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 ($^{68}$Ga, Al[$^{18}$F]F,...)

Chairperson
Filippo Lodi (Bologna, Italy)

Programme
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 $^{68}$Ga-radiopharmaceuticals
2. To learn on Al[$^{18}$F]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 $^{68}$Ga-radiopharmaceuticals as for $^{99m}$Tc. The aluminium fluoride-18 (Al[$^{18}$F]F) radiolabelling is an interesting “one-pot” method which involves the formation of $^{18}$F-metal complex trapped by a suitable chelator. This approach simplifies the $^{18}$F-labeling methodology along with the possibility to obtain a kit-based radiofluorination. In this session, the recent developments in kit-based labeling of $^{68}$Ga-radiopharmaceuticals and in Al[$^{18}$F]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, $^{68}$Ga-radiopharmaceuticals, Al[$^{18}$F]F, regulatory aspects, PET