



## **OSF HealthCare and Bradley University award first-ever Innovation for Health (IFH) grants**

### **For Immediate Release**

(June 1, 2023/PEORIA, Illinois) – OSF HealthCare and Bradley University are focusing on cancer prevention and treatment, as well as improving overall cardiac imaging plus pulmonary lung monitoring for babies and young children. The grants are the result of a partnership announced earlier this year between the Peoria, Illinois-based health system and the city's premiere private university. The awards be given twice a year with joint funding from each organization.

This first round of grants, totaling nearly \$200,000 have been awarded to four projects for research into rapidly developing the best, innovative approaches to medical training and health care delivery. The IFH grant awards include co-investigators from both Bradley University and OSF HealthCare.

### **Here are the Innovation for Health projects for spring 2023:**

#### **Toward Automation of a 4D Heart from Retrospectively Gated Cardiac CT Scans**

##### **Lead researchers**

Matthew Bramlet, MD, OSF HealthCare  
Samuel Hawkins, PhD, Bradley University

The goal of this project is to determine the feasibility automating the segmentation of the 18 phases of gated cardiac CT scans to generate patient-specific, 4D beating hearts and that these 4D animations can be placed into and analyzed in a digital stereoscopic format such as virtual reality.

#### **Pulmonary Acoustic Sensor Telemetry Array (PASTA)**

##### **Lead researchers**

Adam Cross, MD, FAAP, OSF HealthCare  
Suruz Miah, PhD, Bradley University  
Connor Davey, BA, OSF HealthCare  
Reid Jockisch, BS, OSF HealthCare

This venture is an expansion of the Pulmonary Acoustic Sensor Telemetry Array (PASTA) project which is focused on developing a device for use with an algorithm to remotely monitor lung sounds in pediatric patients. The primary deliverable of this phase is a physical device that is easily replicable and records eight channels of audio simultaneously without losing quality due to compression with minimal quality loss due to compression.

#### **Characterization of Changes in Biomechanical Properties and Cell Aggression in Ovarian Cancer Stem Cells Following Exposure to Chemotherapy**

##### **Lead researchers**

Kalyani Nair, PhD, Bradley University  
Craig Cady PhD, Bradley University  
Daniel Chan, MD, PhD, OSF HealthCare

The objective of this concept is to determine whether treatment with a chemotherapeutic agent will induce identifiable changes in the biomechanical properties of cancer stem cells which can be correlated with an increase in cancer stem cell aggression. Identifying biomechanical properties linked to an increase in aggression may suggest alternative approaches to suppressing cancer stem cell activation and reducing the recurrence of cancer.

#### **Humanizing Breast Cancer Prevention: A Community-Based Approach to Increase Health Literacy and Address Breast Cancer Health Disparities among Local Underserved Women**

##### **Lead researchers**

Heather Ford, MFA, Bradley University  
Scott Barrows MA, FAMI, OSF HealthCare  
Tianjiao (Grace) Wang, PhD, Bradley University|  
Rachelle Pavelko PhD, Bradley University  
Mary Stapel, MD, OSF HealthCare

This project aims to address health disparities among underserved groups by developing a community-based solution to effectively increase breast cancer health literacy and raise awareness of breast cancer prevention among local ethnic minority women.

**OSF HealthCare** is an integrated health system owned and operated by The Sisters of the Third Order of St. Francis, headquartered in Peoria, Illinois. OSF HealthCare employs nearly 24,000 Mission Partners in 150 locations, including 15 hospitals – 10 acute care, five critical access – with 2,089 licensed beds, and two colleges of nursing throughout Illinois and Michigan. The OSF HealthCare physician network employs more than 1,500 primary care, specialist and advanced practice providers. OSF HealthCare, through OSF Home Care Services, operates an extensive network of home health and hospice services. It also owns Pointcore, Inc., comprised of health care-related businesses; OSF HealthCare Foundation, the philanthropic arm for the organization; and OSF Ventures, which provides investment capital for promising health care innovation startups. In 2020, OSF OnCall was established, a digital health operating unit, including a hospital-at-home, which delivers care and services when, where and how patients prefer to receive them. OSF HealthCare has been recognized by *Fortune* as one of the most innovative companies in the country for 2023. Learn more at [osfhealthcare.org](https://osfhealthcare.org).

**OSF Innovation** was launched in 2016 and includes a multidisciplinary team that inspires, mentors and partners to transform care for patients and providers. With expertise in everything from ideation to commercialization, the division designs agile solutions, connecting everyday needs with inventive approaches and bold advances. More at [osfinnovation.org](https://osfinnovation.org).

**Bradley University** is a top-ranked private university in Peoria, Illinois, that offers nearly 6,000 undergraduate and graduate students opportunities and resources of a larger university and the personal attention and exceptional learning experience of a smaller university. Bradley offers more than 185 undergraduate and graduate academic programs in business, communications, education, engineering, fine arts, health sciences, liberal arts and sciences, and technology. These high-quality programs incorporate global and experiential learning opportunities, preparing graduates to succeed in a complex world. More at [bradley.edu](https://bradley.edu).