



Dear Sirs and Madams,

Somatostatin receptors became a model biological target for molecular imaging due to growing knowledge on their expression and due to the improved methods for their identification. The first synthetic somatostatin analogs were used in the clinics to control the symptoms of neuroendocrine tumors in the early 1980s. The first ^{111}In -labeled somatostatin analog, ^{111}In -pentetretotide, has been approved for use as a drug in 1995. Our experiences with the development of $^{99\text{m}}\text{Tc}$ -labeled somatostatin analogs date back to 1996 and were initiated within the International Atomic Energy Agency coordinated research project on “ $^{99\text{m}}\text{Tc}$ radiopharmaceuticals for imaging of peripheral receptors” with the involvement of world class specialists in the field. The first-in-human diagnostic application of Somatostatin Receptor Scintigraphy (SRS) with $^{99\text{m}}\text{Tc}$ -(tricine)HYNIC-TOC was published in 2000. Importantly, in the same period, the first patient images with the somatostatin analog, $^{99\text{m}}\text{Tc}$ -EDDA/HYNIC-Tyr³-octreotide, prepared from the dry kit formulation were acquired in Poland in the group of prof. Piotr Lass in Gdańsk. This new technique was further developed in clinical centers in Warsaw, Łódź, Poznań and Kraków with the excellent publication record documenting the diagnostic value of SRS. The original proprietary name Tektrotyd was the result of stimulating discussions and guidance by prof. Julian Liniecki from Łódź. We regret that the small space of this editorial does not allow listing all those who contributed to the success of this new radiopharmaceutical. Their pioneering work is now validated by Marketing Authorization of Tektrotyd in most of the European countries and by its expansion beyond Europe.

In the current issue of Nuclear Medicine Review various aspects of SRS in diagnostics of neuroendocrine neoplasms (NEN) are presented and discussed. Several original papers report on the diagnostic utility of this method supported with images helpful in interpretation and in proper patient diagnosis. This chapter opens with the paper written by Polish colleagues who evaluated the utility of peptide receptor scintigraphy with the use of $^{99\text{m}}\text{Tc}$ -EDDA/HYNIC-TOC in the diagnosis of Iodine Avid Differentiated Thyroid Cancer. The investigators from Croatia analyzed the usefulness of SRS with $^{99\text{m}}\text{Tc}$ -EDDA/HYNIC-TOC in patients with somatostatin receptor (SSTR) positive tumors of head and neck region. The experiences in imaging of bronchial and thymic neu-

roendocrine tumors were presented by authors from Bulgaria. Another article from Poland worked out the influence of PET/CT ^{68}Ga somatostatin receptor imaging on proceeding with patients, who were previously diagnosed using SPECT $^{99\text{m}}\text{Tc}$ -Tektrotyd. Based on the high number of performed SRS studies the colleagues from Hungary shared their observations with regard to the limitations and pitfalls of $^{99\text{m}}\text{Tc}$ -EDDA/HYNIC-TOC scintigraphy, a “must to know” to improve the diagnostic accuracy. The clinical part is closed with the overview of efficacy of this method in neuroendocrine neoplasms, provided by investigators from Serbia. Radiopharmaceutical developments and pre-clinical evaluation of Exendin-4, an agonist of GLP-1 receptor, are presented in another original paper coming from Poland. These receptors are expressed in high density in insulinomas, another diagnostically challenging neuroendocrine neoplasm.

The Review part of this issue consists of three papers. The first two: “Neuroendocrine neoplasms and somatostatin receptor subtypes expression”, “NEN — the role of somatostatin receptor scintigraphy in clinical setting” — written by Polish authors. The introducing paper by Tomaszewska et al. presents the overview of somatostatin receptor expression in various tissues. The following one by Opalinska et al. discusses the role of somatostatin receptor imaging in NENs and opens the new perspectives, in particular offered by hybrid imaging PET/CT. The summary of radiopharmaceutical developments and the new trends in design of radiopharmaceuticals for SSTR imaging, also in the context of new developments in imaging instrumentation has been presented by Mikołajczak and Maecke, the Polish and German authors.

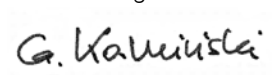
With this issue of Nuclear Medicine Review, thanks to the large number of interesting contributions resulting in the selection of original and review papers, the utility of SRS was demonstrated, not only in terms of neuroendocrine neoplasms visualization but also in terms of its extensive use in various regions of Europe.

Renata Mikołajczak



Radioisotope Centre POLATOM,
National Centre for Nuclear
Research, Otwock

Grzegorz Kamiński



Editor-in-Chief
Nuclear Medicine Review

