



CALIFORNIA  
**Breast  
Cancer  
Research**  
PROGRAM

## **Compendium of Awards**

**Cycle 25  
2019**

## Introduction

*The mission of the CBCRP is to prevent and eliminate breast cancer by leading innovation in research, communication, and collaboration in the California scientific and lay communities.*

The California Breast Cancer Research Program (CBCRP) is pleased to announce the **funding of 19 new research projects** that will advance our knowledge about the community impact, prevention, etiology, detection, and treatment of breast cancer. With these new awards we are **investing \$4,843,884 for research projects being performed at 15 institutions and community organizations across the state.**

CBCRP supports breast cancer research in California from funds obtained through:

- A portion of a **2¢ per pack State cigarette tax**
- Contributions from individuals using the **State's income tax check-off** option
- **Donations** from concerned community members dedicated to defeating breast cancer

CBCRP is administered by the University of California, Office of the President, in Oakland. Our overall objectives, strategies, and priorities are developed with the assistance of a volunteer California Breast Cancer Research Council (BCRC), which sets program priorities and recommends the grants to be funded. The BCRC consists of 16 members: five are representatives of breast cancer survivor/advocacy groups; five are scientists/clinicians; two are members from nonprofit health organizations, one is a practicing breast cancer medical specialist, two are members from private industry, and one is an *ex officio* member from the California Department of Health Services breast cancer early detection program, "Every Woman Counts."

CBCRP research funding is organized through several sub-program units including:

- **Community initiatives** supports research grants that incorporate both academic researchers and community group investigators to study a problem specific to a community, but with wider dissemination potential.
- **Core funding** focuses on investigator-initiated traditional grants to support smaller, innovative projects and conferences.
- **Program Directed Initiatives** support California Breast Cancer Prevention Initiative projects to identify and eliminate environmental causes of breast cancer; identify and eliminate disparities/inequities in the burden of breast cancer in California; develop population-level interventions (including policy research) on known or suspected breast cancer risk factors and protective measures; and develop target interventions for high-risk individuals, including new methods for identifying or assessing risk.
- **Policy Initiative** used an open, competitive peer-reviewed process to establish a pool of pre-qualified policy research investigators/teams who are poised to quickly fill knowledge gaps to inform breast cancer relevant policy. The pre-qualified policy investigators/teams contract with CBCRP to generate answers to CBCRP-selected research questions and then effectively deliver those answers to policymakers.

The full abstracts of these newly funded grants, as well as those from previous CBCRP funding cycles, can be found on our website: [www.CABreastCancer.org](http://www.CABreastCancer.org).

## Overview of CBCRP Priority Areas

- **The Community Impact of Breast Cancer: The Social Context** explores the factors that contribute to the unequal burden of breast cancer among diverse communities and the policy alternatives that would contribute to reducing disparities in access to prevention, risk reduction, detection, treatment, support, and/or survivorship services for California's underserved populations. Subtopics of this priority area include:
  - Health Policy
  - Health Services
  - Sociocultural, Behavioral and Psychological Issues Relevant to Breast Cancer: The Human Side
  - Disparities: Eliminating the Unequal Burden of Breast Cancer
- **Etiology and Prevention: Finding the Underlying Causes** investigates the causes of breast cancer and the strategies that can be used to prevent it. We are interested in learning about the environmental and biological factors that interact to increase the risk of developing breast cancer and the approaches that can be used to reduce or eliminate breast cancer risk. Subtopics of this priority area include:
  - Etiology: The Role of Environment and Lifestyle
  - Prevention and Risk Reduction: Ending the Danger of Breast Cancer
- **Biology of the Breast Cell: The Basic Science of the Disease** supports research that addresses the critical need to understand the pre-neoplastic, causative events of breast cancer at the tissue level, including the stroma. These studies investigate genetic changes in stem cells and normal tissue as well as disease progression and the tumor heterogeneity at the basic science level. Subtopics of this priority area include:
  - Biology of the Normal Breast: The Starting Point
  - Pathogenesis: Understanding the Disease
- **Detection, Prognosis and Treatment: Delivering Clinical Solutions** supports projects with aims that are on the critical path for translation. They develop novel imaging technologies, new biomarkers, and genomic/proteomic approaches for more accurate diagnosis and prognosis. They are also researching less toxic and more individualized therapies, mechanisms of drug resistance, and studies to evaluate alternative medicines and natural products. Subtopics of this priority area include:
  - Imaging, Biomarkers, and Molecular Pathology: Improving Detection and Diagnosis
  - Innovative Treatment Modalities: Searching for a Cure.

