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ΔΡΑΣΗ ΕΘΝΙΚΗΣ ΕΜΒΕΛΕΙΑΣ:
«ΕΡΕΥΝΩ-ΔΗΜΙΟΥΡΓΩ-ΚΑΙΝΟΤΟΜΩ»

Ειδική Υπηρεσία Διαχείρισης Επιχειρησιακού Προγράμματος Ανταγωνιστικότητα Επιχειρηματικότητα και Καινοτομία (ΕΥΔ ΕΠΑνΕΚ)

Ειδική Υπηρεσία Διαχείρισης και Εφαρμογής Δράσεων στους τομείς Έρευνας, Τεχνολογικής Ανάπτυξης και Καινοτομίας (ΕΥΔΕ ΕΤΑΚ)

TITLE: Innovative Radiopharmaceuticals with Fluoride-18: Research, Development and Introduction to the Greek Market for Diagnosis / Progression of Major Diseases with PET

ΑΚΡΩΝΥΜΙΟ: BIOPET

ΚΩΔΙΚΟΣ ΕΡΓΟΥ T1ΕΔΚ-03799

ABSTRACT OF THE PROGRAM

This proposal refers to research, development and availability of innovative F-18 radiopharmaceuticals to be used in the daily clinical practice of Nuclear Medicine in Greece, for the diagnosis of serious diseases. PET has evolved into one of the most important imaging techniques in medicine for the diagnosis of diseases in a non-invasive manner, and is characterized by high sensitivity, which is larger than the order of magnitude than CT and MRI.

The most commonly used radiopharmaceutical in the PET clinic is F-18 fluorodeoxyglucose (F-18-FDG). The

F-18-FDG has a particular application in oncology, but it has limitations in its diagnostic specificity. It is therefore necessary to introduce and develop new PET radiopharmaceuticals with increased specificity for particular tumors as well as radiopharmaceuticals for evaluation and visualization of functional processes such as hypoxia - extremely important in oncology, cardiology and ischemic events - but also the imaging of protein aggregates associated with Neurodegenerative diseases.

Thus, in the context of this project, the research, development and introduction of the three F-18-labeled preparations (18F-PSMA1007, 18F-FMISO and 18F-T808), in the Greek medicine community under the approval of National Drug Organization, with proven pharmacological action in the Bibliography but commercial availability which requires new innovative synthetic approaches to reduce cost and time of manufacture, increased yield, and new efficient protocols for, labeling purification, standardization and formatting.