47. The use of a deuterated compound as described in any one of claims 1-36, or a pharmaceutically acceptable salt thereof, to prepare a medicament for detecting neurofibrillary tangles and/or senile plaques in an animal.

48. The use of a deuterated compound as described in any one of claims 1-36, or a pharmaceutically acceptable salt thereof, to prepare a medicament for detecting a neurological disorder in an animal.

49. The use of a deuterated compound as described in any one of claims 1-36, or a pharmaceutically acceptable salt thereof, to prepare a medicament for detecting Alzheimer's disease in an animal.

50. A method of detecting progressive supranuclear palsy associated with amyloid plaque and/or tau protein aggregation in an animal, comprising administering a deuterated compound comprising an imaging isotope as described in any one of claims 1-36, or a pharmaceutically acceptable salt thereof, to the animal, and measuring the radioactive signal of the compound associated with amyloid deposits and/or tau protein aggregates.

51. A method of detecting progressive supranuclear palsy associated with tau protein aggregation, comprising administering a deuterated compound comprising an imaging isotope as described in any one of claims 1-36, or a pharmaceutically acceptable salt thereof, to the animal, and measuring the radioactive signal of the compound associated with tau protein aggregates.

~~52. The invention as hereinbefore described.~~