## Overview of CBCRP Award Types

CBCRP funded new research projects using a variety of award types in 2018:

- **Community Research Collaboration (CRC)** awards bring community organizations—such as breast cancer advocates, community clinics, or organizations serving under-represented women—together with experienced academic scientists to investigate breast cancer problems that are important to that community, using culturally-appropriate research methods. CRC Pilot (18-month) and CRC Full Research awards (three years) are available.
- **Innovative Developmental and Exploratory Awards (IDEAs)** are 12- to 18-month grants for targeted high-risk/high-reward projects. CBCRP incorporates the “critical path” concept, which requires applicants to place their project on a research continuum leading to practical applications. IDEAs are offered to both new and established investigators.
- **Conference Awards** support a conference, symposium, retreat, or other meeting to link breast cancer researchers, non-breast cancer investigators, and community members for the purpose of stimulating new ideas and collaborations.
- **Program Directed Initiatives** support **Requests for Proposals (RFPs)** that competitively fund investigator-initiated research responding to the California Breast Cancer Prevention initiative topic, **Request for Qualifications (RFQs)** that fund grants based on the qualifications of the investigator to undertake CBCRP-defined research projects in close collaboration with CBCRP

and **Program Directed Awards (PDAs)** to fund crucial projects identified during the strategy development proposed by the Steering Committee and approved by the CBCRP Council. In 2016, CBCRP funded projects in response to the “Non-Targeted Testing of Chemicals in Drinking Water in California” Initiative.

- **Policy Awards** support teams of on-call investigators that have been pre-screened through an RFQ to conduct rapid response research to policy questions identified by CBCRP with the assistance of the Policy Research Advisory Group. \$150,000 is allocated annually and may be dedicated to one team or spread out over multiple teams, depending on the complexity of the topics and the potential for impact of the projects.

## LOI and Application Submissions and Review

IDEA Awards applications must pass through a letter of intent (LOI) screening process conducted by our Council to select projects that best meet our award type and programmatic criteria. We view this as a benefit to both the applicants and Program in terms of reducing the effort to prepare full applications and CBCRP's corresponding peer review costs.

**Table 1. LOI submission and approval results**

Award Type	LOIs submitted	LOIs approved	Percent approved
IDEA	27	23	85%

After the LOI process, the full application data is shown in the table below.

**Table 2. 2019 full application submissions by award type and priority issue**

Award Type ↓	CBCRP Priority Issue				Award Type Totals
	Etiology & Prevention	Community Impact	Detection, Prognosis & Treatment	Biology of the Breast Cell	
Innovative, Developmental & Exploratory (IDEA)	4	1	11	5	<b>21</b>
Community Research Collaboration (CRC) Pilot	3	5	0	0	<b>8</b>
Community Research Collaboration Full	1	1	0	0	<b>2</b>
Program-Directed Initiatives	5	0	0	0	<b>5</b>
Policy Initiative	0	2	0	0	<b>2</b>
CBCRP Conference	1	0	1	0	<b>2</b>
Priority Totals	14	9	12	5	<b>40</b>

## Funding Highlights

**Table 3. 2019 grant distribution by award type**

Award Type	Number of Applications	Grants Funded (Success Rate)	Amount Awarded	Percentage of Total Funding
IDEA	21	8 (38%)	\$1,592,050	32.9%
Community Research Collaboration (CRC) – Pilot	8	4 (50%)	\$746,466	15.4%
Community Research Collaboration (CRC) - Full	2	1 (50%)	\$749,989	15.5%
CBCRP Conference	2	2 (100%)	\$50,000	1.0%
Program-Directed Initiatives	5	2 (40%)	\$1,427,632	29.5%
Policy Initiatives	2	2 (100%)	\$277,747	5.7%
<b>Total</b>	<b>40</b>	<b>19 (47.5%)</b>	<b>\$4,843,884</b>	<b>100%</b>

