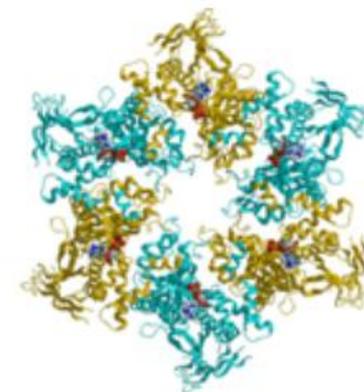
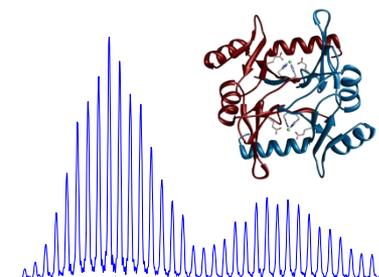
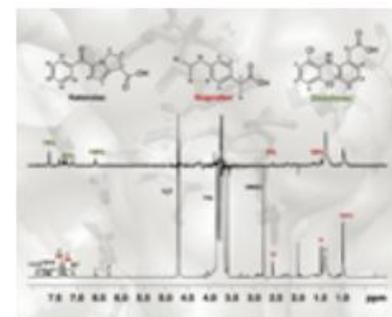


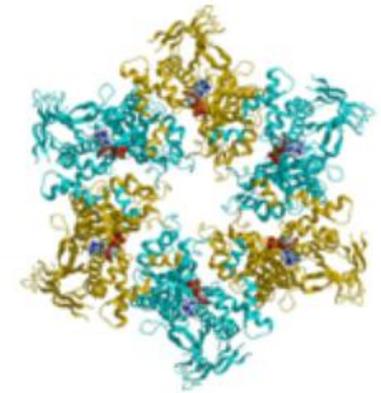
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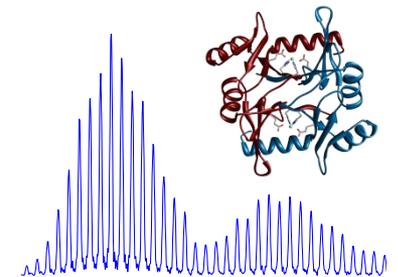
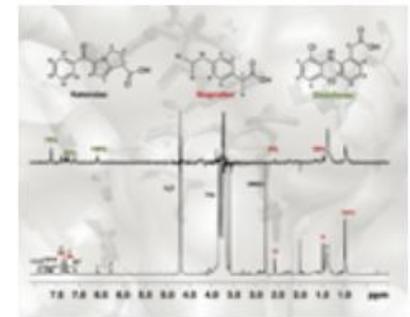
PCISBIO an Affiliated Centre to INSTRUCT

Maria Arménia Carrondo
Instituto de Tecnologia Química e Biológica
Universidade Nova de Lisboa





- PCISBIO is the Portuguese Affiliated Centre to INSTRUCT.
- PCISBIO is financially supported by FCT for the implementation period March 2012 to March 2015.
- PCISBIO integrates research groups from seven public Universities.
- PCISBIO aims at an integrated approach to research involving: **Structural Biology, NMR, MS, Biophysical methodologies, Bioinformatics, Imaging and Biomass production.**





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Coordinator

Maria Arménia Carrondo, ITQB-UNL

Executive Committee:

Maria João Romão – FCT-UNL

Eurico Cabrita – FCT-UNL

Pedro Pereira – IBMC-UP

Rui Brito – FCT-UC

Maria Helena Florêncio – FC-UL

Isabel Sá-Correia – IST-UL

João Rocha - UA

Leonor Cancela – UAIG

Scientific Committee:

Portuguese NMR network – Eurico Cabrita, FCT-UNL; Manolis Matzapetakis, ITQB-UNL, Brian Goodfellow UA,

Portuguese MS network- Maria Helena Florêncio, FC-UL, Carlos Cordeiro, FC-UL; Francisco Amado, UA.

X-ray Crystallography – Pedro Pereira, IBMC-UP; Maria João Romão, FCT-UNL; Alekos Athanasiadis, IGC; Margarida Archer, ITQB-UNL

Biophysical Methods - José J Galhardas de Moura, FCT-UNL, Inês Cardoso Pereira, ITQB-UNL

Protein Production - Isabel Sá Correia, IST-UL, Leonor Cancela, UAIG, Pedro Pereira, IBMC-UP, Carlos Fontes, FMV-UL

Light Microscopy- Paula Sampaio, IBMC-UP; José Rino, IMM-UL; José Feijó, IGC, Rui Malhó, FC-UL, Álvaro Tavares, UAIG



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Main Challenges for PCISBIO during 2014-2020:

