

# Opportunities in Radiation Science: From Low Dose to Climate Change

## Monday, March 28, 2022

### Opening Session

- 9:30 am **Presentation of the Colors**  
Joint Armed Forces Honor Guard  
from the Military District of  
Washington, DC
- Singing of the National Anthem**  
Kimberly Jordan  
*U.S. Nuclear Regulatory Commission*
- 9:35 am **NCRP Welcome**  
Kathryn D. Held  
*President, NCRP*
- 9:50 am **Introduction**  
Evagelia C. Laiakis  
Jessica S. Wieder  
*Program Co-Chairs*

### Eighteenth Annual Warren K. Sinclair Keynote Address

- 10:00 am **Introduction of the Speaker**  
Kathryn D. Held
- Developing a Long-Term Strategy  
for Low-Dose Radiation Research  
in the United States**  
Joe W. Gray  
*Oregon Health & Science University*

### Applying COVID-19 Lessons to Radiological Emergency Response

Sara D. DeCair, *Session Chair*

- 10:20 am **An American in Asia: Takeaways  
from the Asian COVID-19  
Response**  
Andrew J. Cordiner  
*Federal Bureau of Investigation  
Hazardous Materials Response*

- 10:35 am **Vaccine Hesitancy and the Social  
Side to Protective Actions**  
Monica Schoch-Spana  
*Johns Hopkins Center for Health  
Security*
- 10:50 am **Applying Lessons from the COVID-  
19 Pandemic Response to  
Radiological/Nuclear  
Preparedness, Response and  
Recovery**  
Orly Amir  
*U.S. Department of Homeland  
Security*
- 11:05 am **Interactive Q&A**
- 11:20 am **Break**

### Identifying National Defense Needs

Jeffrey J. Whicker, *Session Chair*

- 11:35 am **National Needs in Emergency  
Response and Homeland Security**  
Julian G. Hill  
*U.S. Department of Homeland  
Security*
- 12:00 pm **National Need for U.S. Department  
of Defense's Multiple-Parameter  
Radiological Biodosimetry/  
Dosimetry Diagnostics Network**  
Ricardo A. Reyes  
*Defense Health Agency*
- 12:20 pm **Interactive Q&A**
- 12:35 pm **Lunch**

### Optimizing Next Generation Medical Treatment

Pat B. Zanzonico, *Session Chair*

- 1:30 pm **The "Promise" of Targeted  
Radiopharmaceutical Therapies**  
Lisa Bodei  
*Memorial Sloan Kettering*

## Summary

---

1:45 pm **Treatment Optimization in Radiopharmaceutical Therapy**

George Sgouros  
*Johns Hopkins Hospital*

2:00 pm **Optimizing Next Generation Medical Treatment: Identified Opportunities in Medical School Education**

Neha Vapiwala  
*University of Pennsylvania*

2:15 pm **Interactive Q&A**

3:30 pm **Break**

### **Forty-Fifth Lauriston S. Taylor Lecture on Radiation Protection & Measurements**

3:45 pm **Introduction of the Lecturer**  
Kathryn D. Held

**Long-Term Radiation Animal Studies: A Story Continues**  
Gayle Woloschak

### **Integrating Knowledge Across Disciplines**

Manuela Buonanno, *Session Chair*

2:30 pm **“Y” and the Change in Practice of Routine Gonadal Shielding During Radiography**

Donald P. Frush  
*Duke University Medical Center*

2:40 pm **Sometimes a Statement Just Isn't Enough: The Importance of Considering Your Audience and Their Needs**

Angela Shogren  
*U.S. Environmental Protection Agency*

2:50 pm **Interactive Q&A**

3:00 pm **Preclinical Studies with Proton FLASH Radiotherapy for Gastrointestinal and Sarcoma Tumors in Rodents and Canines**

Constantinos Koumenis  
*University of Pennsylvania*

3:10 pm **FLASH: High Therapeutic Potential While Sparing Normal Tissue Complications at Ultra-High Dose Rates: Dosimetry Aspects**

Magdalena Bazalova-Carter  
*University of Victoria, Canada*

3:20 pm **Interactive Q&A**

## **Tuesday, March 29, 2022**

### **Understanding Individual Responses to Ionizing Radiation**

Nobuyuki Hamada, *Session Chair*

9:30 am **Potential Modifiers of Radiation-related Risk of Circulatory Diseases: Implications for Individual Differences in Radiation Response**

Preetha Rajaraman

9:50 am **Interactive Q&A**

### **Supporting Space Travel**

Jeffrey J. Whicker, *Session Chair*

10:00 am **Space Exploration: Evolving Recommendations for Radiation Protection Standards and Research**

S. Robin Elgart  
*National Aeronautics and Space Administration*

10:20 am **Interactive Q&A**

# Opportunities in Radiation Science: From Low Dose to Climate Change

## Fifth Thomas S. Tenforde Topical Lecture

- 10:30 am **Introduction of the Lecturer**  
Jessica S. Wieder
- Opportunities in Radiation Science: Applying Our Collective Knowledge to the Challenges of Our Time**  
Jill A. Lipoti
- 11:00 am **Break**

## Addressing Waste Management

Brian A. Powell, *Session Chair*

- 11:15 am **DOE Cleanup Efforts with Alaskan Native, Native American, Minority and Low-income Peoples and Communities**  
Joanna Burger  
*Rutgers University*
- 11:30 am **In-Service Condition of Radon Barriers over Uranium Mill Tailings Disposal Facilities in the United States**  
Craig Benson  
*University of Virginia*
- 11:45 am **ARPA-E ONWARDS Program: Addressing the Backend of Advanced Reactors Fuel Cycles**  
Robert Ledoux  
*U.S. Department of Energy*
- 12:00 pm **Interactive Q&A**
- 12:15 pm **Lunch**

## Reducing Climate Change through Nuclear Power

Willie O. Harris, *Session Chair*

- 1:00 pm **Nuclear Energy - Today and Tomorrow**  
Hilary Lane  
*Nuclear Energy Institute*
- 1:15 pm **NextGen RP: Applying Remote and Automated Technologies to Enhance and Optimize Nuclear Power Plant Radiation Protection Operations**  
Karen S. Kim-Stevens  
*Electric Power Research Institute*
- 1:30 pm **Small Modular Reactor/Advanced Nuclear Reactor Health Physics Challenges**  
Bryan S. Pell  
*Duke Energy*
- 1:45 pm **Interactive Q&A**

## Interactive: Opportunities in Radiation Science

- 2:00 pm Evagelia C. Laiakis  
Jessica S. Wieder  
*Program Co-Chairs*

## Conclusions

- 2:30 pm **NCRP Vision for the Future and Program Area Committee Activities**  
Kathryn D. Held  
*President, NCRP*
- 3:00 pm **Adjourn Scientific Meeting**
- 3:15 pm **NCRP Annual Business Meeting**
- 4:30 pm **Adjourn**



@NCRP2022