

## 2022 Research Review

Yale School of Public Health faculty had an extremely busy 2022 conducting extensive research to design, implement, evaluate, and promote solutions to a wide range of public health issues that affect people locally, nationally, and globally.

In 2022, YSPH faculty published more than 1,000 publications covering a broad spectrum of pressing public health matters. These appeared in top scientific journals including *JAMA*, *Science*, *NEJM*, and *Nature* – often in collaboration with other Yale University faculty, but also with peers from other academic institutions in the U.S. and beyond. Of these publications, more than 330 or one-third of the manuscripts had a YSPH faculty member as a first or last author.

Many of these publications addressed public health approaches to achieving health equity and justice, preventing the next public health threat, or advancing planetary health, often using multidisciplinary data science approaches to improve health outcomes and the way we deliver health care. Research topics included maternal child health, infectious disease, environmental health, cancer, cardiovascular disease, global health, and mental health. Some of the publications focused on Yale's home state, Connecticut, while others tackled national and world health problems.

YSPH's six academic departments are home to more than 150 full-time faculty, along with more than 50 postdoctoral fellows. Our research was bolstered by \$58 million in grant funding in FY22, comprised of a total of 234 grants.

We salute and thank all of our faculty, as well as our students, postdocs, and research staff, for their scientific achievements. We look forward to continuing and expanding upon our successes in 2023, as we work with colleagues both at Yale and beyond to create a shared and equitable vision of public health for all.



Melinda Irwin, Ph.D., M.P.H.  
*Associate Dean of Research and Susan Dwight Bliss  
Professor of Epidemiology (Chronic Disease)*

### A Sampling of Research Expertise

**AGING** Our faculty are engaged in interdisciplinary approaches to promote healthy aging. [Read more](#)

**CANCER** is the second-leading cause of death in the United States and a major focus of research. [Read more](#)

**COVID-19** YSPH scientists are providing important research insights to help guide national policy, response, and treatments for this ongoing public health crisis. [Read more](#)

**ENVIRONMENTAL HEALTH** Addressing a major public-health challenge of the 21st century. [Read more](#)

**GLOBAL HEALTH** Working on the front lines of the global health response to numerous health issues. [Read more](#)

**HEALTH CARE** systems struggle around the world to deliver high-quality, patient-centered care. [Read more](#)

**HEALTH DISPARITIES** YSPH researchers work to narrow health inequities. [Read more](#)

**MATERNAL CHILD HEALTH** YSPH faculty focus on a broad range of maternal health conditions. [Read more](#)

**MENTAL HEALTH** has lasting effects throughout a person's life. [Read more](#)

**SUBSTANCE USE** Deaths from use of opioids and other substances continue to be a problem in the U.S., some of them related to the pandemic. [Read more](#)

## CANCER

### *Molecular Biology and Evolution*

Attribution of Cancer Origins to Endogenous, Exogenous, and Preventable Mutational Processes

### *International Journal of Cancer*

A competing risk analysis of adherence to the American Cancer Society Guidelines on Nutrition and Physical Activity for Cancer Prevention and obesity-related cancer risk in Hispanic/Latino adults in the NIH-AARP Diet and Health Study

### *Biology of Sex Differences*

Bile acid distributions, sex-specificity, and prognosis in colorectal cancer

### *Cancer Epidemiology, Biomarkers & Prevention*

Hispanic Ethnicity Differences in Birth Characteristics, Maternal Birthplace, and Risk of Early-Onset Hodgkin Lymphoma: A Population-Based Case-Control Study

## CARDIOVASCULAR DISEASE

### *Stroke*

Trends in 1-Year Recurrent Ischemic Stroke in the US Medicare Fee-for-Service Population

### *Journal of the American Heart Association*

Rural Residence and Antihypertensive Medication Use in US Stroke Survivors

## COVID-19

### *Cell Reports Medicine*

Comparative transmissibility of SARS-CoV-2 variants Delta and Alpha in New England, USA

