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## TAEA Proton Accelerator Facility, Objectives and Capabilities

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The main goal of Turkish Atomic Energy Authority (TAEA) is to enhance the use of products of nuclear technology by acquiring it for the utmost benefits of Turkey. Within mentioned frame; the accelerator technology is also a good tool to be implemented nuclear technologies for the utmost benefits of Turkish Nation. It is known that; the accelerators play a central role in medical applications such as radioiso-topes/radiopharmaceuticals production to be used nuclear medicine, heavy ion treatments at cancer cure studies and scientific studies ranging from biology to health, from material science to metallurgy, from fundamental particles to universe.

In order to achieve this main goal, The Proton Accelerator Facility (PAF) was established at Sarayköy Nuclear Research and Training Center (SNRTC) of TAEA in Ankara on 2012. By the commissioning of TAEA-PAF, being a multi-purpose facility, an infrastructure for accelerator technology with an integral type of facility that is designed for radioisotope and radiopharmaceutical production, quality control and research and development have been established in Turkey for the first time. Eventually various institutions in our country in the field of medicine and research is benefit from this Facility, which is a unique type of its kind.

As briefly TAEA PAF comprises; a proton accelerator (CYCLONE 30 designed by Ion Beam Application S.A.-Belgium) with energy of 15 30 MeV and proton current of 1.2 mA (maximum), four beam transport lines which three of them are used for radioisotope production (for PET and SPECT) from different kind target (liquid, gas and solid) systems and one of them could be used for research activities and related production and quality control laboratories.

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