The background features a complex, abstract graphic of molecular structures in shades of blue and teal. Several isotopes are highlighted with yellow wavy lines: ^{225}Ac , ^{89}Zr , ^{68}Ga , ^{177}Lu , ^{18}F , and $^{99\text{m}}\text{Tc}$.

BOOK OF ABSTRACTS: INTERNATIONAL SYMPOSIUM ON TRENDS IN RADIOPHARMACEUTICALS

#ISTR2023

IAEA Headquarters
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17 – 21 April 2023



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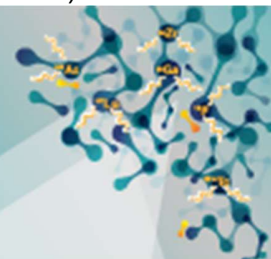
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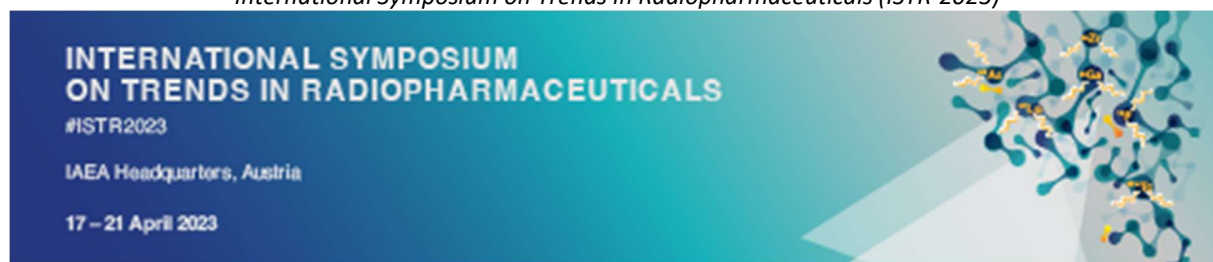
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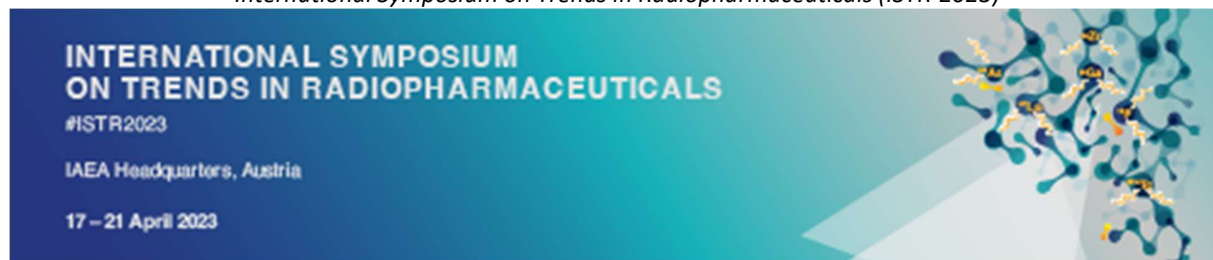
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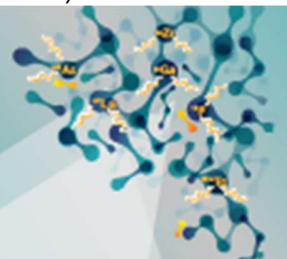
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ON TRENDS IN RADIOPHARMACEUTICALS

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Design of Feasibility Study for the Establishment of ^{89}Zr Production – Tailored Approach to Introduce New Radiopharmaceuticals in a Developing Country

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Establishing radiopharmaceutical production in a developing country is challenging, mainly in the economic aspect. A feasibility study provides an objective insight into many aspects of the feasibility of the idea of introducing new radiopharmaceutical. The feasibility study for establishing production of ^{89}Zr is designed to include preliminary analysis, market research, technical feasibility analysis, economic analysis, review and analysis of all data, and feasibility conclusion. The preliminary analysis comprises a review of the application of ^{89}Zr -radiopharmaceuticals in clinical trials and a review of the cancer statistics on a national level. The technical feasibility determination is based on the analysis of the technical capacities of the production site – University Institute of Positron Emission Tomography. The economic feasibility estimation comprehends financial and pharmacoeconomic analysis, which aims to assess the justification for implementing a new radiopharmaceutical in clinical practice. For this purpose, a cost-effectiveness analysis is performed. ^{89}Zr -trastuzumab is selected as a subject of the pharmacoeconomic estimation, based on the results of the preliminary analysis: ^{89}Zr -trastuzumab is one of the most common ^{89}Zr -radiopharmaceuticals in clinical trials, and on the national level the breast cancer is the most common malignancy and the most common cause of death from cancers in the female population.