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A Creative Vision for the Future

Innovative Technologies for Production, Purification, Analysis and in Vitro Evaluation of Radiopharmaceuticals

Symposium Organizers: van Dam, R. Michael; Pascali, Giancarlo; Kuge, Yuji

Preparation of short-lived radiopharmaceuticals for imaging or therapy requires significant automation. As demand and variety of radiopharmaceuticals in use continue to increase, there is renewed interest in improving the technologies used for their production.

For example, microfluidics and flow chemistry offer many advantages that can improve the yields and decrease the cost of producing radiopharmaceuticals. Recently, research in this area has been expanding to include upstream (e.g. radioisotope separation and concentration) and downstream processes (e.g. purification, formulation, analysis). Other recent innovations include automated QC testing and modular systems that increase equipment versatility. Evaluation of pharmacologic properties of radiopharmaceuticals in cell cultures or single cells via microfluidic radioassays is also now possible.

This symposium will highlight the progress made in radiochemistry technology innovations and the challenges to be addressed to bring these concepts into mainstream use.