**Table 4. 2019 grant distribution by priority issue**

Award Type	Number of Applications	Grants Funded (Success Rate)	Amount Awarded	Percentage of Total Funding
Etiology & Prevention	14	5 (36%)	\$2,488,459	51.4%
Community Impact	9	6 (67%)	\$1,024,213	10.2%
Detection, Prognosis & Treatment	12	5 (42%)	\$835,001	17.2%
Biology of the Breast Cell	5	3 (60%)	\$496,211	10.2%
<b>Total</b>	<b>40</b>	<b>19 (47.5%)</b>	<b>\$4,843,884</b>	<b>100%</b>

## Grants Funded in Cycle 25 2018-2019

### Community Initiatives Grants

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#### **Breast Cancer Risks from California's Gold Mining Legacy**

Award type: Community Research Collaboration Award - Full  
Priority Issue: Etiology and Prevention

Joanne Hild  
Sierra Streams Institute  
\$788,664

Peggy Reynolds  
UCSF  
\$183,334

Total Award: \$749,989

#### **Cancer Navigation for Vietnamese Americans (CANVAS)**

Award type: Community Research Collaboration Award - Pilot  
Priority Issue: Community Impact of Breast Cancer

Becky Nguyen  
Vietnamese American Cancer Foundation  
\$90,355

Sora Tanjasiri  
UCI  
\$90,121

Total Award: \$180,476

#### **Creating Bridges to Women's Health Care in Young Survivors**

Award type: Community Research Collaboration Award - Pilot  
Priority Issue: Community Impact of Breast Cancer

Helen Palomino  
Cancer Resource Center of the Desert  
\$65,370

Irene Su  
UCSD  
\$112,500

Total Award: \$177,870

#### **Ethnic Enclave Effect on Vietnamese Breast Cancer Patients**

Award type: Community Research Collaboration Award - Pilot  
Priority Issue: Community Impact of Breast Cancer

Hai Hoang  
BPSOS Center for Community Advancement  
\$88,784

Lihua Liu  
University of Southern California  
\$123,750

Total Award: \$212,534



### **Nail Salon Worker Leadership and Reducing Breast Cancer Risk**

Award type: Community Research Collaboration Award - Pilot

Priority Area: Community Impact of Breast Cancer

Charlotte Chang  
UCB  
\$88,338

Lisa Fu  
Asian Health Services  
\$87,248

Total Award: \$175,586

## **Core Funding Grants**

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### **7th Annual Metastatic Breast Cancer Conference**

Award type: CBCRP Conference Award

Priority Issue: Detection, Prognosis and Treatment

Sharon Schlesinger  
Susan G. Komen for the Cure  
\$25,000

### **Defining the metastasis-initiating cancer stem cells**

Award type: IDEA Award

Priority Issue: Biology of the Breast

Olga Razorenova  
UCI  
\$184,337

### **Enhancing muscle strength and immunity in breast cancer**

Award type: IDEA Award

Priority Issue: Etiology and Prevention

Joanna Davies  
San Diego Biomedical Research Institute  
\$285,838

### **Immunotherapeutic Exosomes for Triple Negative Breast Cancer**

Award type: IDEA Award

Priority Issue: Detection, Prognosis and Treatment

Yong Zhang  
University of Southern California  
\$247,500

### **Mechanisms underlying cellular addiction to HER2**

Award type: IDEA Award

Priority Issue: Biology of the Breast

Mark Moasser  
UCSF  
\$185,874



### **Non-contrast MRI Breast Cancer Screening**

Award type: IDEA Award

Priority Issue: Detection, Prognosis and Treatment



Rebecca Rakow-Penner  
UCSD  
\$187,501

**Novel Ab-(IL-12) Fusion Proteins for Breast Cancer Therapy**

Award type: IDEA Award  
Priority Issue: Detection, Prognosis and Treatment

Manuel Penichet  
UCLA  
\$187,500

**Tumor and Liquid Biopsy-based Biomarkers for Immunotherapy**

Award type: IDEA Award  
Priority Issue: Detection, Prognosis and Treatment

Laura Van 't Veer  
UCSF  
\$187,500



**Unraveling the Mutagenic Mechanisms of Breast Cancer**

Award type: IDEA Award  
Priority Issue: Biology of the Breast

Remi Buisson  
UCI  
\$125,000

**Women's Health and Environmental Justice**

Award type: CBCRP Conference Award  
Priority Issue: Etiology and Prevention

Janet Pregler  
UCLA  
\$25,000



Denotes awards that have been supported in part through voluntary contributions from California taxpayers



