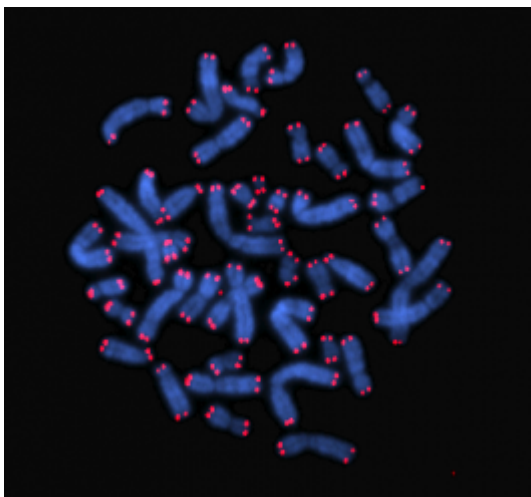


## Radiobiology Faculty



### **Credit**

John Murnane

The protective caps called telomeres (red) on the ends of the human chromosomes (blue).

Radiobiology is a field of clinical and basic science that involves the study of the action of ionizing radiation on living things. Radiobiology investigates radiation-induced cellular damage and the responding cell signaling pathways that affect cell survival and phenotype, to improve the ability of radiation therapy to control cancer. Radiobiology also investigates the harmful effects of radiation, including normal tissue damage and cancer, to minimize complications that can result from radiation therapy or accidental and occupational exposure.



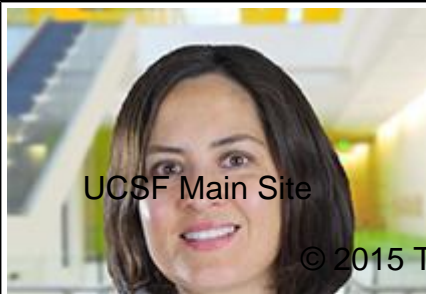
Mary Helen Barcellos-Hoff,  
PhD [1]

Dr. Barcellos-Hoff's research focuses on how tissues integrate information across scales of organization and uses this information to identify critical events in terms of effects on cell phenotype and tissue interaction during radiation carcinogenesis.



John P. Murnane, PhD [2]

Dr. Murnane's interests are the study of the mechanisms of DNA damage, DNA repair, and chromosome instability, and their relationship to cancer.



UCSF Main Site

© 2015 The Regents of the University of California

\*/

**Source URL:** <https://radonc.ucsf.edu/radiobiology-faculty>

**Links**

[1] <https://radonc.ucsf.edu/mary-helen-barcellos-hoff>

[2] <https://radonc.ucsf.edu/john-p-murphy>

[3] <https://radonc.ucsf.edu/paola-betancur>

Dr Betancur's long-term research goal is to understand the mechanisms encoded in the DNA by which cancerous cells in response to inflammation or radiation-induced inflammation, avoid being detected and destroyed by the host's immune system.

Paola Betancur, PhD [3]