



Founders Week

Entrepreneur of the Year



William F. Regine, MD, FACR, FACRO

School of Medicine

The \$200 million Maryland Proton Treatment Center that began treating patients in February has turned out just the way William F. Regine envisioned it and the MPTC's executive director couldn't be happier.

"The vision we set was a tall order in wanting to make MPTC both a center of proton therapy excellence across all academic missions and a regional resource for health care providers in the mid-Atlantic," says Regine, who also is professor and Isadore & Fannie Schneider Foxman Chair in the School of Medicine's Department of Radiation Oncology.

"We have managed to attract outstanding faculty who are already doing some cutting-edge research in proton therapy and have also managed to bring on two affiliate partners, Georgetown University and WellSpan Health [based in York, Pa.], making proton

therapy accessible to their patients within the first six months of opening. We have a joint program with Hopkins in Howard County and a community-based practice group in Anne Arundel County. We expect to bring other health care partners along in the next six months, including from northern Virginia."

Regine has had a crash course in partnerships during the past 10 years in making MPTC a reality. He began by visiting the few other proton treatment centers around the country and engaging a diverse group to create one here.

He developed a partnership with Maryland Proton Treatment Holdings (formally known as Advanced Particle Therapy LLC of San Diego, Calif.) to successfully raise funding sources; engaged Varian Medical Systems of Palo Alto, Calif., the world leader in radiation oncology technology, to provide the most advanced form of proton therapy; and enabled the School of Medicine's Department of Radiation Oncology (University of Maryland Radiation Oncology Associates P.A.) to lead the project in providing the center's vision, as well as professional and clinical management services. He integrated MPTC with the UM Greenebaum Comprehensive Cancer Center and UM Medical Center/System by locating the center within the BioPark at UMB and much, much more.

MPTC's grand opening in June, four years after its groundbreaking, was a triumph for Regine and his team. The 110,000-square-foot facility is the first and most advanced of its kind in the Baltimore-Washington region and will provide nearly 2,000 cancer patients a year with precision technology to treat cancer.

Not one to tread water, Regine already is looking ahead. Asked what he sees for the center in 10 years, Regine says, "Being a world leader in bringing and defining the best use of proton therapy in the care of cancer patients."

How about 50 years?

"I see proton therapy, along with other coming advances in cancer therapy, especially other targeted/systemic agents, leading to a time when there will be little or no need for the use of a scalpel in the treatment for cancer."

Historically, the challenge in fighting cancers has been to direct adequate radiation to the tumor site without affecting surrounding tissue. Too often, however, radiation extends beyond the designated site. Proton therapy, specifically the kind that emits a pencil-thin beam of radiation like that at MPTC, goes directly to the tumor with no extension beyond the targeted site. The patient first undergoes a CAT scan, so that the therapist can make any adjustment for movement or alteration in breathing. Because the treatment is precise, the duration of the therapy can be shorter.

Ranked in the top five in the country in National Institutes of Health research funding, Regine is no stranger to innovation. He is co-inventor of the GammaPod, the first radiation treatment system in the world completely dedicated to early-stage breast cancer. Regine is confident it will allow patients in the near future to be able to have their breast cancer treated in one to three outpatient treatment sessions of less than 30 minutes without ever needing breast surgery.

As a department chair, principal investigator of four National Cancer Institute clinical trials, inventor, research author, and editor of textbooks like *Principles and Practices of Stereotactic Radiosurgery*, Regine has made an enormous impact. What is the most satisfying aspect of his work?

"Being fortunate enough to have had great partners and being surrounded by amazing staff — and family — all dedicated to making a difference in the lives of not only the cancer patients we directly see and care for, but for cancer patients around the world," he says. "Nothing I have done would have been possible without them."

Among those partners is E. Albert Reece, MD, PhD, MBA, dean of the School of Medicine and vice president for medical affairs at UMB, who called Regine "a relentless and dynamic leader in radiation oncology" at the grand opening of the center.

Regine says "without the support of our UMSOM leadership starting with Dean Reece and UMMS leadership starting with Bob Chrencik, this project would not have happened."

And Regine admits he was "very surprised" to be chosen as UMB's 2016 Entrepreneur of the Year, saying "we are fortunate to have a lot of creative-minded faculty on the UMB campus."

James L. Hughes, MBA, chief enterprise and economic development officer and vice president at UMB and head of UM Ventures, said Regine set himself apart, creating a state-of-the-art center that will save lives while producing revenue.

"MPTC is creating 175 local jobs and it is also bringing patients from around the world to Baltimore for up to six weeks of treatment," Hughes says. "It's an amazing win-win for the University and the public it serves. Dr. Regine should be justifiably proud."

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620 W. Lexington St., Baltimore, MD 21201 | 410-706-3100
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