



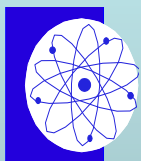
Centre d'Etude et de Recherche sur les Radiopharmaceutiques





C E R P

Association Publique - Privé



CYCLOPHARMA
LABORATOIRES

Instituts
thématiques

Inserm

Institut national
de la santé et de la recherche médicale

CHRU
HÔPITAUX DE TOURS




UNIVERSITÉ
FRANÇOIS - RABELAIS
TOURS

Gagnant/Gagnant !

Gagnant/Gagnant ?

Expertise Industrielle

Process de fabrication

Infrastructure (locaux cyclotrons..)

....

Expertise Académique Hospitalière

Recherche

Clinique

....

Production connaissance (articles)

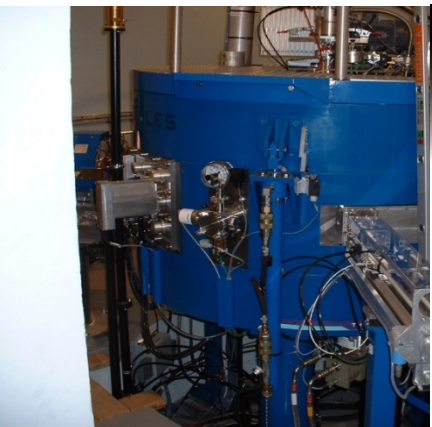
Essais cliniques

valorisation: brevet, commercialisation



Plate-forme d'Innovation autour des Radiopharmaceutiques depuis 2007

Cyclotrons

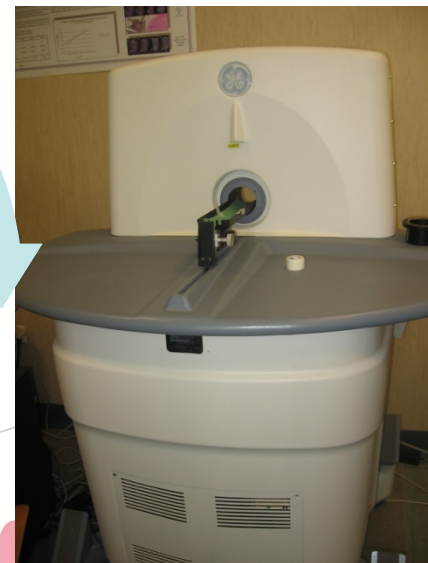


Clinique



Les équipements

Animal



Chimie Radiopharmacie

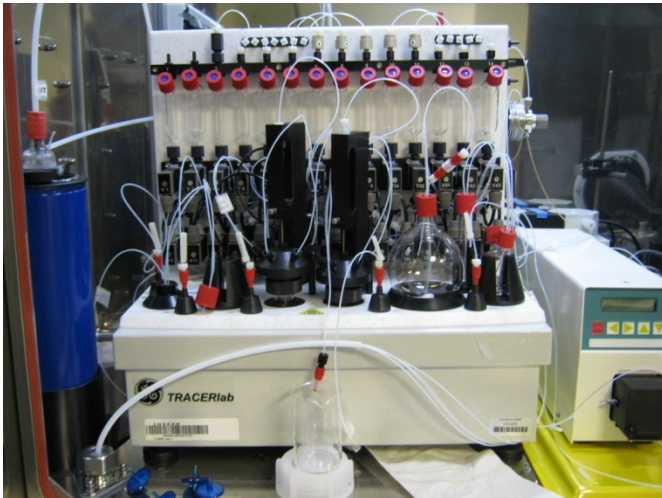
Environnement



R&D, 3 enceintes



Production, 1 enceinte + isolateur



FX-FN pro



Contrôle qualité

PHRC SLA DPA 714

Contrôles

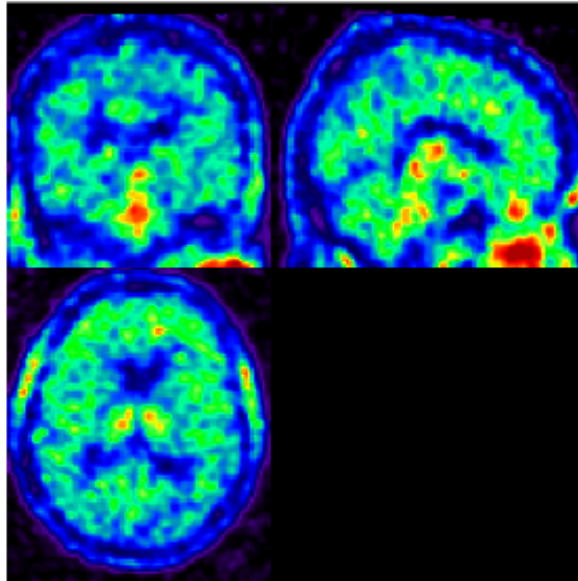


Figure 33: Sample view of the PET image of C

SLA

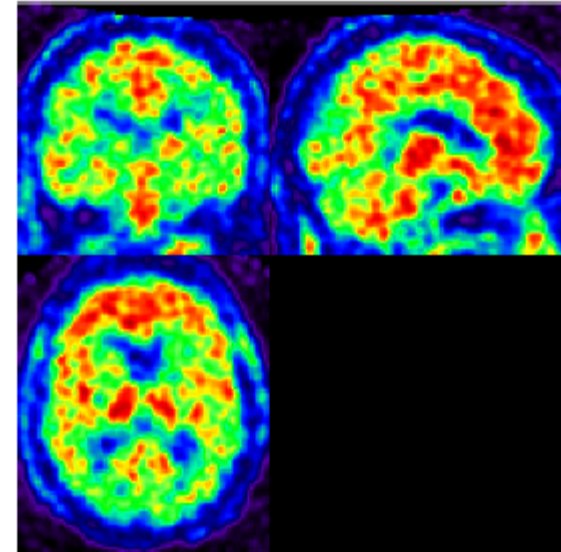


Figure 31: Sample view of the PET image of ALS6

OPEN ACCESS Freely available online

Molecular Imaging of Microglial Activation in Amyotrophic Lateral Sclerosis

Philippe Corcia^{1,2,3*}, Clovis Tauber^{2,3}, Johnnie Vercoullie^{2,3}, Nicolas Arlicot^{2,3,4}, Caroline Prunier⁴, Julien Praline¹, Guillaume Nicolas⁵, Yann Venel⁴, Caroline Hommet^{2,3}, Jean-Louis Baulieu^{2,3,4}, Jean-Philippe Cottier^{2,3}, Catherine Roussel⁶, Mickael Kassiou^{7,8,9}, Denis Guilloteau^{2,3,4,6}, Maria-Joao Ribeiro^{2,3,4,6}

