Dr. John P. Plastaras graduated from Vanderbilt in 2002 following his award of the M.D. He completed his Ph.D. in the Department of Biochemistry in 2000 under the mentorship of Dr. Larry Marnett. His research in the Marnett lab focused on studying DNA adduct formation by malondialdehyde and structurally related compounds. John then completed a transitional internship at Memorial Sloan-Kettering Cancer Center in New York. He followed that experience with a residency in Radiation Oncology as a B. Leonard Holman Research Pathway Resident at the Hospital of the University Pennsylvania. That appointment was accompanied by an RSNA research seed grant.

John’s first faculty position was as a clinical instructor in the Department of Radiation Oncology (U Penn) in July 2007, followed by his appointment one year later as assistant professor in the same department. In July 2009, he was named the Scientific Director of Clinical Research in the Department of Radiation Oncology and has since been actively involved in teaching and mentoring medical undergraduates. John is board certified by the American Board of Radiology in Radiation Oncology and has an impressive record of publications. He is married to Neha Vapiwala, M.D., who is the Genitourinary Service Chief and Director of Education for the Penn Department of Radiation Oncology.

The Chimera: Radiology and Radiation Oncology are growing in popularity with MD-PhD students. What is it about these fields that are attractive or conducive to a career for an MSTP student? Do you forecast continuing research opportunities, particularly given new technologies on the horizon?

John Plastaras: I can only speak for myself, but I know that a combination of factors makes them both attractive professional fields to enter, yet residencies are highly competitive. Though the MD-PhD does not offer a clear advantage over MD applicants for residencies, I do believe that having the research training that comes from the dual degree results in MSTP graduates being much sought after. One indication of the value of the MD-PhD and research training was my appointment at Penn as a Holman Pathway Research Resident and subsequent appointment as Director of Clinical Research. I believe that the hard work put in while in the Vanderbilt MSTP paid off during the residency application process and then following with my appointment to Penn. However, there are a number of good positions available for MSTPs not only at Penn, but in many institutions.

About technology, there are new field-specific tools being developed every day that are interesting to learn, exciting to use, but more complicated and requiring constantly learning new skills and processes. The Roberts Proton Therapy Center at Penn has been open for just over 2 years, and it has been one enormous learning curve where I have worked closely with medical physicists, radiation biologists, and biomedical engineers. These very talented professionals have been great collaborators and are always looking for innovative processes to improve medicine. It is an enjoyable aspect of my career to be able to spend time with non-physician researchers as they develop new technologies.

TC: What was the most difficult part of transitioning from residency to faculty and what decision was the most important insofar as the transition?

JP: The most difficult part, for me, was deciding which career path to follow: either more laboratory-research focused and less clinical emphasis (about a 50-50 split in effort) or more of a clinically-focused pathway (more like 80/20). I decided to choose the path I enjoyed more, and selected the clinical pathway.

TC: What are some lessons learned that you wish you had when a student, or particularly as a senior student?

JP: I received some pretty good advice about choosing sub-internships. It was suggested I select sub-internships outside of my planned specialty, and request those that you will never be exposed to again. Medical school is the time to learn about “everything else,” before focusing on one specialty you can/will do for the rest of your life. I felt that I would be doing radiation oncology as a career, so medical school was the time to be exposed to a wider range of specialties as it would probably be the last time to do so.

TC: Are you involved in MD-PhD training or the program at Penn?

JP: I am more focused on resident teaching and mentoring but have been involved in several medical school courses. However, I would like to be more involved in interacting or mentoring Penn MSTP students.