Trifunctionalised Triazoles for Imaging

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Category(s):
Diagnostic/Prognostic

Description:

Trifunctionalised Reagent Platform for PET, SPECT, and Optical Imaging

Available For: Exclusive or non-exclusive licensing.

Summary

We have developed trifunctionalised reagents equipped with reporter groups for imaging with PET, SPECT and optical techniques. Our patent pending technology utilises simple chemistry to form multi-modal reagents with expanded utility beyond the traditional restrictions of two group functionalisation.

The Technology and its Advantages

We believe the addition of a third functionality provides a significant improvement to a broad range of imaging reagents, as dual reporters can be attached to biomolecules in a single step thereby providing the opportunity for multiscale imaging with nuclear and optical techniques. This offers the opportunity to develop libraries rapidly, incorporating a reporter group, a biomolecule and a third functionality that can be adjusted to optimise the pharmacokinetic properties of tracers.

The advantage of this technology over Al-F chemistry with respect to antibody labelling is the ability to incorporate a second functional group in the labelling reagent. Radioiodine can be incorporated to provide labelled compounds for imaging and/or radiotherapy. Alternatively, a fluorescence group can be added for optical high resolution imaging in combination with PET, or to allow the use of high throughput assays, or for simplified purification.

Market Opportunity

Current methods for radioiodination typically rely on toxic organotin precursors and have limited biological stability. Our tracers can be constructed with the possibility of incorporating two different radiolabels, allowing 'scouting' imaging prior to radiotherapy using structurally identical compounds. Also, tracers can be used for PET and SPECT without structural modifications, allowing users to commercialise products for both modalities whilst halving costs for supporting biological data.

Intellectual Property Status

Patent pending.

Further Information

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