

CME Session 9

Radiopharmacy + Drug Development Committee
Friday, October 22, 09:00-10:30

Session Title

Back to the Future - New Kit-Based Approaches for Labelling Radiopharmaceuticals (⁶⁸Ga, Al[¹⁸F]F,...)

Chairperson

Filippo Lodi (Bologna, Italy)

Programme

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| 09:00-09:29 | Clement Morgat (Bordeaux, France): Labelling Cold Kit With ⁶⁸ Ga - The Future is Bright |
| 09:29-09:58 | Chiara Da Pieve (London, United Kingdom): Al[¹⁸ F]F - From Modules Toward a Kit-Based Radiofluorination? |
| 09:58-10:27 | Oliver Neels (Dresden, Germany): Regulatory Aspects of Cold Kit-Based Radiopharmaceuticals in the EU |
| 10:27-10:30 | Session Summary by Chairperson |

Educational Objectives

1. To update on recent developments in cold kit based ⁶⁸Ga-radiopharmaceuticals
2. To learn on Al[¹⁸F]F labelling, along with the possibility to obtain a kit-based radiofluorination of radiopharmaceuticals
3. To give an overview of regulatory aspects and issues for cold kit-based preparations in different EU countries

Summary

The cold kit approach is a fast and easy method for labeling tracers with radiometals used in Nuclear Medicine for ^{99m}Tc-radiopharmaceuticals since decades. The clinical success of some radiopharmaceutical labelled with Ga-68, a generator-based PET isotope, followed by the availability of registered generators and the development of new chelators, boosted the interest in development of cold kit-based ⁶⁸Ga-radiopharmaceuticals as for ^{99m}Tc. The aluminium fluoride-18 (**Al[¹⁸F]F radiolabelling**) is an interesting “one-pot” method which involves the formation of ¹⁸F-metal complex trapped by a suitable chelator. This approach simplifies the ¹⁸F-labeling methodology along with the possibility to obtain a kit-based radiofluorination. In this session, the recent developments in kit-based labeling of ⁶⁸Ga-radiopharmaceuticals **and in Al[¹⁸F]F labeling** will be discussed. Finally, since the regulatory aspect is an important issue for using cold kit preparations in clinical practice, an overview of the different regulations in European countries will be showed and discussed.

Key Words

Cold kit, radiolabelling, ⁶⁸Ga-radiopharmaceuticals, Al[¹⁸F]F, regulatory aspects, PET