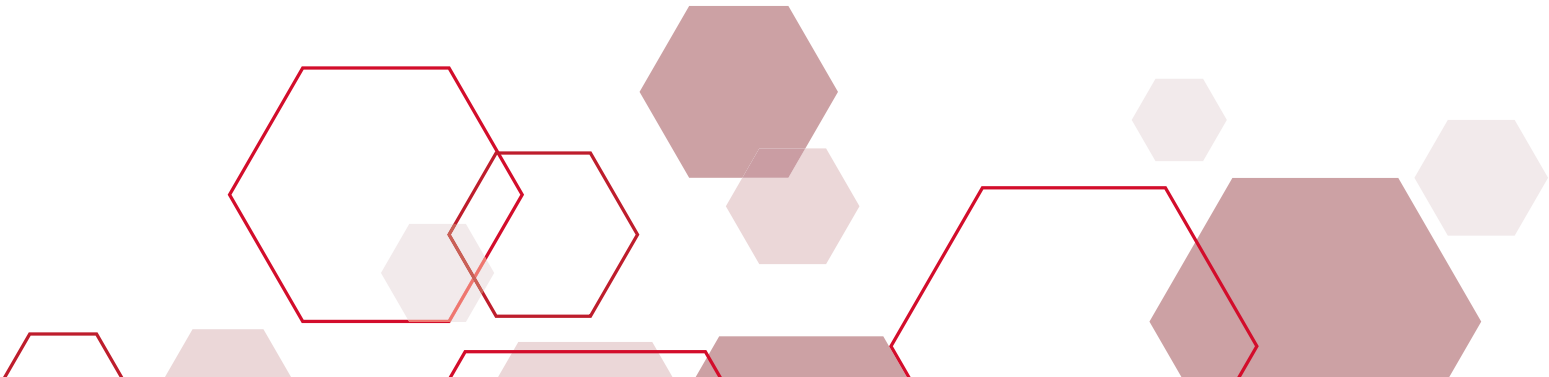
Helping Everyone Achieve a LifeTime of Health





# TABLE OF CONTENTS

<b>ABOUT US</b> <ul style="list-style-type: none"><li>• Institute Information</li><li>• Mission &amp; Objectives</li><li>• Directors</li></ul>	<b>05</b>
<b>PARTICIPATION &amp; PERFORMANCE</b> <ul style="list-style-type: none"><li>• Participation Percentages</li><li>• Participation by College</li><li>• Participation by Department</li></ul>	<b>07</b>
<b>RESEARCH INTEREST &amp; EXPERTISE</b> <ul style="list-style-type: none"><li>• Research Topics</li></ul>	<b>09</b>
<b>SERVICES &amp; AGENCIES</b> <ul style="list-style-type: none"><li>• Services Available</li><li>• Outside Agencies</li></ul>	<b>11</b>
<b>FINANCIAL SUPPORT</b> <ul style="list-style-type: none"><li>• Total Support</li><li>• Sponsors</li><li>• Pilots</li></ul>	<b>13</b>
<b>PROJECT IMPACT</b> <ul style="list-style-type: none"><li>• Taking Texas Tobacco Free</li><li>• Treating Obesity in Underserved Communities in Houston</li><li>• UHAND (University of Houston/MD Anderson Cancer Center) Partnership</li><li>• HEALTH Research Institute</li></ul>	<b>15</b>
<b>FY21 GOALS</b> <ul style="list-style-type: none"><li>• Immediate &amp; Continuing Goals</li></ul>	<b>17</b>





## HEALTH Research Institute

Year established:  
2016

### Directors:

Dr. Ezemenari M. Obasi  
Dr. Lorraine R. Reitzel

### Address:

1100 Health 2  
4849 Calhoun Road  
Houston, TX 77204

### Website:

[hri.uh.edu](http://hri.uh.edu)

## MISSION

The HEALTH Research Institute leverages an interdisciplinary group of researchers at the University of Houston to advance science capable of meeting the health needs of the Houston community and beyond. **Our primary mission is to conduct cutting-edge research that informs novel prevention, early detection, diagnosis, and intervention strategies that mitigate a broad range of health challenges.** Our partnerships with a diverse array of stakeholders informs a growing public health challenge through multi-site cooperative trials, public health initiatives, and empowering dissemination and implementation activities that are embedded in the cultural fabric of the communities we serve.