- Allow for a strong integrative approach on innovative and front-line technologies in SB in Portugal and in Europe through Instruct
- Establish a network of services and access to PCISBIO key technologies
- PCISBIO has followed and will continue to follow an equivalent structure and organization of Instruct

<http://www2.dq.fct.unl.pt/xtal/PCISBIO>



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STRATEGIC PLANNING

- **INSTRUCT Preparatory Phase (1.4.2008- 31.3.2011)**

A proposal to become Affiliated Centre was submitted and approved in 2011

- **INSTRUCT Operational Phase (1.4.2011- 31.3.2015)**

Portugal is one of the founding MEMBERS of Instruct

Any portuguese scientist can apply to the various actions of Instruct

February 2012

Instruct Membership agreements signed and ratified in the presence of Robert Jan-Smits

Collaboration Agreements with:

BELGIUM

CZECH REPUBLIC

FRANCE

ISRAEL

ITALY

NETHERLANDS

PORTUGAL

SPAIN

UNITED KINGDOM



Memorandum of Understanding with:

Consortium of Institutions in GERMANY

Max Planck Society

Helmholtz Association

Leibnitz Association

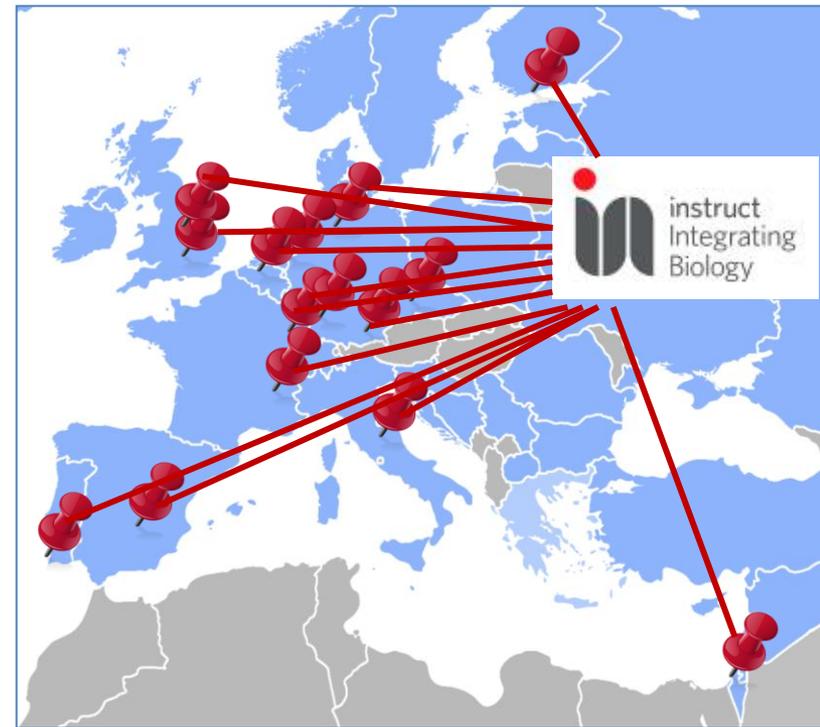
EMBL

Instruct is one of 13 Biomedical Sciences ESFRI infrastructures

The European Strategy Forum on Research Infrastructures (ESFRI) is developing a European Roadmap on Research Infrastructures

Research infrastructures (RIs) are facilities, resources and services used by the scientific community to undertake high quality research

