

# MIRIAD : Molecular Imaging Research Initiative for Application in Drug Development

<https://www.neurodegenerationresearch.eu/survey/miriad-molecular-imaging-research-initiative-for-application-in-drug-development/>

## Principal Investigators

KU Leuven, Faculteit Farmaceutische Wetenschappen, Dept Farmaceutische en Farmacologische Wetenschappen, Lab voor Radiofarmacie

## Institution

KU Leuven

## Contact information of lead PI

### Country

Belgium

## Title of project or programme

MIRIAD : Molecular Imaging Research Initiative for Application in Drug Development

## Source of funding information

Flanders Innovation & Entrepreneurship

## Total sum awarded (Euro)

€ 3,533,969

## Start date of award

01/01/2014

## Total duration of award in years

4.0

## The project/programme is most relevant to:

Parkinson's disease & PD-related disorders

## Keywords

### Research Abstract

Strategic Basic Research (SBO) project – Instituut Wetenschap en Technologie (IWT)

The MIRIAD project aims to provide a complete platform of molecular imaging solutions to pharmaceutical industry in Flanders by combining

(1) imaging and animal model expertise

(2) imaging equipment

(3) access to fast development and validation of imaging probes by joining forces from complementary research groups of KU Leuven and VUB

Project summary

In vivo molecular imaging provides different modalities for non-invasive visualization, characterization and quantification of specific molecules and their interaction in living organisms and allows longitudinal follow up of animal models with sufficient spatial and temporal resolution. Animals can be used as their own control, increasing statistic power and reducing the number of animals required. Each imaging modality has its own advantages and limitations. Optical imaging such as fluorescence (FMT) and bioluminescence imaging (BLI) are relatively cheap, but cannot be translated to humans. Positron emission tomography (PET), single photon emission tomography (SPECT) and magnetic resonance imaging (MRI) are more expensive, but can readily be translated from mice or rats to human application. However, the different in vivo molecular imaging modalities are in general complementary.

This SBO project proposal aims to stimulate drug discovery and development research in Flanders exploiting in vivo multimodal (pre)clinical imaging technologies and therefore requires a multidisciplinary approach:

A technology platform for in vivo molecular imaging modalities including fluorescence tomography, bioluminescence, PET, SPECT and MRI.

Novel tools and biologicals:

- o #Viral vectors for imaging research
- o Disease/reporter models (imaging read-out)
- o PET synthons and tracers, MRI contrast agents, NIR-fluorescence probes and multimodal probes
- o Nanobody-based multimodal imaging probes.

### **Lay Summary**

**Further information available at:**

### **Types:**

Investments > €500k

### **Member States:**

Belgium

### **Diseases:**

Parkinson's disease & PD-related disorders

### **Years:**

2016

### **Database Categories:**

N/A

**Database Tags:**

N/A