## VISION

1. **To build an infrastructure** that develops and leverages University of Houston intellectual capacity to advance innovative research in health equity science that addresses the health needs of underserved communities in Houston and beyond.
2. **To develop a novel model** for rapidly translating basic biomedical science into culturally-informed and empirically based prevention, early detection, diagnosis, and intervention strategies for populations most vulnerable to health challenges.
3. **To become the national model** for reducing - and ultimately eliminating - health disparities through strong and equitable partnerships with community-based organizations, faith-based organizations, healthcare agencies, stakeholders, and community members.

## DIRECTORS



### DR. EZEMENARI M. OBASI

Professor & Associate Dean of Research  
Department of Psychological, Health, & Learning Sciences

Dr. Obasi is the Founder & Director of the HEALTH Research Institute. Dr. Obasi's current program of research focuses on addictions, health disparities that disproportionately affect the African American community, stress physiology, and cultural predictors of health behaviors. As the Director of the Hwemudua Addictions and Health Disparities Laboratory (HAHDL) at the University of Houston – a Biosafety Level II laboratory – he takes an interdisciplinary approach (biomarkers, biofeedback, implicit cognitions, genetics, fMRI, experimental manipulations, etc.) and uses a diverse range of settings (community, bar lounge, experimental rooms, medical facilities, etc.) to investigate biological, psychological, social, and cultural determinants of health.



