instruct ERIC

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Report of Portugal Instruct Activity January 2019

Summary

- **Members**: 340 of a total of 7228
- **Centres**: 1 Instruct Affiliate Centre
- **R&D research grants**: 4 awarded out of 35 successful applications
- **Proposal Submitted:** 74 out 773 visits, 42 out of 489 proposals
- **Successful Proposals**: 53 out 622 visits, 30 out of 385 proposals
- **Training Courses**: 8 of 54 approved courses
- **Internships**: 8 out of 33 approved applications

Instruct provides researchers with access to state-of-the-art structural biology technologies and expertise. By driving innovation at the boundary between technologies, it will stimulate and facilitate research that integrates an understanding of biological structure with cellular function and tackles challenging questions that are otherwise not easily addressed. Equipment at the cutting-edge of structural biology is increasingly expensive to build and maintain, and no European country possesses such equipment and expertise in all structural biology technologies. Instruct enables its members to access this equipment and expertise through a dynamic, sustainable, infrastructure distributed across Europe. In addition, Instruct supports European research with an active training programme in structural technologies and methods and a competition for small research and development awards to kick-start innovative research.

Governance

Instruct-ERIC was formally ratified by the European Commission and was celebrated at the Royal Society, London 18th July 2017.

Full operational and administrative transfer from Instruct Academic Services Limited to Instruct-ERIC has been completed including all financial, personnel, premises and registrations with all official bodies including the European Commission.

The operations of Instruct are defined by the following agreements and bodies:

- Instruct-ERIC statutes; Implementing Decision dated 4th July 2017
- Instruct-ERIC Council: Strategic body for Instruct, Interim Chair Nathan Richardson (MRC, UK); Vice Chair Laurence Lenoir (BELSPO, BE)
- Instruct-ERIC Executive Committee: Operational body, Chair Dave Stuart
- Training Committee: Chair Lucia Banci
- Access Committee: Chair Darren Hart

In addition, Working Groups are stablished by the Executive committee to advise on specific issues such as the Business Group which prepared an updated Business Plan suitable for the ERIC transition incorporating a strategy for sustainability, and the Computational Structural Biology working group to advise on the access provision and legacy from Horizon 2020 project West-Life.

Instruct-ERIC premises are located at the University of Oxford, UK; 10 staff are in the Instruct-ERIC Hub (4.6 FTE are employed on Instruct funds; 4.4 FTE are employed on external H2020 grants).

Representation on the governance bodies of Instruct can be found at:

https://instruct-eric.eu/governance

Infrastructure

In the past year Instruct carry out a catalogue update exercise with the guidance of the Access committee. The update aimed to provide a clearer information to the user of the services available as well as keep with the rapid technological developments in structural biology. A description of 58 local services/technology is available through the Instruct website. A general plan of what is on offer is best represented by our Service/Technology catalogue: (https://instruct-eric.eu/platform-catalogue). Currently the catalogue can be filtered by centre and users are also able to navigate by technique. Each service should have information regarding local contacts, user guides, publications, what is coming next for the technology and technical description of the equipment. Each centre is responsible for keeping this information correct, complete and up to date.

Access

Access to the Instruct infrastructure is via an automatic online procedure that allows applicants, that have been validated as Instruct scientists, to upload their proposal, connect the proposal to their profile; the system also automatically contacts the secretary of moderators, the moderator, the reviewers and the user as required. To apply, go to:
https://instruct-eric.eu/submit-proposal

Users visits per country

Country	National Visits	Transnational Visits
Czech Republic	0	70
Portugal	0	74
Spain	25	87
United Kingdom	31	76
Italy	9	80
Germany	7	32
Belgium	4	41
France	83	28
Israel	48	29
Netherlands	9	14
Slovakia	0	2
Denmark	0	1
Totals	216	516

Access calls are open without any end date or time

Members

Instruct has 7228 registered users so far of which 340 are from Portugal:
Membership and visits to the website have grown steadily from the opening of the site. In the last year we have re-launched our website with new content and more accessible information for different communities.

Training

Since 2012, 54 training courses have been approved for Instruct funding or co-funding. Course contents include: cross-technology structural data integration methods, computational modelling

and protein design, macromolecular complex production, electron tomography and correlative imaging techniques, biomolecular interactions, hybrid approaches in structural biology.