December 2012 | Volume 7 | Issue 12 | e52941



C E

2012 SNM Highlights Lectures

MIAMI, 2012

Neurosciences Highlights

The society now has a new name—the Society of Nuclear Medicine and Molecular Imaging (SNMMI)—and is looking to the future. At the same time, I want to honor Henry N. Wagner, Jr., MD, who for many years gave the annual Highlights Lecture at this meeting. I had the pleasure of seeing him earlier this year in Hamamatsu, Japan. He remains enthusiastic about advances in neurologic molecular imaging. As you may know, he put himself

Mental Health Research Institute, and the University of Melbourne (all in Melbourne, Australia) and AstraZeneca R&D (Södertälje, Sweden) reported on “Comparison of ^{11}C -PiB and ^{18}F -AZD4694 for A β imaging in aging and dementia” [149]. Their study showed that with the same acquisition timing, processing, and display scale



Neuroinflammation and Cholinergic Investigations

Neuroinflammation is not specific to AD, and many people are finding that it plays a role in a range of neurologic disorders. One example was the presentation by Ribeiro et al. from Université François Rabelais (Tours, France) and the University of Sydney (Australia), who reported on “Evaluation of neuroinflammation in amyotrophic lateral sclerosis [ALS] with ^{18}F -DPA-714” [35]. Patients with ALS had slightly elevated neuroinflammation when compared with normal controls (Fig. 12).