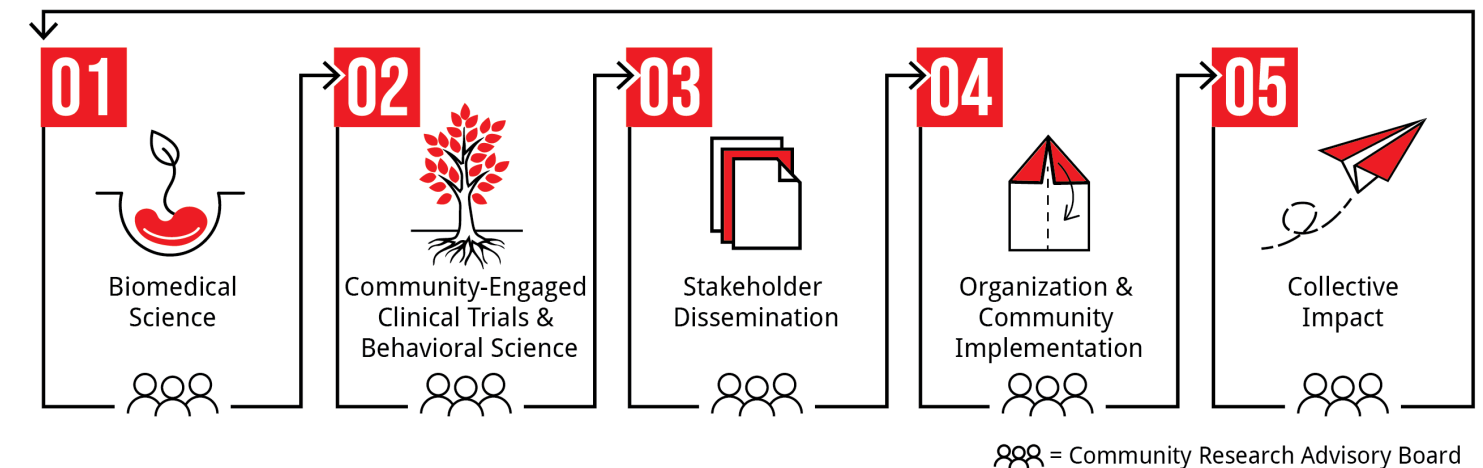
### DR. LORRAINE R. REITZEL

Professor  
Department of Psychological, Health, & Learning Sciences

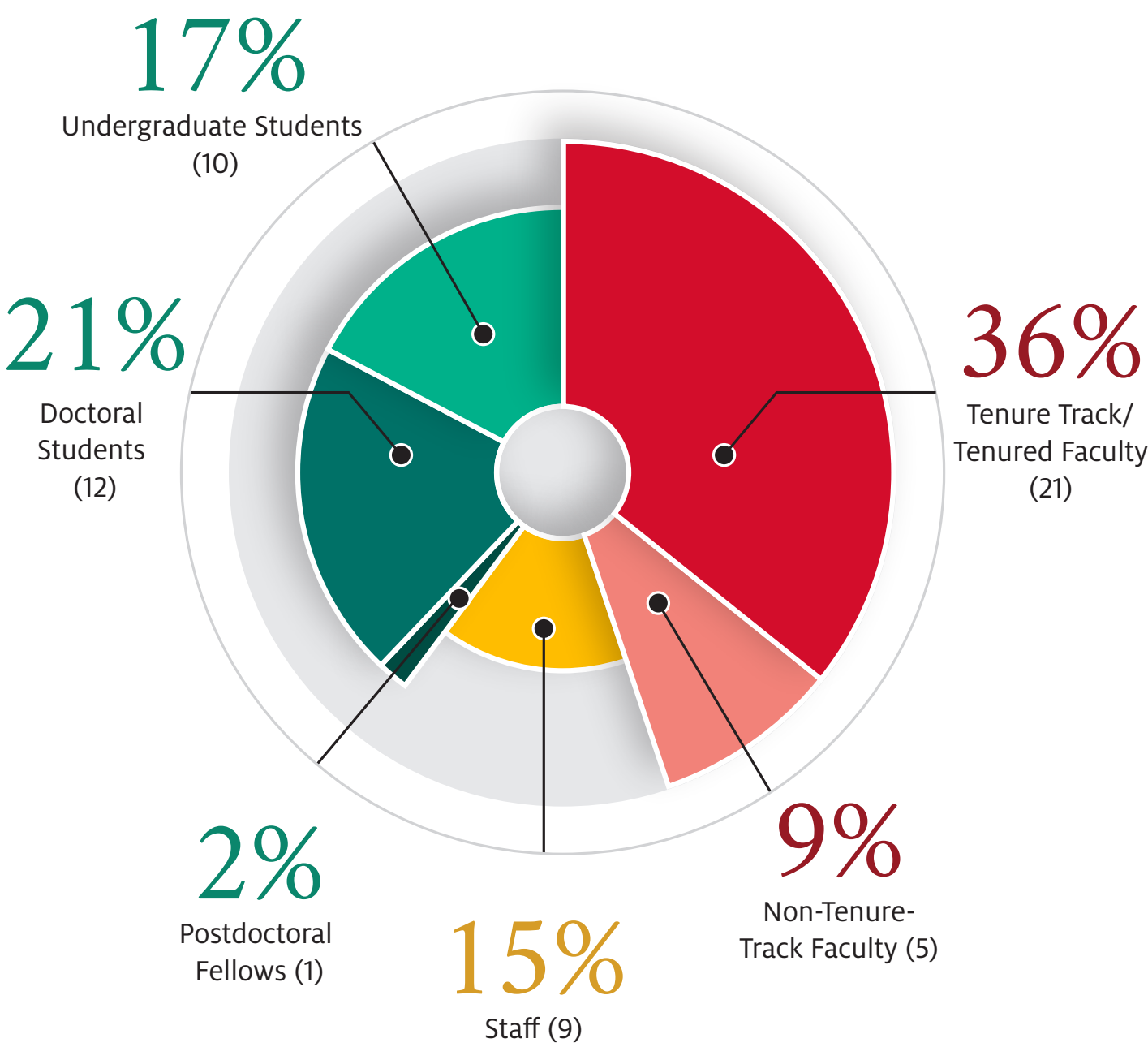
Dr. Reitzel is the Co-Founder & Co-Director of the HEALTH Research Institute. She also directs the Social Determinants and Health Disparities Lab at the University of Houston. Her research program focuses on better understanding the social determinants of health and health risk behaviors - and the specific biopsychosocial mechanisms that account for disparities in health risk behaviors and health outcomes - with an emphasis on generating highly translational results that can be used to inform policy and intervention. Much of her work is focused on addressing health disparities related to tobacco use, alone or comorbid with other substance dependence and health risk behaviors, among low socioeconomic status groups.

## HEALTH RESEARCH MODEL

The HEALTH Research Institute advances a community-engaged research model that rapidly disseminates scientific breakthroughs designed to mitigate, and ultimately eliminate, community-identified health challenges in metropolitan Houston and beyond.