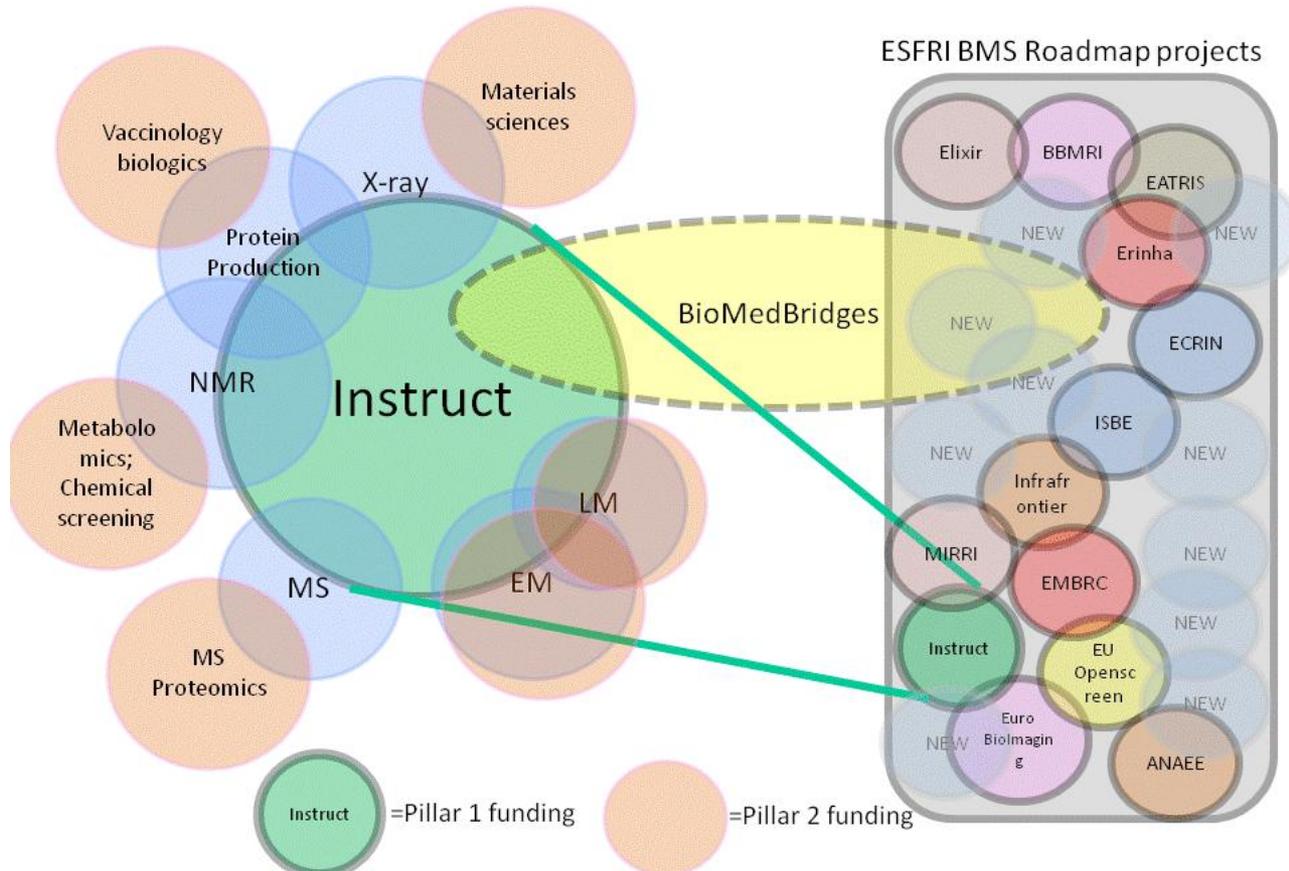
RIs can be single, distributed or virtual
– **Instruct is a distributed RI with 15 Instruct Centres around Europe**



Instruct in Horizon 2020

Methodologies covered by Instruct

Relationship with other ESFRI BMS projects



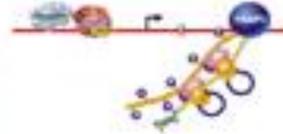
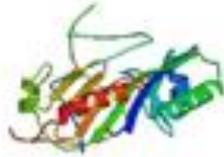
*Small proteins
and domains*

