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A new center for heavy ion research

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Progress in cancer therapy with ions heavier than protons, i.e., helium, carbon, oxygen and neon, requires research and development capability. Ion research activity, however, is limited from the absence of U.S. accelerator facilities offering ion beams for therapy –placing the U.S. significantly behind Europe and Asia. With dramatic advances in beam delivery and compact accelerators, the potential exists to create a facility that can play a leadership role in particle therapy and ion-based research. This paper announces summary details of a new center for ion therapy research under construction in Waco, TX, in collaboration with recognized accelerator entities both academic and industrial. The advanced accelerator technologies will produce beams for both clinical and research applications, offering a complete range of ions, intensities and energies required by the medical community, including the capability to perform ultra-high dose irradiation (FLASH) research. FLASH, a recent research initiative, which has the potential of reducing cancer treatment toxicities, is an important if not critical capability for a competitive research center –requiring beam intensities well beyond those provided by current medical accelerators. Building a state-of-the-art cancer research center within a comprehensive facility will provide the resources to promote ion therapy in the U.S, including, preclinical/clinical trials and protocols between modalities, and also support broad ion R&D.

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Footnotes

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Yes

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