# PARTICIPATION & PERFORMANCE

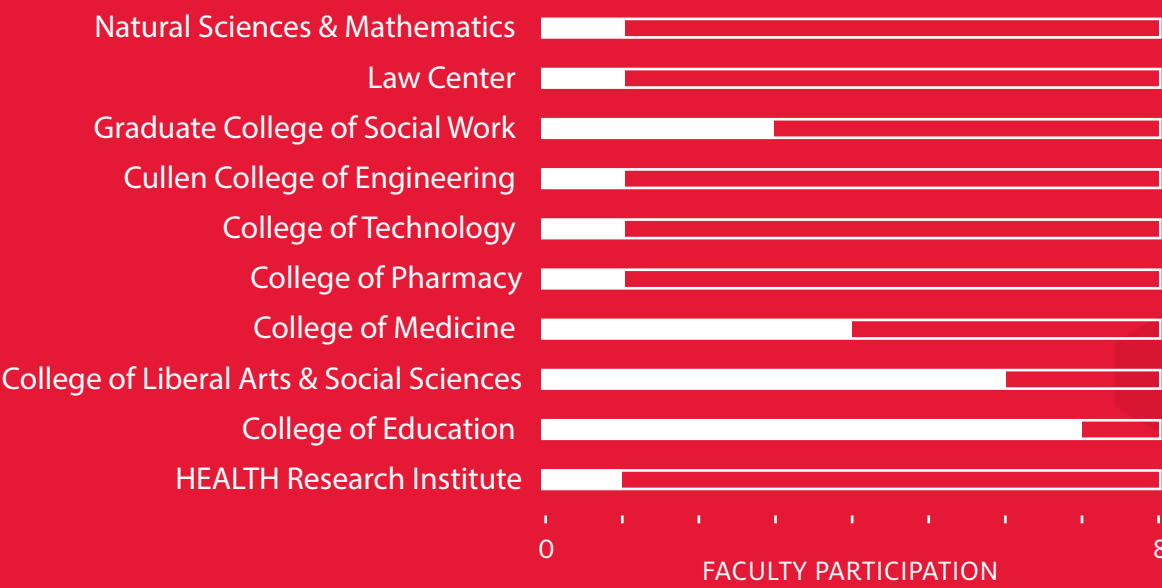


TRAINEES

STAFF

FACULTY

## FACULTY PARTICIPATION BY COLLEGE



## FACULTY PARTICIPATION BY DEPARTMENT

- Biomedical Engineering; Cullen College of Engineering
- Biomedical Sciences; College of Medicine
- Clinical Sciences; College of Medicine
- Community Health; College of Medicine
- Health Systems & Population Health Sciences; College of Medicine
- Engineering Technology; College of Technology
- Graduate College of Social Work
- Health & Human Performance; College of Liberal Arts & Social Sciences
- Psychology; College of Liberal Arts & Social Sciences
- Sociology; College of Liberal Arts & Social Sciences
- Law Center
- Pharmacy Practice & Translational Research; College of Pharmacy
- Physics; Natural Sciences & Mathematics
- Psychological, Health, & Learning Sciences; College of Education
- HEALTH Research Institute; Division of Research





# RESEARCH INTERESTS & EXPERTISE

DIABETES • BEHAVIORAL HEALTH  
BIOLOGICAL MECHANISMS  
OBESITY • BUILT ENVIRONMENT

**C A N C E R**

CLINICAL SCIENCE • CULTURE  
DISCRIMINATION  
FOOD INSECURITY • GIS/GPS

**DISSEMINATION**

IMPLEMENTATION SCIENCE  
PUBLIC POLICY • MENTAL HEALTH  
PHYSICAL ACTIVITY

**S T R E S S**

PREVENTION  
SOCIAL DETERMINANTS  
PSYCHOLOGICAL INTERVENTIONS

**S U B S T A N C E  
U S E / A B U S E**

TRANSLATION





# SERVICES & AGENCIES



## Biostatistician

- Statistical Consultation
- Power Analysis
- Data Analytic Plans
- Data Management
- Advanced Statistical Analysis
- Grant & Manuscript Development



## Sr. Graphics Designer

- Manage Publications & Websites
- Translate Marketing Objectives Into Creative Strategies
- Create and Execute Collateral Materials & Signage
- Develop Artwork for Dissemination Materials
- Data Visualization



## Community Outreach

- Cultivate Community Partnerships & Engagement
- Recruitment & Retention
- Social Media
- Dissemination of Project Materials
- Health Screenings



## Program Manager

- Budget Development
- Budget Forecasting
- Purchasing
- Hiring
- Contracts/Agreements
- Policy Implementation



## Program Director

- Lead Research Projects
- IRB Submission
- Progress Monitoring
- Grant Reporting
- Compliance
- Quality Control

