

Abstract Submitted
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Developing isotope production capabilities with heavy-ion beams at Texas AM University LAUREN MCINTOSH, JON BURNS, LAURA MCCANN, GABRIEL TABACARU, EVGENY TERESHATOV, AMY VONDER HAAR, SHERRY YENNELLO, Texas AM University, SAMUEL FERRAN, SUZY LAPI, University of Alabama at Birmingham, SEAN MCGUINNESS, GRAHAM PEASLEE, JOHN WILKINSON, University of Notre Dame, KENDALL BARRETT, JON ENGLE, University of Wisconsin — Alpha emitting radionuclides with medically relevant half-lives are of interest to the medical community for treating malignant disease because they deposit large amounts of energy close to the location of the decaying nucleus. Some radionuclides of interest are available via low energy protons or reactor neutrons. However, some of the most promising radionuclides are inaccessible via these conventional routes and require more exotic incident particle beams or energies. Production and supply of these unique radionuclides is difficult due to the limited number of facilities with production capabilities, including the aforementioned accelerated heavy-ion beams or the requisite targetry and radiochemistry expertise to isolate components of interest. The Cyclotron Institute of Texas AM has this expertise and is using its K150 cyclotron to explore the production of many radionuclides of medical interest. A program is being developed to focus on production of alpha emitters, and preliminary studies of At-211 and Tb-149 production have been performed. These results and future directions will be discussed, with an emphasis on current capabilities.

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