### *JAMA Network Open*

Estimating COVID-19 Infections, Hospitalizations, and Deaths Following the US Vaccination Campaigns During the Pandemic

### *Science*

Vaccination with BNT162b2 reduces transmission of SARS-CoV-2 to household contacts in Israel

### *Science Advances*

Impact of close interpersonal contact on COVID-19 incidence: Evidence from 1 year of mobile device data

### *Proceedings of the National Academy of Sciences*

The durability of natural infection and vaccine-induced immunity against future infection by SARS-CoV-2

## ENVIRONMENTAL HEALTH

*Environmental Health Perspectives*

Unconventional Oil and Gas Development Exposure and Risk of Childhood Acute Lymphoblastic Leukemia: A Case-Control Study in Pennsylvania, 2009-2017

*Environmental Science & Technology*

Assessing the External Exposome Using Wearable Passive Samplers and High-Resolution Mass Spectrometry among South African Children Participating in the VHEMBE Study

## GENE-LIFESTYLE-ENVIRONMENTAL INTERACTIONS

*Obesity (Silver Spring)*

The protective effect of rs373863828 on type 2 diabetes does not operate through a body composition pathway in adult Samoans

*The American Journal of Human Genetics*

Leveraging LD eigenvalue regression to improve the estimation of SNP heritability and confounding inflation

## HEALTH CARE MANAGEMENT

*Annals of Internal Medicine*

Residual Confounding in Health Plan Performance Assessments: Evidence from Randomization in Medicaid

*JAMA Health Forum*

Disparities in Health Care Spending and Utilization Among Black and White Medicaid Enrollees

“This report captures the innovation and collaboration that advances the Yale School of Public Health’s mission. The outstanding work of our faculty led to numerous awards and honors in 2022, including: Paul Anastas (2022 Hofmann Medal); Nathan Grubaugh (2022 NIH New Innovator Award), Nancy Ruddle (2022 Distinguished Fellow, American Association of Immunologists); and Heping Zhang (2022 Neyman Lecture). We are proud of what we have accomplished and are committed to sustaining this momentum in 2023.” – MELINDA PETTIGREW

INTERIM DEAN, YALE SCHOOL OF PUBLIC HEALTH

## HIV/INFECTIOUS DISEASES

*Psychotherapy (Chic.)*

A pilot test of a treatment to address intersectional stigma, mental health, and HIV risk among gay and bisexual men of color

*JMIR Public Health Surveillance*

Trends and Characteristics of #HIV Prevention Tweets Posted Between 2014 and 2019: Retrospective Infodemiology Study

## MATERNAL CHILD HEALTH

*Journal of the American Statistical Association*

Modeling Pregnancy Outcomes through Sequentially Nested Regression Models

*PLoS One*

“Now, I have my baby, so I don’t go anywhere”: A mixed method approach to the ‘everyday’ and young motherhood integrating qualitative interviews and passive digital data from mobile devices

## PLANETARY HEALTH/CLIMATE CHANGE

*Nature Communications*

Associations between long-term drought and diarrhea among children under five in low- and middle-income countries

*GeoHealth*

Residential and Race/Ethnicity Disparities in Heat Vulnerability in the United States

“We look forward to continuing and expanding upon our successes in 2023, as we work with colleagues both at Yale and beyond to create a shared and equitable vision of public health for all.”

— MELINDA IRWIN  
ASSOCIATE DEAN OF RESEARCH

## SUBSTANCE USE/ALCOHOL/TOBACCO

*The New England Journal of Medicine*

[The E-Cigarette Flavor Debate – Promoting Adolescent and Adult Welfare](#)

*JAMA Health Forum*

[Estimated Prevalence of Smoking and Smoking-Attributable Mortality Associated with Graphic Health Warnings on Cigarette Packages in the US From 2022 to 2100](#)

*Chemico-Biological Interactions*

[Liver metabolomics identifies bile acid profile changes at early stages of alcoholic liver disease in mice](#)

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[ysph.yale.edu/research\\_practice](https://ysph.yale.edu/research_practice)