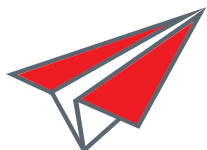


## Research Scientist

- Data Collection
- Grant Development
- Prepare Research Papers
- Facilitate Project Conduct
- Conduct Qualitative Methods & Analysis

- ABC Dental
- African American Health Coalition
- Alpha Home
- American Heart Association
- Arms of Hope
- Asian American Health Coalition
- Avenue 360
- Baylor Teen Clinic
- Billy T. Cattan Recovery Outreach Center
- BOUNCE
- Brighter Bites
- Cancer Prevention and Research Institute of Texas
- Catholic Charities
- Change Happens
- Common Threads
- Community Health Choice
- Counseling and Recovery Services
- Denver Harbor Multiservice Center
- DePelchin Children's Center
- District H - City of Houston (Councilwoman Cisneros)
- El Centro de Corazon
- Foundation Communities
- Fundación Latinoamericana de Acción Social, Inc.
- H-E-B Grocers
- Harris County Parks Department
- Harris County Public Health Dept.
- HCC Eastside Campus
- Healthcare for the Homeless – Houston
- Hispanic Health Coalition
- Honey Child Prenatal Education Program
- Houston Academy
- Houston Aphasia Recovery Center
- Houston Dynamo
- Houston Health Department
- Houston Independent School District Health and Medical Services
- Houston Texans YMCA
- Kids' Meals
- L.I.F.E. Houston
- Land Manor, Inc.

- Legacy
- Magnolia Multiservice Center
- Manos Abiertas a la Comunidad
- Mayor's Office of Complete Communities
- Menninger Clinic
- Montrose Center
- National Institutes of Health
- New Hope Housing
- Partners 4 Inclusion
- Planned Parenthood
- Recipe for Success
- Reconstruction of a Survivor
- San Antonio Metropolitan Health District
- San Jose Clinic
- Santa Maria Hostel
- SEARCH Homeless Services
- Shades of Blue
- Sisters Network Inc.
- Sobering Center
- Spring Branch Community Health Center
- St. Luke the Evangelist
- Susan G. Komen (Houston)
- Texas Children's Hospital
- Texas Health & Human Services Commission
- Texas Southern University
- The Council on Recovery
- The Rose
- The Village at Incarnate Word
- United Health Foundation
- University of Houston
- University of Texas MD Anderson Cancer Center
- UT MD Anderson Center for Community-Engaged Translational Research (CCETR)
- Vecino Health Centers
- Veritex Community Bank
- Volunteers of America
- Wesley Community Center
- Wheeler Avenue Baptist Church
- Young Library





# FINANCIAL SUPPORT



Total External Research Expenditures

\$895,000

Federal Proposals Submitted

15

Peer-Reviewed Journal Articles

61

Research Presentations and Abstracts

84

## PROJECT SPONSORS

American Cancer Society

Cancer Prevention and Research Institute of Texas

NIH/National Cancer Institute

NIH/National Institute on Drug Abuse

NIH/National Institute of Child Health and Human Development

Robert Wood Johnson Foundation

United Health Foundation

## HEALTH RESEARCH INSTITUTE SPONSORED PILOT PROJECTS

PILOT YEAR: 09.2017 – 08.2018

**i. The Intersectionality of Nutrition, Alcohol Abuse, and Infectious Disease Susceptibility**

The pilot project uses a mouse model of disease to investigate how the intersection of nutritional disparities and substance abuse related health risks directly impacts immunological health.

**Principal Investigator:**

Dr. Elebeoba E. May

**Project Team Includes:**

- Dr. Ezemenari Obasi, Co-Investigator

**ii. Computerized Suicide Prevention for Latinos in Primary Care**

The pilot project supports a test of a theory-driven brief intervention for suicide prevention delivered via a health technology platform for Latino young adults in primary care.

**Principal Investigator:**

Dr. Michael J. Zvolensky

**Project Team Includes:**

- Dr. Andres Viana, Co-Investigator
- Dr. Rheeda Walker, Co-Investigator
- Dr. Jodi Berger Cardoso, Co-Investigator
- Dr. Monica Garza, Co-Investigator

PILOT YEAR: 09.2019 – 08.2020

**i. Physical Mechanisms of Prostate Cancer Metabolism**

The pilot project will study physical mechanisms of impaired mitochondrial electron transport in prostate cancer (PCa) to address the lack of diagnostic modalities for early identification of high risk PCa neoplasms; and to address the need for metabolic-based therapies for prostate cancers that have become aggressive.