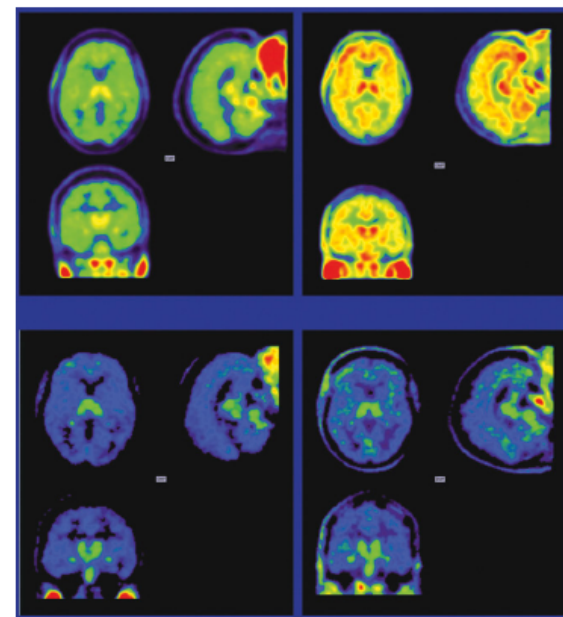
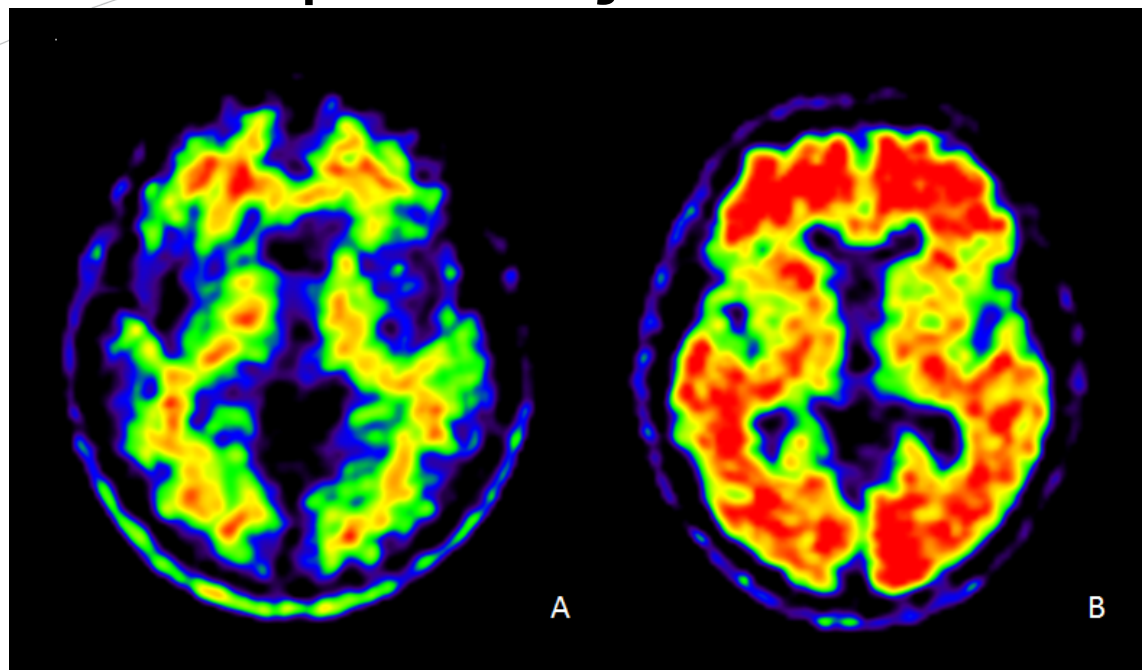


FIGURE 12. Neuroinflammation imaging in (left) controls and (right) ALS patients shows (top) ^{18}F -DPA-714 integrated images and (bottom) ^{18}F -DPA-714 distribution volume relative images.



