

PET Facility

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Aberdeen Biomedical
Imaging Centre

Molecular Imaging



Wikipedia

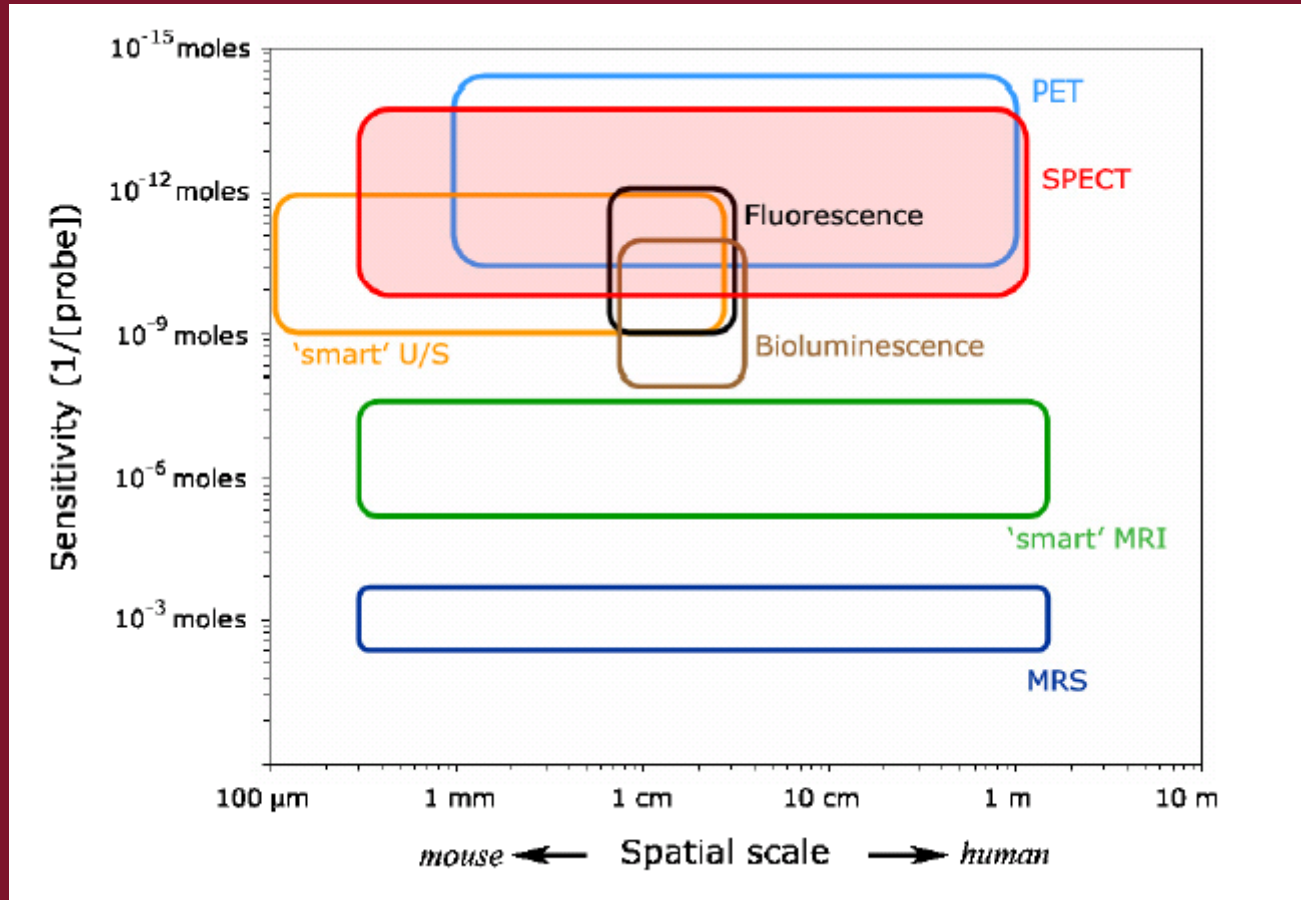
Molecular Imaging is a new discipline that unites molecular biology and *in vivo* imaging. It enables the visualisation of cellular function and the follow-up of the molecular process in living organisms without perturbing them.

Molecular imaging differs from traditional imaging in that probes known as biomarkers are used to help image particular targets or pathways.

Molecular Imaging



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Meikle et al Phys Med Biol vol 50 R45-R61 2005

PET



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- The ability to image function in-vivo, with high sensitivity, using positron emitting tracers
- Can use small organic molecules e.g. Carbon, Oxygen, Nitrogen & Fluorine
- Image the whole body



- Significant investment in facilities
 - Clinical & Pre-clinical PET, MRI & CT
 - Cyclotron & Radiochemistry Labs
 - Medicinal chemistry facilities
- Recent key academic appointments
 - Matteo Zanda (tracer development)
 - Vin Cunningham (image analysis)

Pre-clinical PET/CT

- Improve accuracy
- Reduce number of animals required for research
- Allow multiple observations
- Capability exists in Aberdeen to develop new methods