**Principal Investigator:**

Dr. John H. Miller

**Project Team Includes:**

- Dr. Martha Y. Suarez Villagran, Postdoc
- Dr. Dale Hamilton, (Houston Methodist Research Institute), Collaborator / Co-Investigator

**ii. Functional Cortical Deficits and Cortical Hemodynamic Changes in Minority Older Adults with Type II Diabetes**

The pilot project aims to discover potential sex differences in cognitive-sensorimotor dysfunction and dysfunctional brain activation during motor tasks in persons with Type II Diabetes as well as how sex, sex hormones, and measures of inflammation and adiposity impact brain activation.

**Principal Investigator:**

Dr. Stacey L. Gorniak

**Project Team Includes:**

- Dr. Luca Pollonini, Co-Investigator
- Dr. Steven Woods, Co-Investigator
- Dr. Emily LaVoy, Co-Investigator

PILOT YEAR: 02.2020 – 01.2021

**i. Role of 27-hydroxycholesterol, the Endogenous SERM that Links Cholesterol Metabolism and Estrogen Receptor Signaling, in Adipose Tissue Function**

The pilot project will investigate how 27-hydroxycholesterol, the most abundant cholesterol metabolite in human circulation, modulates adipose (fat) tissue and adipose tissue inflammation using comprehensive hypothesis analysis.

**Principal Investigator:**

Dr. Michihisa Umetani

**Project Team Includes:**

- Dr. Yang Zhang, Co-Investigator
- Dr. Preethi Gunaratne, Collaborator

**ii. Investigating Efficacy of Epigenetic Therapy in Ovarian Cancer**

The pilot project aims to utilize an innovative biomaterial-based substrate to evaluate the in vitro efficacy of epigenetic treatments for epithelial ovarian cancer by providing a 3D microenvironment and critical mechanistic cues that regulate epigenetic modifications.

**Principal Investigator:**

Dr. Fatima Merchant

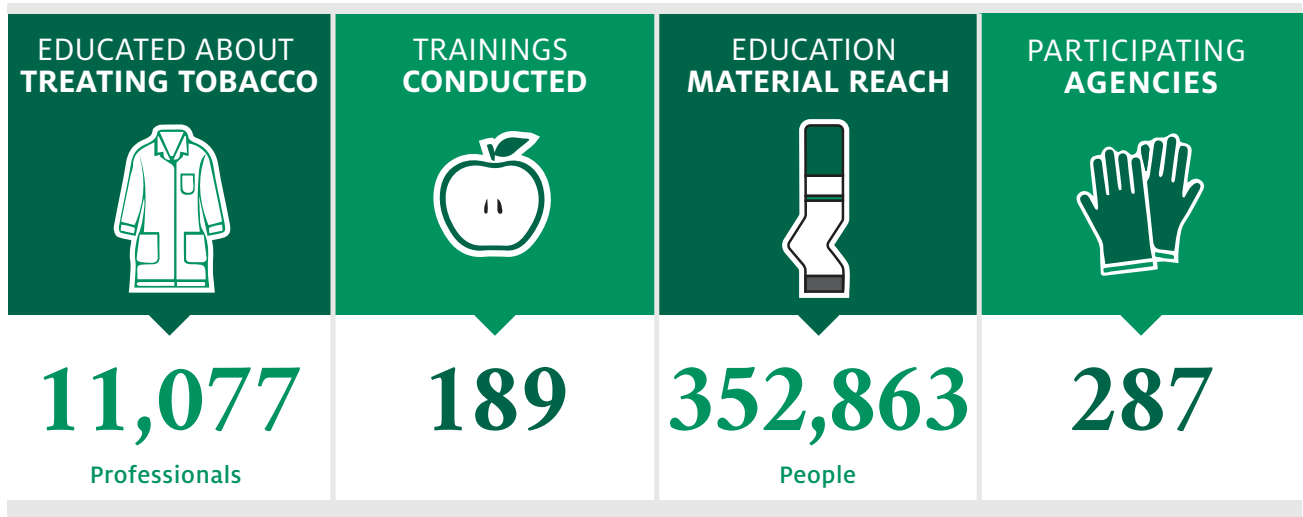
**Project Team Includes:**

- Dr. Wanda Wosik, Co-Investigator
- Dr. Lewis Francis, (Swansea University College of Medicine), Collaborator