Eur J Nucl Med Mol Imaging
DOI 10.1007/s00259-011-2021-8

ORIGINAL ARTICLE

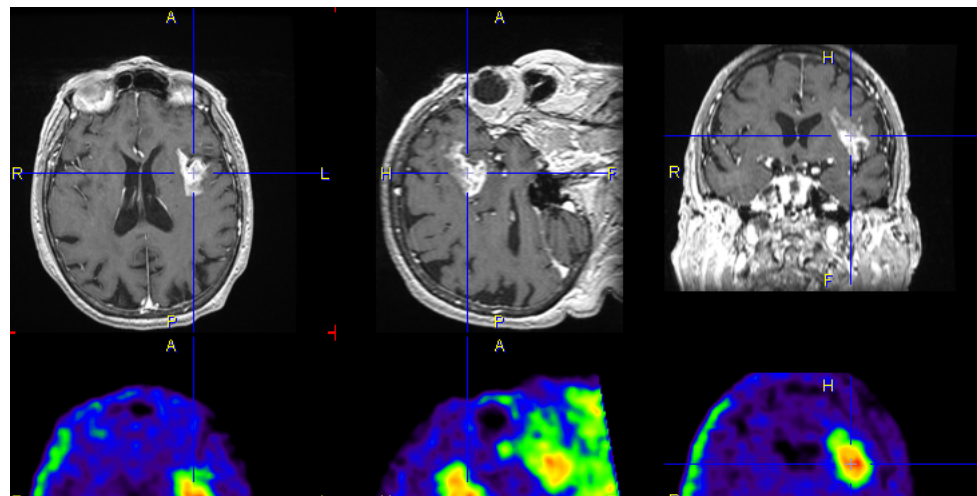
Using PET with ^{18}F -AV-45 (florbetapir) to quantify brain amyloid load in a clinical environment

V. Camus • P. Payoux • L. Barré • B. Desgranges •
T. Voisin • C. Tauber • R. La Joie • M. Tafani •
C. Hommet • G. Chételat • K. Mondon •
V. de la Sayette • J. P. Cottier • E. Beaufils •
M. J. Ribeiro • V. Gissot • E. Vierron • J. Vercoillie •
D. Skovronsky • B. Vellas • F. Eustache • D. Guilloteau

PHRC AVC DPA 714

Activation microgliale dans l'accident vasculaire cérébrale : Etude préliminaire d'imagerie moléculaire TEP utilisant le 18F-DPA-714. 9 patients injectés

*Evaluation of
neuroinflammation
in early post stroke
using PET with
18F-DPA-714
(Soumis JNM)*



Ribeiro et al. *EJNMMI Research* 2014, 4:28
<http://www.ejnmires.com/content/4/1/28>

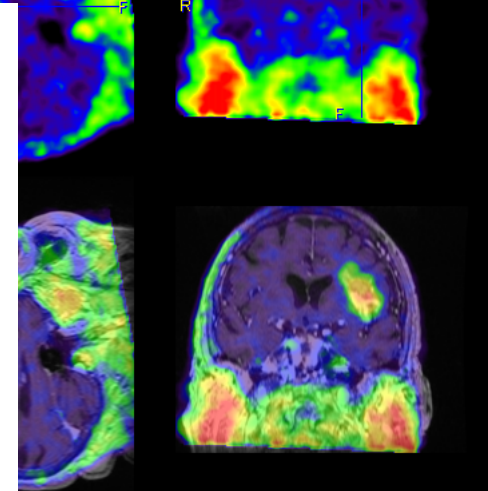
 **EJNMMI Research**
a SpringerOpen Journal

ORIGINAL RESEARCH

Open Access

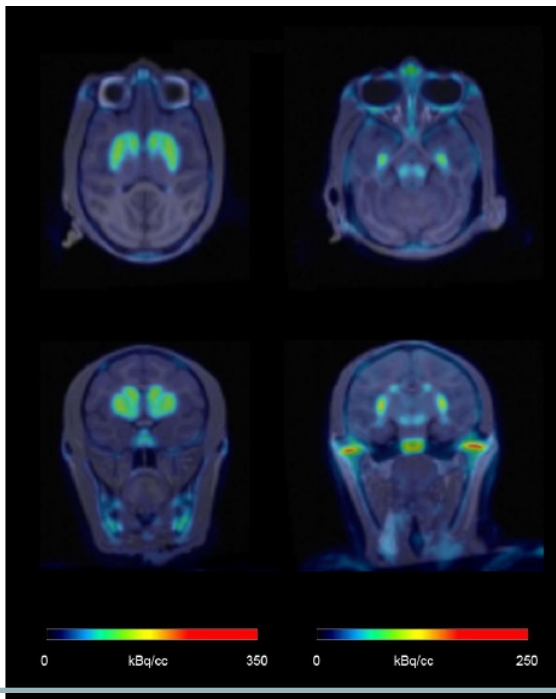
Could ^{18}F -DPA-714 PET imaging be interesting to use in the early post-stroke period?