Denotes Faith Fancher Research Award recipient. [Faith Fancher](#) was a long-time television news anchor and personality with KTVU (Oakland) who waged a very public battle against breast cancer. She also was the founding member of the CBCRP Executive Team, which formed in 2001 to help raise the visibility and fundraising profile of our program. Faith passed away in October 2003 after a six-year struggle with breast cancer. In Faith's honor, and to commemorate all that she did for breast cancer education and research, we have created this annual award. The selected grant reflects the values that Faith held most closely and extends the work that Faith did for all women facing breast cancer.

## **Program-Directed Research**

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### **Nontargeted Chemical Analysis of California Drinking Water**

Award type: CBCPI Request for Proposals

Priority Issue: Etiology and Prevention

Thomas Young

UCD

\$753,009

### **Tapwater Analysis Project (TAP): Testing Chemicals in Water**

Award type: CBCPI Request for Proposals

Priority Issue: Etiology and Prevention

Gina Solomon

Public Health Institute

\$674,623

## **Policy Initiative Research**

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### **Awareness of Alcohol as a Risk Factor for Breast Cancer**

Award type: Policy Award

Priority Issue: Community Impact of Breast Cancer

Priscilla Martinez

Public Health Institute

\$152,747

### **Barriers to Metastatic Breast Cancer Care in California**

Award type: Policy Award

Priority Issue: Community Impact of Breast Cancer

Ninez Ponce

UCLA

\$125,000

## 2019 CBCRP Funding by Institution

The following **15 California research institutions and community organizations were awarded new CBCRP funding in the 2018-2019 grant cycle.** Community Research Collaboration (CRC) grants may be split between institutions.

<b>Institution</b>	<b># of Grants</b>	<b>Amount</b>
Asian Health Services	1	\$87,248
BPSOS Center for Community Advancement	1	\$88,784
Cancer Resource Center of the Desert	1	\$183,334
Public Health Institute	2	\$827,370
San Diego Biomedical Research Institute	1	\$285,838
Sierra Streams Institute	1	\$388,508
Susan G. Komen for the Cure	1	\$25,000
UCD	1	\$753,009
UCB	1	\$88,338
UCI	3	\$399,458
UCLA	3	\$337,500
UCSD	2	\$300,001
UCSF	3	\$735,855
University of Southern California	2	\$371,250
Vietnamese American Cancer Foundation	1	\$90,355

## 2019 CBCRP application evaluation process & review committee rosters

**CBCRP thanks the participants in our 2019 review committees for their service and dedication to our Program!**

In the first phase of the funding process, grant applications were peer reviewed and scored for scientific merit by review committees using a model that follows established practice at the National Institutes of Health (NIH). Each committee is composed of scientists and advocates from outside California. The Committee Chair leads the review process and is a senior researcher. Scientific Reviewers have broad expertise in topics associated with individual applications. Breast cancer Advocate Reviewers are women active in breast cancer advocacy organizations, and many of them are also living with the disease. Advocates bring their personal knowledge and commitment to the review process. Each committee also includes a California Advocate Observer, who does not review or vote, but represents California's advocacy community. The observer gains insight into our process and provides feedback to the Program. When additional expertise is needed, an Ad Hoc Member is brought in to the review a particular application not covered by the other committee scientist reviewers.

CBCRP uses a scientific **merit scoring system** that rates individual components (e.g., approach, innovativeness, impact). This allows our expert reviewers and Council to better differentiate applications that might otherwise appear identical. Depending on the award type, we use four or five scientific merit components in the peer review process.

We **triage** some applications that score in the lower range of a committee's portfolio using the preliminary scores of the assigned reviewers. Applications in the upper range of a committee's portfolio all receive full committee discussion, as do any of the lower scoring applications nominated to full review by one reviewer.