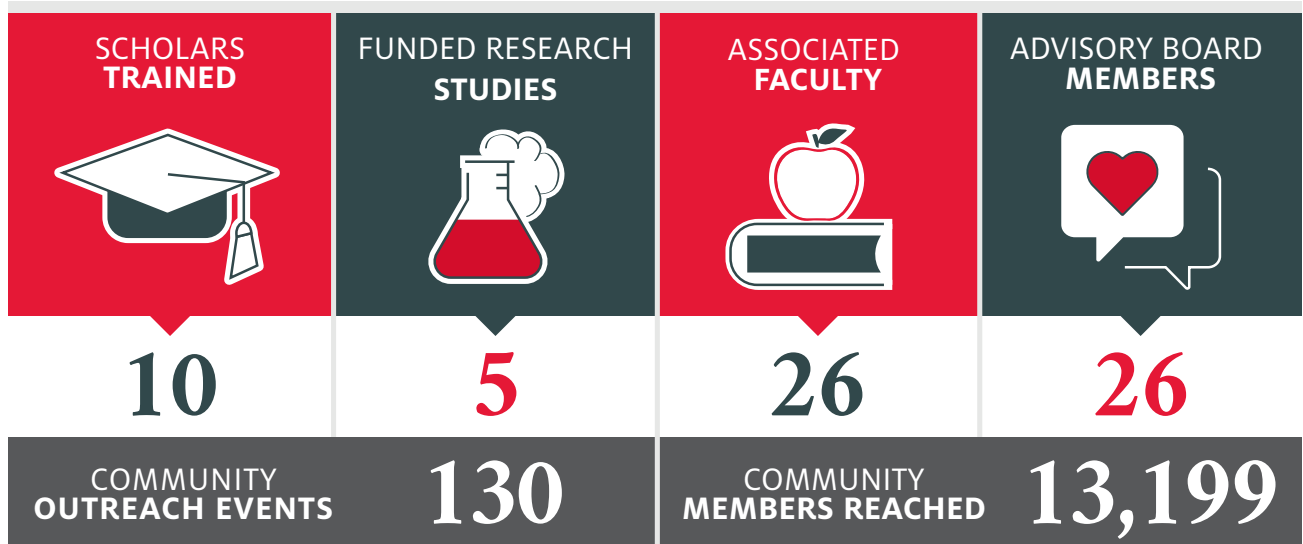




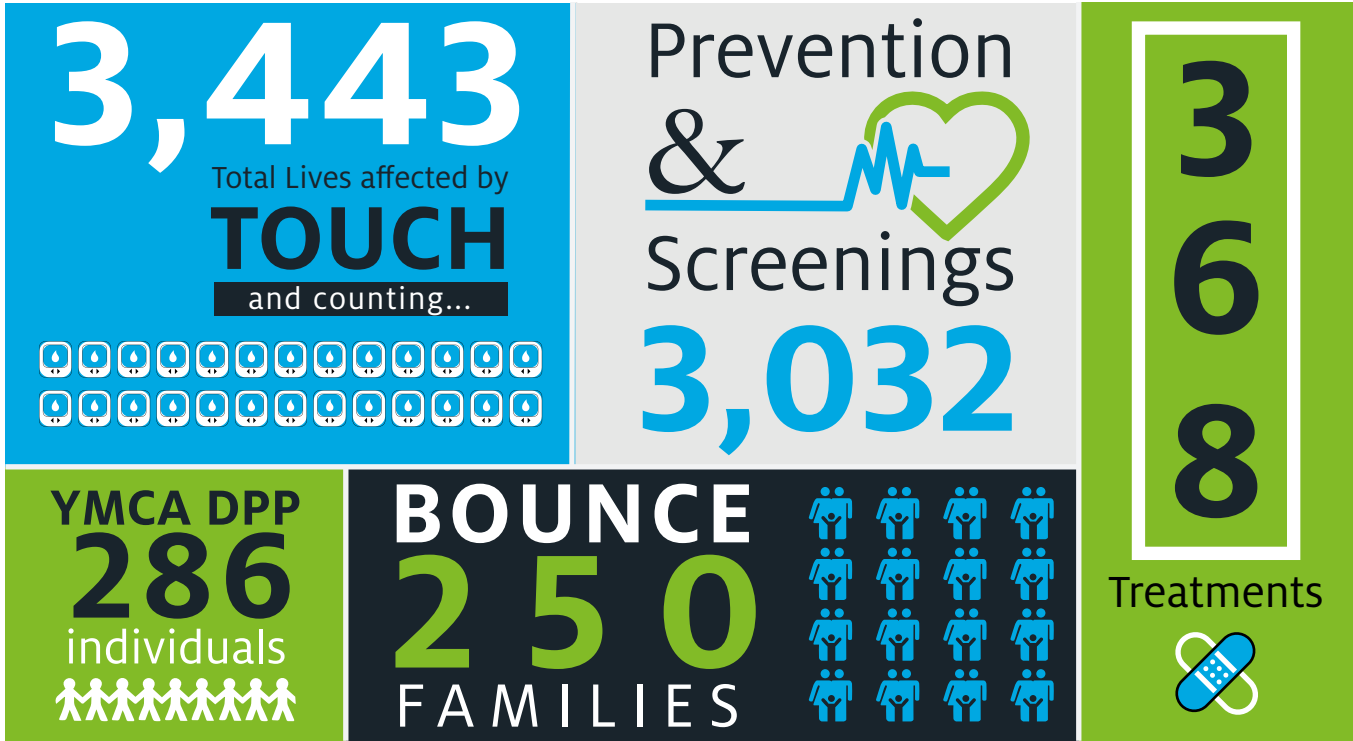
OVERALL IMPACT OF PROJECTS THROUGH 2019



The mission of **Taking Texas Tobacco Free (TTTF)** is to promote wellness among Texans by partnering with healthcare organizations to build capacity for system-wide, sustainable initiatives that will reduce tobacco use and secondhand smoke exposure among employees, consumers, and visitors.



The **University of Houston/MD Anderson Cancer Center (UHAND)** Program is a collaborative partnership devoted to the elimination of cancer inequities through the reduction of social and physical risk factors among disproportionately affected groups.



**Treating Obesity in Underserved Communities in Houston (TOUCH)** is a program funded by the UnitedHealth Foundation to help identify residents of Houston’s Third Ward and East End at risk for chronic diseases and connect them with programs and services to fully maximize their health potential.



Sample Community Event Participation	Date
TOUCH Health Fair with Councilwoman Cisneros	1/2019
Third Ward Collaborative Health Fair Peace Makers Workshop	2/2019
March of Dimes March for Babies	4/2019
Benbrook Elementary Health Fair	4/2019
Baker Ripley Harbach Health Fair	4/2019
Blackshear Elementary Community Fair	5/2019
Magnolia Multiservice Center Health Fair	5/2019
Men’s Health Expo	6/2019
Mayor Turner’s “Back to School” Bash	8/2019
Congressman Al Green’s Green Light to Healthy Living	8/2019

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## FY21 GOALS

- **Increase membership** through an open call for HEALTH Research Institute Fellows and Affiliates
- **Submit** new federal, state, and/or foundation grant applications
