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**Progress in the Development of Irradiation Targets for Production of
Mo-99 in Brazil**

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ABSTRACT

Currently, the world's ⁹⁹Mo supplying depends on the operation of research reactors which are aged around 40 years and, therefore, are not capable of reliable operation. This situation makes the ⁹⁹Mo production chain particularly vulnerable. Recent crises in the supply of ⁹⁹Mo has profoundly affected the distribution of ⁹⁹Mo/^{99m}Tc generators in Brazil and encouraged the starting of the RMB - Brazilian Multipurpose Reactor, which has as one of the objectives to make the country independent in the production of radioactive isotopes for medicine. The success of RMB Project will require the manufacturing technology of irradiation targets for the ⁹⁹Mo production from nuclear fission. The manufacturing processes of two types of targets using low enriched uranium (LEU) are being studied at IPEN. The first one is based on UAlx-Al dispersion targets. The second one is based on thin foils of metallic uranium. This paper presents the current status of ongoing activities at IPEN-CNEN/SP related to the development of these two types of LEU irradiation targets for future production of ⁹⁹Mo in RMB.