Instruct Supported Training Courses:

- CERM/CIRMMP Jan 2-31 2013: Advanced methods for the integration of other structural data with NMR data (CIRMMP Florence, Italy)
- Weizmann Sept 2-6 2012: The use of computational tools for modeling of multi-molecular assemblies and protein design (Weizmann, Israel)
- IBMC Porto Nov 5-9 2012: Biomolecular interactions analysis. Organised within the Instruct Centre Training (Portugal)
- CERBM/IGBMC Nov 26-30 2012: Production, purification and characterisation of macromolecular complexes (IGBMC, France (Marie Christine)
- PSB-Grenoble IBS, UVHCI, EMBL, ESRF June 4-9 2012: EMBO practical course on the structural characterisation of macromolecular complexes (PSB, France) – event completed, report available at http://www.structuralbiology.eu/content/documents
- EMBL Hamburg June 11-16 2012: Hybrid structural biology approaches (EMBL Hamburg)
- Diamond Oxford Dec 5-6 2012: Cryo Soft X-ray imaging of Biological cells (Diamond Light Source)
- IGBMC, Illkirch, April - Sept 2013: Getting the best from your structural data: beyond black boxes. (IGBMC, Strasbourg, France)
- Instruct Centre for Protein Production, Helmholtz Centre for Infection Research, Dec 2-6 2013: Practical Course "Mammalian protein production in transient and stable cell culture based expression systems" (Helmhotz, Germany)
- CIRMMP-CERM, In cell NMR in collaboration with other centres in Italy Sept - Jan 2013: In-cell NMR analysis of biomolecular structure and function (Italy)
- ITQB – Oeiras Instruct Affiliate Centre: PCISBIO – Portuguese Centre for Integrated Structural Biology 5-8 Nov 13: 1st International Masterclass on Multidisciplinary Approaches to the Study Structure and Function of Membrane Proteins. Organised by Carlos Coardeiro, Margarida Archer, Jose Brito and Ricardo Gomes (Portugal)
- Madrid, Biocomputing Unit of the National Center of Biotechnology (BCU-CSIC) Instruct Image Processing Center (I2PC) Dec-13: 3D Electron and X-ray Microscopies: Image Processing Workflows (Spain)
- "University of Grenoble" Univ. Regensburg, MPI Frankfurt, EPFL, VMS, Gif-sur-Yvette, iRTSV/PCV, and UVHCI 7th July to 1st August 2014: Multi area including biology, physics, structural and cell biology/Les Houches Summer School 2014 (Instruct France 2)
- Academic and University Center Nove Hrady, Zamek 136, CZ-37333 Nove Hrady, Laboratorio de Estudios Cristalografico , Granada, Spain June 20 – June 27, 2014 first advertising beginning of 2014: Protein expression and crystallisation/Advanced Methods in Macromolecular Crystallization VI" – the 1st joint FEBS-INSTRUCT crystallization course in middle EU (Czech Republic)

- "FCT-Universidade Nova de Lisboa" Associate Laboratory REQUIMTE and FMV-Universidade de Lisboa 6-13 October 2014: X-ray Crystallography, NMR, Carbohydrate Microarrays and Calorimetry/Integrative Structural Biology tools for the study of protein-ligand interactions. Organised by Ana Luisa Carvalho and Eurico Cabrita (Portugal)
- Grenoble Partnership for Structural Biology IGBMC-Strasbourg ; LCRB-Paris & University of York 26-30 January 2015: "Labeling, NMR/Practical Workshop: Advanced Isotopic Labelling Methods for Biological NMR" (France)
- National Technical University of Athens (NTUA), Apr-14: Strategic pipeline planning: from sample preparation to 3D structure determination with bio SAXS and other biophysical techniques (Greece)
- PSB, Instruct France 2. Apr-May 2015: Molecular interactions: the complementarity between biophysical methods (France)
- Center for Neurosciences and Cell Biology – University of Coimbra. March-May 2015: From protein structure to biological function through interactomics – an integrated view. Organised by Bruno Manada (Portugal)
- IGBMC, Instruct France 1. November 2014: Course in structural and functional proteomics (France)
- Instruct CCISB. November 2014: Computational tools for combining atomic and volume data (UK)
- Instruct France 26th Jan 2015 to 30th Jan 2015 Advanced Isotopic Labelling Methods for Biological NMR Grenoble, France - J. Boisbouvier
- Diamond Light Source, UK 20th – 22nd April 2015 Computational tools for combining atomic and volume data
- Instruct France April – May 2015 Molecular interactions: the complementarity between biophysical methods, Grenoble France - Christine Ebel
- 30 May – 5th June 2015 A Practical Course in Three-Dimensional Electron Microscopy, Czech Republic - Tanvir (Tapu) Shaikh
- 7th June 2015 Technical and Analytical Approaches to the Translation of Deep Sequencing Data into Three-Dimensions - Joel L Sussman and Gideon Schreiber
- 29 Jun - 3 July 2015 I2PC "hands on" course on image processing applied to the structural characterization of biological macromolecules - Carlos-Oscar Sanchez-Sorzano
- 13-19 July 2015 Integrative Structural Biology tools for the study of protein-ligand interactions: X-ray Crystallography, NMR, Carbohydrate Microarrays, Isothermal Titration Calorimetry and Molecular Modeling. FCT-University of Nova de Lisboa - Ana Luísa Carvalho and Eurico Cabrita Portugal
- 7th - 11th Sept 2015 - From protein structure to biological function through interactomics – an integrated view Instruct Portugal - Bruno Manadas
- 11-15 April 2016. Advanced methods for the integration of diverse structural data with NMR data. SURF Offices Hoog Overborch, Moreelsepark 48, 3511 EP Utrecht, The Netherlands, Ivana Kutá Smatanová