Applications that were not triaged were rated by CBCRP's Council for **programmatic responsiveness**. Combinations of the following criteria were used:

- Responsiveness to CBCRP's priority issues and award type (or initiative)
- Strength of individual scientific merit component scores (e.g., innovation for IDEA applications)
- Underfunded topic
- Quality of the lay abstract
- Inclusion of advocates in the funded research
- Addressing the needs of the underserved
- Critical path/translation (IDEA and Translational Research Award), or dissemination and translational potential (CRC)

This two-tiered evaluation and funding process ensures both scientific excellence and relevance of the research to CBCRP's mission and goals.

## Community Impact Review Committee

### **Chairs:**

#### **Carolyn Gotay, PhD**

Professor Emeritus of Population and Public Health  
University of British Columbia  
Vancouver, BC

#### **JoAnn Tsark, MPH**

Co-Director, Community Engagement Core for Ola HI  
John A. Burns School of Medicine, University of Hawaii  
Honolulu, HI

### **Scientific Reviewers:**

#### **Sandra Deming Halverson, PhD**

Adjunct Research Assistant Professor of Medicine  
Vanderbilt University  
Nashville, TN

#### **Farrah Jacquez, PhD**

Associate Professor  
University of Cincinnati  
Cincinnati, OH

#### **Grace Sembajwe, PhD**

Associate Professor  
Occupational Medicine, Epidemiology and  
Prevention (OMEP)  
Northwell Health  
Great Neck, NY

#### **Emma Tsui, PhD**

Assistant Professor  
CUNY Graduate School of Public Health and Health  
Policy (CUNY SPH)  
New York, NY

#### **Karriem Watson, DHS**

Assoc. Director Community Outreach and  
Engagement University of Illinois Cancer Center  
Chicago Health Equity Collaborative  
University of Illinois, Chicago School of Public Health  
Chicago, IL

### **Advocate Reviewers:**

#### **Valerie Fraser**

Inflammatory Breast Cancer International  
Consortium  
Huntington Woods, MI

#### **Susan Pelletier**

Vermont Breast Cancer Coalition  
Stockbridge, VT

### **Ad Hoc Reviewer:**

#### **Anna Goodman Hoover, PhD**

Department of Preventive Medicine and  
Environmental Health  
Center for Public Health Systems & Services  
Research and Public Health Practice-based  
Research Networks  
College of Public Health  
University of Kentucky  
Lexington, KY

### **California Advocate Observer:**

#### **Michele Atlan**

Breast Cancer Care & Research Fund  
Los Angeles, CA

## Clinical, Prevention & Biological Sciences Review Committee

### **Chair:**

**Patricia A. Thompson Carino, Ph.D.**  
Professor, Department of Pathology  
Associate Director for Basic Research Cancer  
Center  
Stony Brook School of Medicine

### **Scientific Reviewers:**

**Erik Nelson, PhD**  
Assistant Professor  
University of Illinois  
Urbana, IL

**William Redmond, PhD**  
Associate Member, Laboratory of Cancer  
Immunotherapy  
Director, Immune Monitoring Laboratory  
Earle A. Chiles Research Institute  
Providence Cancer Institute  
Portland, OR

**Amos Sakwe, PhD**  
Associate Professor  
Department of Biochemistry and Cancer Biology  
School of Graduate Studies and Research  
Meharry Medical College  
Nashville, TN

**Natalie Serkova, PhD**  
Professor  
Department of Radiology, School of Medicine  
University of Colorado – Anschutz Medical  
Campus  
Denver, CO

**Sallie Smith Schneider, PhD**  
Director, Biospecimen Resource and Molecular  
Analysis Facility  
Baystate Medical Center  
Springfield, MA

### **Advocate Reviewers:**

**Lisa DeFerrari, MBA**  
Virginia Breast Cancer Foundation  
Richmond, VA

**Ann Fonfa**  
Annie Appleseed Project  
Delray Beach, FL

**Beverly Parker, MSW, PhD**  
Living Beyond Breast Cancer  
Naperville, IL

### **Ad-Hoc Reviewer:**

**Eva Sevick, PhD**  
Professor, Nancy and Rich Kinder Distinguished  
Chair of Cardiovascular Disease Research  
Professor and Director, Center for Molecular  
Imaging  
McGovern Medical School  
The University of Texas Health Science Center at  
Houston  
Houston, TX

