

***DR. R. V. RAJAM Oration***

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## **RECENT TRENDS IN MOLECULAR IMAGING**

### **SUMMARY**

PET/CT is an important molecular imaging technique for the assessment of neurological disorders. The most widely used radiopharmaceutical for both clinical and research purposes is [18F] 2-fluoro-2-deoxy-D-glucose (FDG). It is extensively used owing to its favourable physical characteristics. It enables depiction of cerebral glucose metabolism, and has thus been used to study various pathological states. Despite this, FDG has its own limitations. This is owing to its limited specificity and high cortical uptake. This has paved the way for the development of several non-FDG PET radiopharmaceuticals. We present the insights gained at our institution, using these radiotracers in the assessment of neurological disease. Our study shows that the use of FDG and non-FDG novel PET radiopharmaceuticals facilitates the early diagnosis, delineation of extent, prognostication and monitoring of therapeutic response in several neuropathological states.