- 17-20 May 2016. From 2D images to 3D structures: A practical course on Electron Microscopy Single Particle Analysis. National Center for Biotechnology – CNB, Jose Maria Carazo (Spain)

- 21-27 May 2016. EMBO Practical Course on the Structural Characterization of Macromolecular Complexes. European Photon and Neutron (EPN) Science Campus, Grenoble, Dr Carlo Petosa (France)

- 6-8 June 2016. Protein Production 2016 Workshop. Old Road Campus Research Building and Target Discovery Institute, Dr. Nicola Burgess-Brown, Prof. Liz Carpenter (UK)

- 13-17 June 2016. Workshop on frontiers of recombinant multi-protein complex expression in insect and mammalian cells. Research Complex at Harwell, Rutherford Appleton Laboratory, Prof Ray Owens (UK)

- 13- 15 September 2016. Advanced Workshop "Computational protein design for Biotech applications" Faculty of Sciences and Technology Universidade NOVA de Lisboa Campus Caparica Portugal- Ricardo J. F. Branco. Portugal

- 5-8 October 2016. Methods and Techniques in structural biology: beyond black boxes. Strasbourg, France, Jean Cavarelli, Bruno Klaholz, Alexandre Ourjoumtsev (France)

- 17-20 October 2016. First I2PC-FEI "hands on" course on image processing applied to the structural characterization of biological macromolecules. Parador Nacional Alcala de Henare, Spain, Ms. Blanca Benitez, Carlos-Oscar Sanchez-Sorzano (Spain)

- 6-17 March 2017. Advanced Isotopic Labelling Methods for Integrated Structural Biology, Jerome Boisbouvier. (France)

- 13-25 March 2017. Les Houches – Winter school - Biology at different scales: interplay between physics and integrative biology, Eva Pebay-Peyroula. (France)

- 30 April -5 May 2017. Structural Mass Spectrometry Workshop, Michael Sharon. (Israel)

- 20-23 November 2017. Biophysical Characterisation of Macromolecules and Quantification of Biomolecular Interactions, Anastassis Perrakis. (Netherlands)

- January –February 2018. Advanced methods for the integration of diverse structural data– 3rd Edition, Antonio Rosato. (Italy)

- January-March 2018. Image Processing for Electron Microscopy in the cloud, Carlos Oscar Sanchez Sorzano. (Spain)

- January-March 2018. From protein structure to bioligical function through interactomics – an integrated view (2nd edition). Centre for Neurosciences and Cell Biology – University of Coimbra – Bruno Manadas. Portugal

- September 2018. Workshop for the hydrodynamic and thermodynamic analysis of biological macromolecules and their interactions: multi-method approaches and global data analyses, Ondrej Vanek. Czech Republic

- 14-18 May 2018. Open SESAME & Instruct workshop on Remote MX Data Collection using the Diamond Light Source (DLS, Oxford) & the European Synchrotron Radiation Facility (ESRF, Grenoble) to be held at the Weizmann Institute of Science (Israel)
- 5-6 April 2018. Instruct/CIISB course on fragment screening using crystallography laboratory equipment (Czech Republic)

- 27-29 June 2018. Instruct - I2PC- FEI: Facility-based Image Processing for Electron Microscopy (Spain)

- 1-4 May 2018. Instruct course on Model Building and Refinement for High Resolution EM Maps (4th Icknield workshop) (UK)

- 9-1- September 2018. Nanobodies4Instruct for Structural Biology and beyond. Organised by VIB-VUB center for Structural Biology (CSB) at the Vrije Universiteit Brussel (Belgium)

Instruct Training Courses for 2019

The ninth call for Instruct Training Courses attracted a strong field of very high quality proposals.