Maria-Joao Ribeiro^{1,2,3,4,9*}, Johnny Vercouillie^{1,2}, Severine Debais³, Jean-Philippe Cottier^{1,2,3}, Isabelle Bonnaud³, Vincent Camus^{1,2,3,5}, Samuel Banister^{6,7}, Michael Kassiou^{6,7,8}, Nicolas Arlicot^{1,2,3} and Denis Guilloteau^{1,2,3,4,5}



Développement d'un médicament radiopharmaceutique marqué au fluor 18, pour l'exploration en TEP de la maladie de Parkinson, LBT-999 transporteur de la dopamine

[¹⁸F]LBT999



¹⁸F]LBT-999
10-243 min



- ✓ Résultats : Traceurs, développé, validé chez l'animal, breveté, publication dans JNM

Imaging of the Striatal and Extrastriatal Dopamine Transporter with ¹⁸F-LBT-999: Quantification, Biodistribution, and Radiation Dosimetry in Nonhuman Primates

Andrea Varrone¹, Vladimir Stepanov¹, Ryuji Nakao¹, Miklós Tóth¹, Balázs Gulyás¹, Patrik Emond², Jean Bernard Deloye³, Johnny Vercouillie², Michael G. Stabin⁴, Cathrine Jonsson⁵, Denis Guilloteau², and Christer Halldin^{*1}

J Nucl Med 2011; 52:1313–1321

**[¹⁸F]LBT999 : un brevet
quatre articles publiés**

Développement d'un médicament radiopharmaceutique marqué au fluor 18, pour l'exploration en TEP de la maladie de Parkinson, LBT-999 transporteur de la dopamine

- En cours:
- Phase Clinique dossiers finalisés (DME, BI...)
- Cyclopharma, CERRP,
- CHRU Tours, CIC-IT (Radiopharmaceutiques et US)
- CMRR
- Financement: AVIESAN

Programme Multicentrique « NICAD »

(ANR grant) +(DGOS grant)

Project Acronym	NICAD Neuroinflammation
Project Title	NeuroInflammation and Cognitive decline in Alzheimer's Disease: a pilot study of PET imaging of the translocator proteine ligands (TSPO) with [¹⁸F] DPA-714
ANR number	ANR-13-PRTS-0021
Project coordinator	Caroline Hommet MD, PhD
Partners	Partner 1: CHRU Tours – CMRR (Tours, Nantes, Rennes, Caen, Toulouse) – CIC and CIC IT Partner 2: UMR INSERM U930 “Imagerie et cerveau”, Université Tours
Start date/end date	30 Mar 2014 / 30 Sept 2018 (54 months)
Total budget (€)	713 514 € 142 472 € (ANR grant) 571 042 € (DGOS grant)

✓ Programme Européen

7^e PCRD : INMiND

COST : Bimodal PET/MRI molecular imaging

✓ Programmes Industriels

✓ OSEO

Oncodesign/ Guerbet : « Imakinib* »



C E R P



7^{ème} programme cadre de recherche et développement (**PCRD**)

Consortium de 27 Partenaires
25 millions d'€ / 5 ans



Projet Européen In Mind

Imaging of NeuroinflaMmation In Neurodegenerative D



- ✓ Moyens : **1 Thésard, co-direction avec l' ICOA.**
- ✓ Objectif général :
Développement de radiopharmaceutiques marqués au ^{18}F ciblant COX-2.
- ✓ Résultats :
Premières molécules originales synthétisées (14 à ce jour)
Tests vitro démarrés
- ✓ Développement de traceurs (Cox-2)
- ✓ Préclinique (modèles animaux – neuroinflammation)
- ✓ Clinique (AVC, SLA, sclérose en plaques?)



