

Polarized Helium Lung Imaging Network

Innovative, non-invasive lung MRI techniques for clinical diagnosis and validation of lung therapy



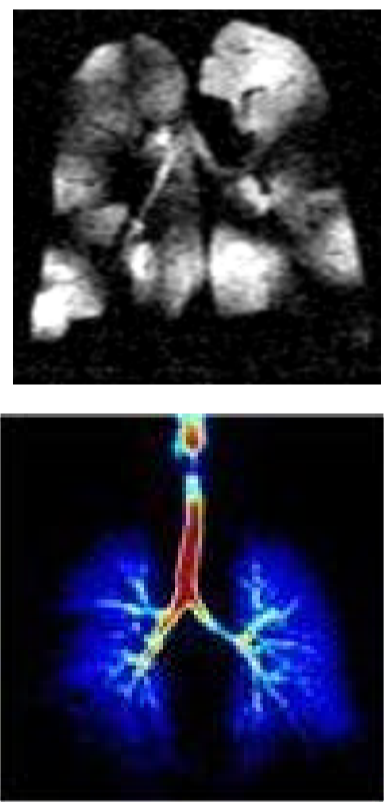
Research & Training Network (RTN) – Marie Curie Actions
6th Framework Program (2007-2010)



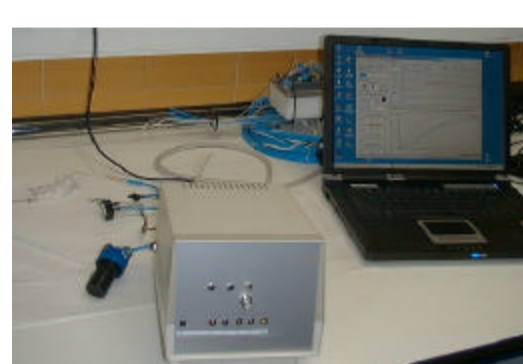
Project overview

Eleven European academic research groups with trans-disciplinary expertise, three SME's, and three major European industrial groups have created a network for the development and the application of **innovative, non-invasive lung MRI techniques for clinical diagnosis and validation of lung therapy**. This European network, called **PHELINET** (Polarized Helium Lung Imaging Network), will address the increasing demand on active co-operation and transfer of knowledge, from the centres where high expertise in hyperpolarized (HP) Helium3 lung MRI has been developed by both academic and industrial parties. Driven by end-users needs, it is devoted to co-ordination of straightforward upgrades and applications of the existing tools of HP Helium3 lung MRI (for clinical diagnosis and drug development), and to the dedicated adaptation of new leading-edge imaging and management techniques of the HP inhaled tracer (for further development and more widespread use of this innovative, powerful, non-invasive technique).

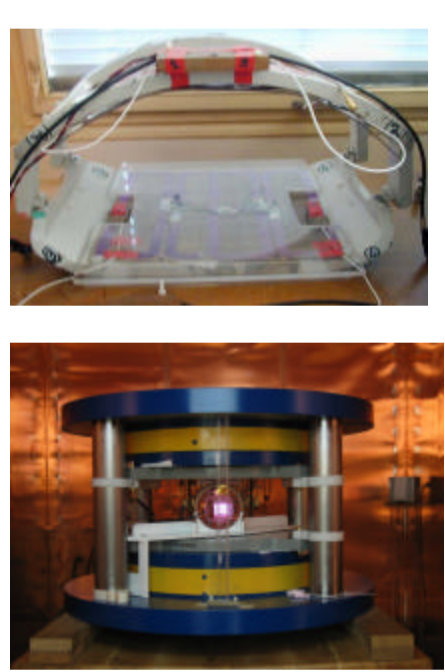
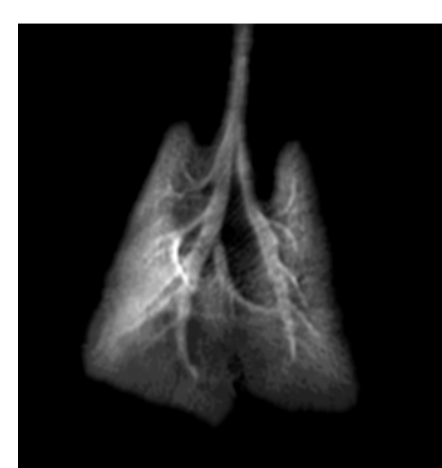
Research objectives