*Large proteins
and complexes*

*Multi-protein
assemblies*

*sub-cellular
structure*

whole cells



X-ray crystallography

NMR

X-ray microscopy

mass spectrometry

small angle scattering

single particle cryo-EM

cryo-electron tomography

Light/fluorescent microscopy

Computational analysis and modelling



University of Oxford

Director: Prof David Stuart FRS

Coordinator: Dr Susan Daenke

Project Manager: Dr Claudia Alen Amaro

dave@strubi.ox.ac.uk

susan@strubi.ox.ac.uk

claudia@strubi.ox.ac.uk

Current broad pan-European support for Instruct

European User Community

>1600 registered users on the Instruct hub from 25 countries

225 organisations linked with Instruct

11 networks hosted on the hub



AT



SI



GR



DK

Progressing



FI



SE

Affiliate Members

ES



FR



CZ



DE



IL



IT



NL



PT



UK



BE



Full Instruct Members

130 Technolglical Platforms are listed
for access in the hub

to studies from small protein domains to whole cells



University of Oxford

Director: Prof David Stuart FRS

Coordinator: Dr Susan Daenke

Project Manager: Dr Claudia Alen Amaro

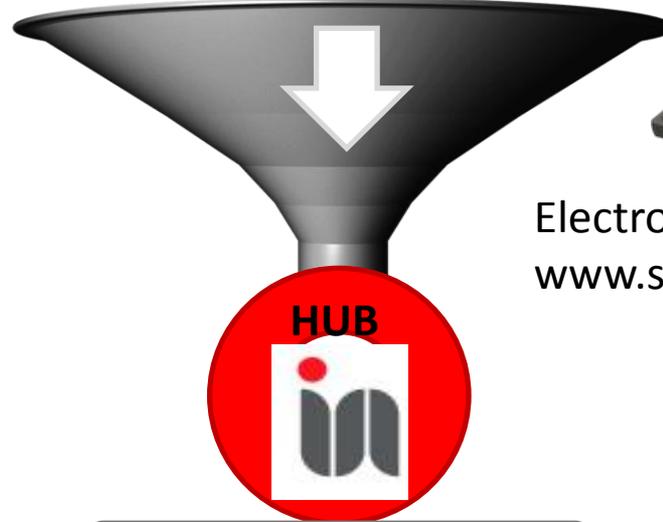
dave@strubi.ox.ac.uk

susan@strubi.ox.ac.uk

claudia@strubi.ox.ac.uk

Single portal for Instruct proposals

European user submissions



Electronic submission through hub at www.structuralbiology.eu

>70 reviewers available

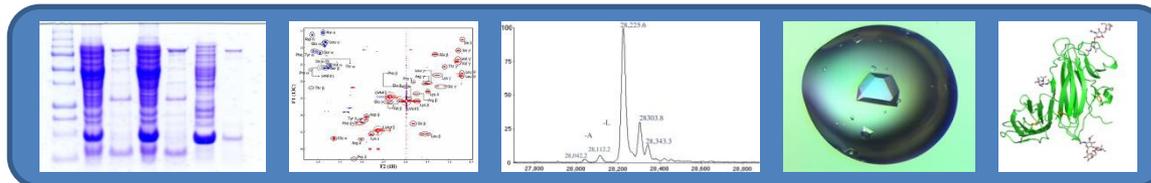
Proposal Review

Fast review < 4 weeks

130 FREE technology platforms available in 15 Instruct Centres

User training, staff support

User obtains data from access experiment



→ next technology platform access if planned

Value of Instruct to European science

- Provision of **all large scale and cutting edge technologies** for structural biology **are beyond the reach of many national** resources
- Instruct has coordinated specialist expertise and technological facilities in **existing centres of excellence** in Europe and made it available to more users
- Instruct provides **FREE access** to Instruct technologies through Instruct Centres
- Instruct coordinates access— guiding the research through a pipeline of techniques
- Instruct also provides training courses, internships, small start-up awards, conference fellowships and more
- **Instruct has a larger user base (100,000s) than almost all physical sciences Research Infrastructures – therefore has a very large impact, not only on European skills, but on biological and health outcomes**

Instruct Access requests to date

Instruct Access: 42 platforms requested → 26 approved

5 mammalian expression	4 crystallization	2 mass spectrometry
3 SAXS	3 biophysical characterization	1 bacterial expression
2 solution NMR	1 solid state NMR	1 X-ray spectroscopy
1 Fluorescent microscopy	2 nanobody preparation	7 requesting countries; 10 Centres requested

What has Instruct achieved in the Transition Phase?

Access

- 15 Instruct Centres available to provide access to 130 technology platforms
- **Access take-up is being encouraged .**
- **Next call planned for 31st August 2013**

Training

- First call for courses: 8 funded; 7 now completed
- Second call for courses: 5 funded for completion in 2014
- **Third call planned for 15th October 2013**

R&D

- First call for applications: 70 received, 10 funded (up to €10K each)
- **Second call planned 2014**

Short-term internships

- First Call closed, first internships to start May 2013
- Aimed at Graduate students
- Funding 6 interns to spend 2-5 months in an Instruct Centre (different country)
- Undertake own project
- Access Instruct infrastructure at more than one Centre/platform
- **Next call planned for 2014**

What has Instruct achieved in the Transition Phase?

Industry

- Two major meetings (London and Leiden)
- Involvement in Marie Curie proposals submitted by Instruct for funding 2013-17
- Major sponsors of Instruct Biennial Conference

Conference

- **First Biennial Conference, Heidelberg May 22-24th 2013: 210 registered participants; high profile international speakers.**

Coordination

- Instruct hub coordinates all these activities, manages the website, liaises with all members, users, Centres, funders, Committees, EC, ESFRI, related FP7 projects, IMI projects



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Portuguese involvement and success in Instruct

- **Access – 10 out of the 26 approved for access**
- **Training workshops – 2 out of the 13 approved**
- **R&D projects – 1 out of the 10 approved**
- **Internships- 3 out of the 6 approved**



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FUTURE ACTIONS towards HORIZON 2020

- **PCISBIO fully established and funded as a National RI**
- **Continue with a strong Portuguese involvement and participation in Instruct**

APPLY to new CALLS

- **New infrastructure is constantly being added to the Instruct facility list that extends research capabilities for users**

<http://www2.dq.fct.unl.pt/xtal/PCISBIO>