Innovative Radiopharmaceuticals in Oncology and Neurology

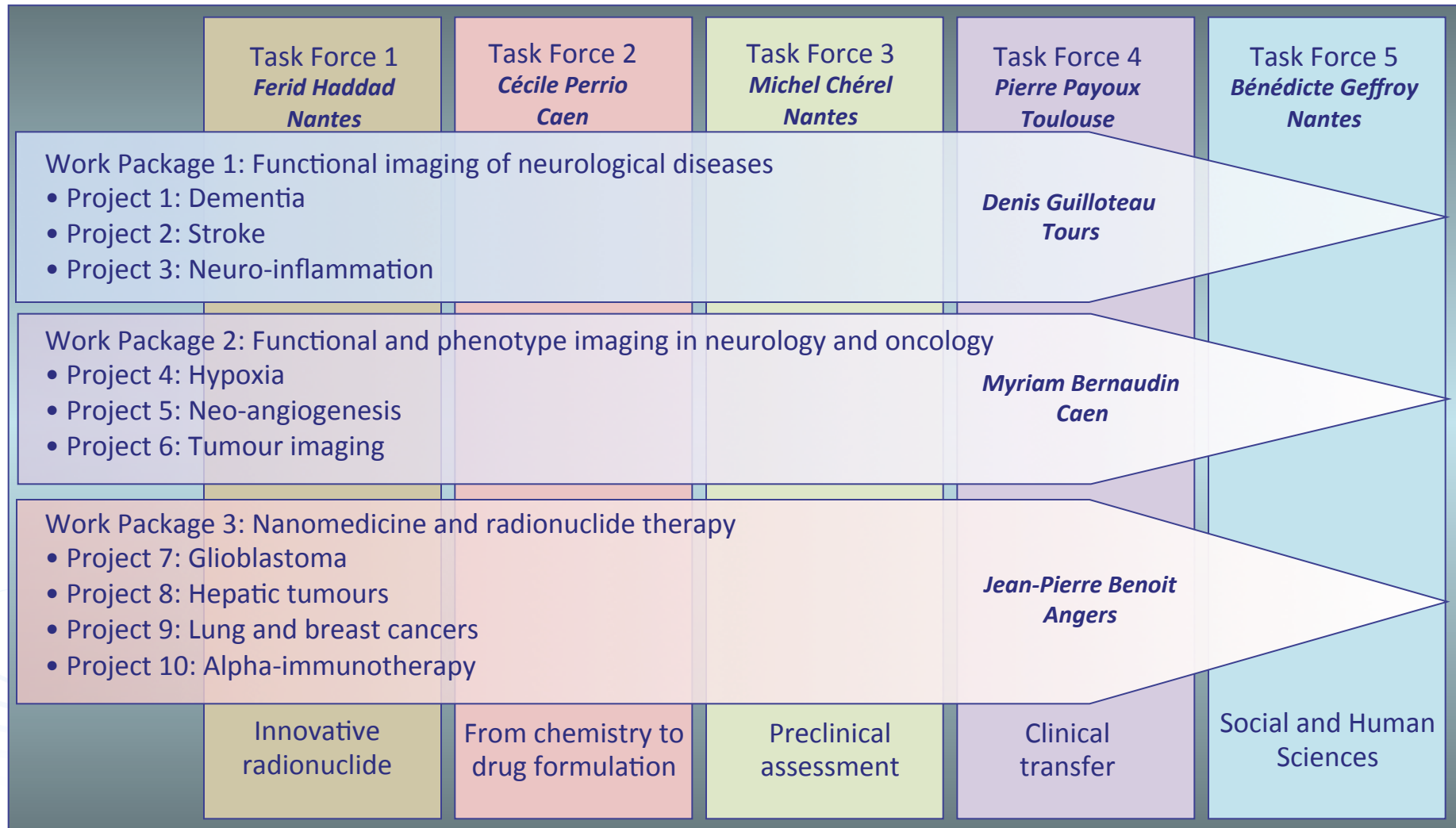


ANR-11-LABX-0018-01

Angers ●
Caen ●
Nantes ●
Orléans ●
Rennes ●
Strasbourg ●
Toulouse ●
Tours ●

Un projet d'excellence scientifique

Porteur du projet: Françoise Kraeber-Bodéré



Du fondamental à la clinique

De la clinique à la commercialisation

CERRP

Passage rapide à l'homme

Structure efficace

win/win