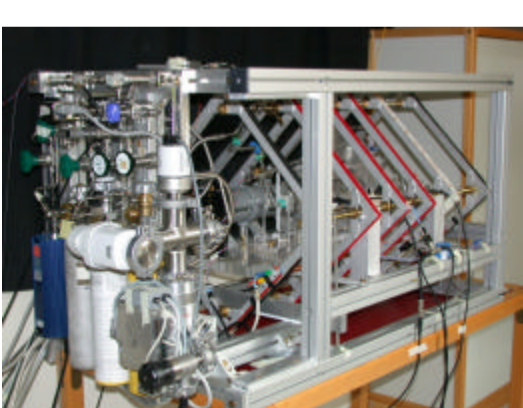
- **He3 imaging medical applications**, aiming at applying HP Helium3 to human studies, for diagnosis and treatment monitoring of lung diseases.



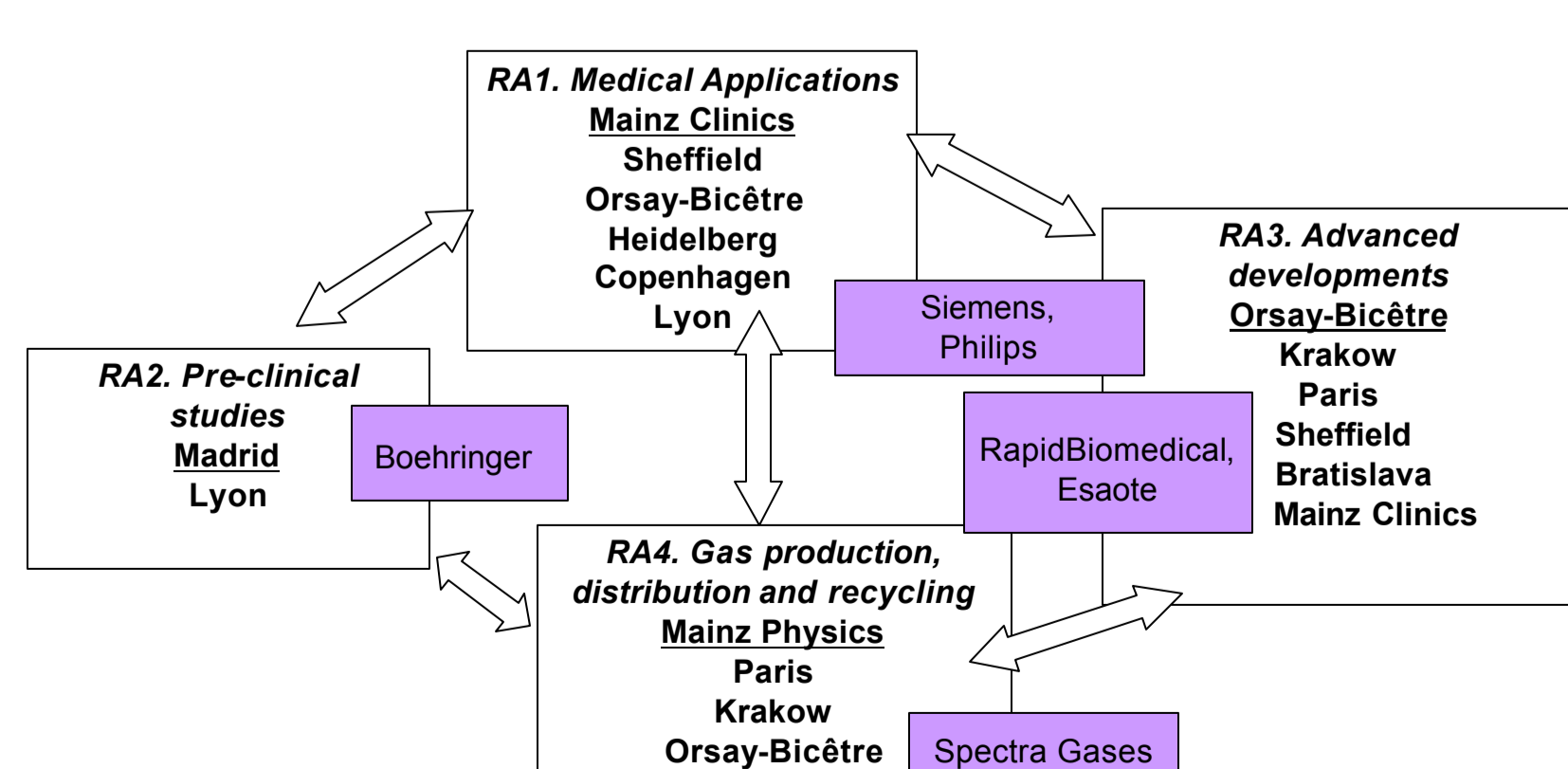
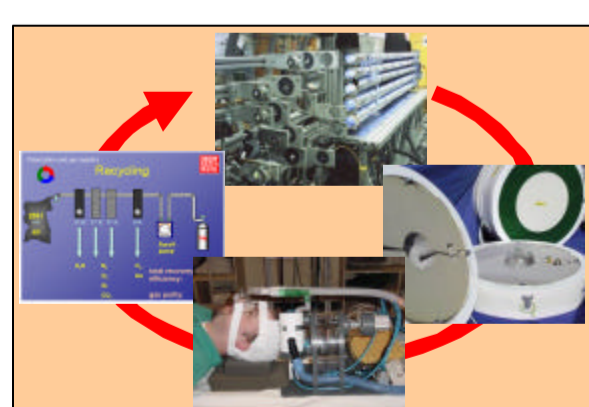
- **He3 and proton pre-clinical studies**, for the development and applications of pre-clinical Helium3 imaging protocols in animal models of lung diseases.



