

## Three OHSU medical students receive prestigious RSNA Research Medical Student Grant awards

Three OHSU medical students receive prestigious 2012 [RSNA Research Medical Student Grants](#) from the [Research and Education Foundation](#) of the [Radiological Society of North America](#). Ruth White, PhD, Leonel Kahn, BS, and Joshua Walker, PhD, three members of the OHSU medical school Class of 2013, received funding.

Drs. White and Walker are both part of the OHSU (MSTP) [Medical Scientist Training Program](#).

These current awardees represent the 6th, 7th, and 8th, [OHSU Radiation Medicine Student Interest Group](#) members to receive the highly competitive medical student research support from the RSNA.

“This is especially notable in light of the challenging extramural grant funding environment that currently exists,” said Charles Thomas, MD, Professor and Chair, Department of Radiation Medicine. “This unprecedented academic achievement which speaks to our commitment to training the next generation of leaders in academic radiation medicine.”

### STUDENT RESEARCH AT A GLANCE

#### ***Ruth White, PhD, MS3***



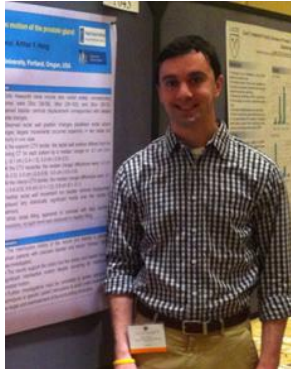
Dr. White’s grant is titled, *MicroRNA Mediated Radiosensitization of Head and Neck Squamous Cell Carcinoma Cancer Stem Cells*.

Radiation therapy is a mainstay in the treatment of locally advanced head and neck squamous cell carcinoma (HNSCC). However, approximately half of patients relapse with either local or distant disease progression. Failure of radiation therapy in HNSCC may be attributed to the presence of a population of chemo- and radioresistant tumor cells that initiate tumor recurrence called cancer stem cells.

Dr. White’s study aims to identify molecular targets, specifically microRNAs (small RNAs that post-transcriptionally regulate gene expression), induced in this cell population after treatment that can be targeted to augment radiotherapy in head and neck squamous cell carcinoma.

The research outlined in this grant will be carried out under the guidance of Dr. Molly Kulesz-Martin in the department of Dermatology and Dr. Charles Thomas in the Department of Radiation Medicine.

**Leonel Kahn, BS, MS3**



Leonel's grant is titled, *Construction of a Nomogram for Predicting Mortality and Visual Outcomes of Patients Treated with I-125 Plaque Brachytherapy for Choroidal Melanoma.*

The goal of his project is to create a clinical model to predict individual mortality and visual outcomes based on pre-treatment demographic and tumor parameters in choroidal melanoma patients treated with I-125 brachytherapy.

"Radiotherapy based treatment parameters will also comprise input variables into the model," said Leonel. "The creation of this nomogram, which will be based on a large compilation of data from 20+ years of experience, will provide important and practical information for counseling and clinical decision making in patients with choroidal melanoma."

Additionally, the grant will allow both the radiation oncology and ophthalmology communities to provide evidence based, individualized advice. This is a collaborative project between the Department of Radiation Medicine and the Casey Eye Institute at OHSU, as well as the Department of Radiation Oncology at Drexel University.



**Joshua Walker, PhD, MS3**

Dr. Walker's grant is titled, *Role of DAMPs (danger-associated molecular pattern) as Immune Activators in Combination SBRT and IL-2 Therapy of Metastatic Melanoma.*

He will be working with a recent graduate of the OHSU Radiation Oncology Residency Program, Dr. Marka Crittenden, on a clinical trial researching the effectiveness of combining stereotactic body radiation therapy and IL-2 immunotherapy to treat metastatic melanoma.

"Preliminary results have been extremely promising, showing significant increases in the clinical response rates of patients treated with this combination therapy compared to patients receiving IL-2 immunotherapy alone," said Dr. Walker.

The goal of the project outlined in the grant is to measure serum levels of several mediators of immune activation in the patients involved in the clinical trial, in an attempt to elucidate mechanisms underlying tumor regression in the responding patients. This RSNA grant is a

collaboration between the Radiation Oncology Department at OHSU and the Providence Portland Cancer Center where the trial is taking place.