- **Advance University of Houston's national competitiveness** by contributing to its federally funded grant expenditures. By extension, this would raise the local and national profile of health research being conducted by the HEALTH Research Institute, while contributing to stronger national rankings of affiliated degree programs, Departments, Colleges, and the University
- **Continue to generate publications** and conference presentations crediting HEALTH Research Institute
- **Engage in strategic planning** to develop a strong interdisciplinary national center of excellence
- **Launch RFA and implement** FY21 Pilot Grant Program: Clinical Science
- **Provide professional development** activities that advance HEALTH Research Institute Mentee's grant writing development, grant submissions, grant awards, & that contribute to their retention in academia at the University
- **Continue community engagement** through outreach, dissemination, training, and health fair opportunities
- **Contribute to student success** by having new undergraduate, graduate, and postdoctoral fellows supported on federally funded research grants
- **Provide intellectual resources** aimed at eliminating local and national health challenges. This could come in the form of advancing large-scale research initiatives, workshops, guest lectures, health fairs, and community-based outreach, interventions, and prevention programming

HELPING  
EVERY-  
ONE  
ACHIEVE  
A LIFETIME OF  
HEALTH





HEALTH  
Research Institute

HEALTH  
Research Institute

OUR MISSION

UNIVERSITY OF HOUSTON

TEXANS

# HEALTH

## Research Institute

Helping Everyone Achieve a LifeTime of Health

TEXAS  
BACCO FREE

Division of Taking Texas Tobacco  
promoting wellness among  
by partnering with healthcare  
organizations to build capacity for  
-wide, sustainable initiatives  
will reduce tobacco use and  
hand smoke exposure  
employees, consumers, and v

Me gustaría dejar de  
No sé por dónde empezar