- **Advanced technological and methodological developments for HP He3 imaging**, for instrumental and methodological MRI developments of new research and routine medical applications using Helium3.



- **HP He3 gas production and management**, dedicated to the implementation and dissemination of techniques for polarization, delivery, and recycling of Helium3.

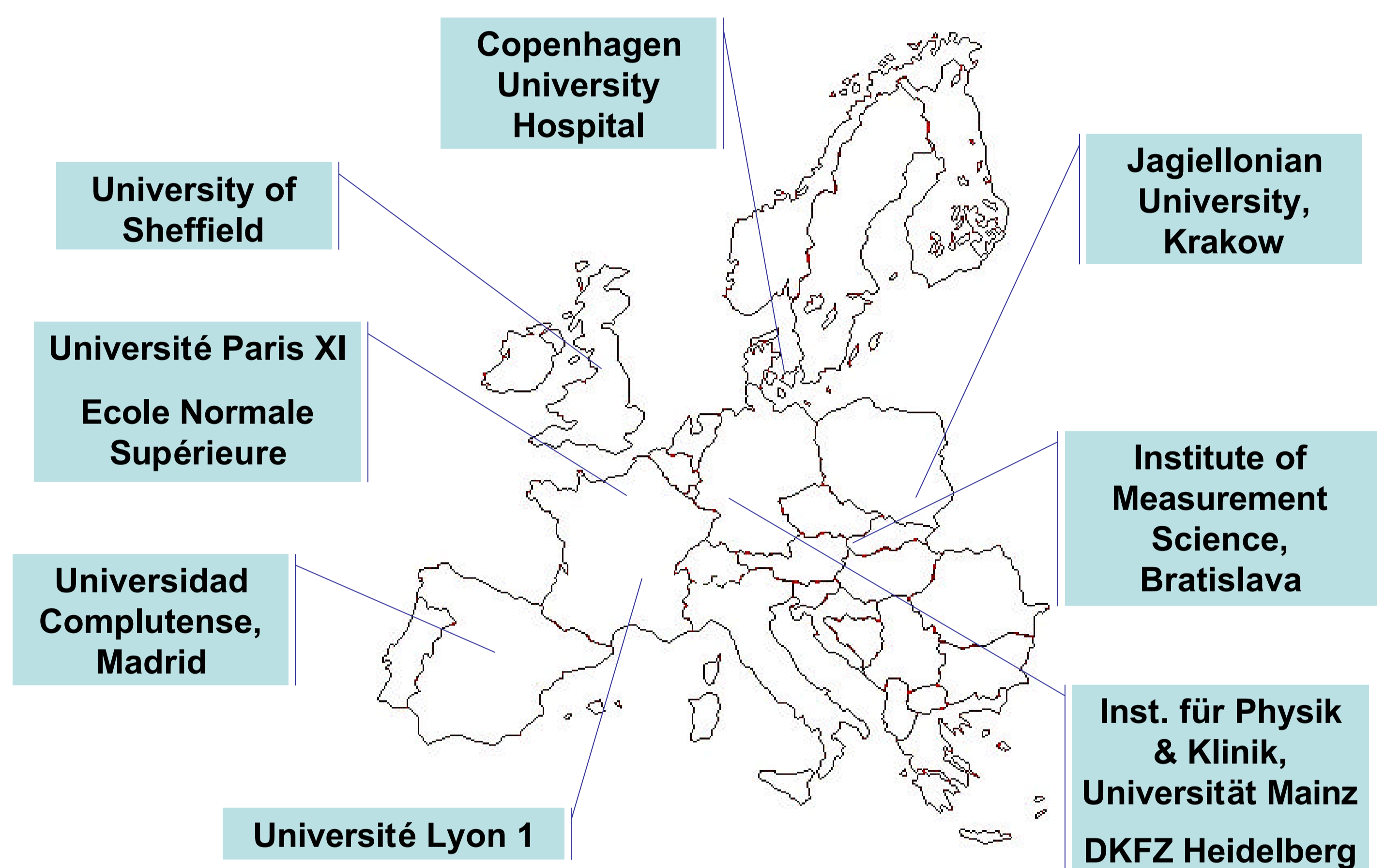


The PHELINET Research Activities

The PHELINET network

65 scientists/medical doctors from 11 academic laboratories in 7 countries
18 recruited research fellows (11 PhD students + 7 post-docs)

6 industrial partners: **Siemens, Philips, Boehringer Ingelheim Pharma, RapidBiomedical, Esaote, SpectraGases**



Training program

Network-wide Training / Transfer-of-knowledge Activities

- Organization of **tutorial schools on Clinical lung imaging techniques, Animal experimentation techniques, HP Helium3 MR imaging techniques, MR instrumentation, Polarization and HP gas management.**

- **On-site visits** to partners institutions, organization and participation to **international workshops, web-based networking activities, complementary training for recruited early stage researchers** in local languages courses, intellectual property rights (IPR), ethics in human and animal studies, project management, communication techniques, etc.

ESR/ER activities	Year 1 months 6 12	Year 2 months 18 24	Year 3 months 30 36	Year 4 months 42 48
Network Meeting	✓ Kick-off meeting	✓ Network Annual Meeting	✓ Network Annual Meeting	✓ Annual / final Meeting
Training school	✓ General Tutorial school	✓ Advanced (✓) and Specific (★) Training school		
Non scientific school (IPR, ethics, etc.)		✓		
Transfer of knowledge sessions	✓	✓	✓	✓
Laboratory Visits At least 1/year	■	■	■	■
International Workshops At least one			■	✓ ESR/ER organized workshop
PhD programs and language courses	■	■	■	■

The PHELINET Training/ToK Activities

Contact

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