### **California Advocate Observer:**

**Jennifer Scott, MA**  
Director of Development, UCLA Fielding  
School of Public Health  
Los Angeles, CA

## **CBCPI Hormones in Beef & Chemicals in Drinking Water Review Panel**

### **Chair:**

#### **Jessica Schifano, JD, MPH**

Health Scientist  
U.S. Department of Labor  
Occupational Safety and Health Administration  
Washington, DC

### **Scientific Reviewers:**

#### **John (Jay) Nuckols, PhD**

Emeritus Professor  
Colorado State University  
Environmental and Radiological Health Sciences  
North Bethesda, MD

#### **Carsten Prasse, PhD**

Assistant Professor  
Johns Hopkins University  
Environmental Health & Engineering  
Bethesda, MD

#### **Laura Vandenberg, PhD**

Associate Professor  
University of Massachusetts, Amherst  
School of Public Health & Health Sciences  
Amherst, MA

### **Advocate Reviewer:**

#### **Patricia O'Brien**

Vermont Cancer Network  
Burlington, VT

### **Ad-Hoc Reviewers:**

#### **Kerri Gehring, PhD, MS**

Professor, Meat Sciences  
Texas A&M University  
Animal Science  
College Station, Texas  
kbgehring@tamu.edu

#### **Keeve Nachman, PhD, MHS**

Director, Food Production and Public Health Program  
Assistant Professor  
Johns Hopkins University  
Department of Environmental Health and Engineering; Department of Health Policy and Management  
Bethesda, MD

## Policy Research Advisory Group

### **Garen Corbett, MS**

Director, California Health Benefits  
Review Program  
University of California, Office of the President  
Oakland, CA

### **Angela M. Gilliard, JD**

Legislative Director for UC Health  
UC Office of the President  
State Government Relations  
Sacramento, CA

### **Citseko Staples Miller**

Senior Specialist  
American Cancer Society Cancer  
Action Network, Inc.  
Washington DC

### **Diane Griffiths**

Office of Sen. Robert M. Hertzberg  
Sacramento, CA

### **Usha Ranji, MS**

Associate Director, Women's Health Policy  
Kaiser Family Foundation  
Menlo Park, CA

### **Nancy Buermeyer**

Senior Policy Strategist  
Breast Cancer Fund  
San Francisco, CA

### **Karren Ganstwig**

Los Angeles Breast Cancer Alliance  
Toluca Lake, CA

### **Michael Lipsett**

Retired  
Chief of the Environmental Health Investigations Branch  
CA Department of Public Health  
Sacramento, CA



## California Breast Cancer Research Council Programmatic Review Committee

### **Advocates**

#### **Ghecemy Lopez**

Celebrate Life Cancer Ministry

#### **JoAnn Loulan**

Breast Cancer Action

#### **Dolores Moorehead**

Women's Cancer Resource Center

#### **Joan Venticinque**

Cancer Patient Advocacy Alliance

#### **Patricia Wu, Ed.D.**

Dr. Susan Love Research Foundation

### **Nonprofit Health Organization**

#### **Representatives**

#### **Tasha Stoiber, Ph.D.**

Environmental Working Group

#### **Thu Quach, Ph.D.**

Asian Health Services

### **Medical Specialist**

#### **Francine Halberg M.D.**

Marin General Hospital

### **Industry Representatives**

#### **Lisa Eli, Ph.D.**

Puma Biotechnology, Inc.

#### **Stina Singel M.D. Ph.D.**

Genentech

### **Scientist/Clinicians**

#### **Ana Navarro, Ph.D.**

University of California, San Diego

#### **Robert Oshima, Ph.D.**

Sanford Burnham Prebys Medical Discovery

#### **Sharon Lum, M.D.**

RAND Corporation

#### **Veronica Vieira, D.Sc.**

University of California, Irvine

## **California Breast Cancer Research Program Staff**

**Marion Kavanaugh-Lynch, M.D., M.P.H.**

*Director*

**Lisa Minniefield**

*Program Specialist*

### **SPECIALRESEARCH INITIATIVES**

**Nicholas Anthis, D.Phil.**

### **COMMUNITY INITIATIVES**

**Senaida Fernandez, Ph.D.**

### **CORE FUNDING**

**Katherine McKenzie, Ph.D.**

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