Our first event of the year will take place in France at the Instruct Centre - France 1 with the course ' Instruct Workshop for the hydrodynamic and thermodynamic analysis of biological macromolecules and their interactions: multi-method approaches and global data analyses' by Instruct Centre France 1. The following events cover all areas of structural biology with emphasis on integration and scientific areas of emerging relevance:

January
Instruct Workshop for the hydrodynamic and thermodynamic analysis of biological macromolecules and their interactions: multi-method approaches and global data analyses. Organised by Instruct-France 1

April
Joint INSTRUCT-CAPRI Workshop on Integrated Modelling of Protein-Protein Interactions. Organised by Instruct Centre-NL

May
Instruct Course on Biology at different scales: interplay between physics and integrative biology. Organised by Instruct Centre - France 2

July/August (summer)

Instruct course on Image Processing for Electron Microscopy and hybrid modelling. Organised by Instruct Centres – Spain

October
Instruct Workshop on Integration of Computational approaches in Structural biology. Organised by Instruct centre -CZ

These events, all consortium events and other relevant event to the structural biology community can be found listed and in calendar view at:
https://instruct-eric.eu/events

Instruct Internships
From time to time, Instruct will publish calls for internship awards: details are given below.
The Instruct Internship Programme funds research visits of 3-6 months duration to Instruct Centres in Europe. The aim is to facilitate valuable collaborations with Instruct research groups applying techniques that are not available in the applicant's laboratory. Applications should specifically focus on the benefit to the applicant's research. Internships may be hosted at any institution that hosts an Instruct Centre, providing the applicant is a resident of a different full Instruct member country at the time of making the application.

- Internships cover travel plus subsistence of the intern only and not of dependents.
- Applicants should be pre-doctoral scientists (PhD students) and early-stage postdoctoral fellows
- Internships are awarded for exchanges between laboratories in different countries.
- Proposals must have the approval of the hosting Institution or Department.
- Internships should be taken within one year of the award.
- The home laboratory (applicant's usual workplace) must be within an Instruct Member country.
- On completion of the internship applicants must return to their home laboratory.

Internship calls are published on the Instruct website.

Results from the five internship calls is available from:
https://instruct-eric.eu/internships

First Call			
Name	**Organisation Origin**	**Country of origin**	**Host Organisation**
Thomas Drury	University of Cambridge	UK	European Molecular Biology Laboratory, Grenoble
Alan Kadek	Laboratory of Molecular Structure Charecterisation	Czech Republic	Physical and Theoretical Chemistry Laboratory, Dept of Chemistry, UofOx
Ana Sofia Tremaceiro Lourenco	University of Coimbra	Portugal	Partnership for Structural Biology (PSB)
Daniela Moutinho/Pedro Sousa	ITQB-UNL	Portugal	EMBL-Hamburg
Rajesh Ponnusamy	ITQB-UNL	Portugal	Dept of Chemistry, Physical & Theoretical Chemistry

			Laboratory and Department of Structural Biology. UofOx
Luca Zinzula	University of Cagliari	Italy	Max Planck Institute of Biochemistry
Second Call			
Name	**Organisation Origin**	**Country of origin**	**Host Organisation**
Isaac Santos	University of Basque	Spain	Instruct Centre for Virus Production (ICVIR)
Sara Silva	Instituo de Technologia Quimica e biologica	Portugal	Centre for Image Processing - Spain
Mattia Bertinelli		Italy	STRUBI - United Kingdom
Susanne Hank	Goethe University	Germany	Nanobodies4Instruct - Belgium
Sandra Anjo	University of Coimbra	Portugal	Oxford Mass Spectrometry Centre - United Kingdom
Oskar Aurelius	Department of Biochemistry and Structural Biology	Sweden	Instruct Centre - France 2 - France
Gilles GUICHARD		France	Instruct Centre Italy
Third Call			
Name	**Organisation Origin**	**Country of origin**	**Host Organisation**
Jan Blaha	Charles University in Prague	Czech Rep	Strubi/ UK
Marcia Alves	ITQB	Portugal	Diamond/UK
Elena Sanchez	CSIC	Spain	OPPF/UK
Joana Cristovao	University of Lisbon	Portugal	Nanobodies4Instruct
Fourth Call			
Ganna Krasnoselska		Germany	Instruct Centre-UK
Encarna Pucheta-Martinez		UK	Instruct Centre - CERM/CIRMMP Italy
Miguel Arbesu		Spain	Solid State NMR Centre
Amal Hassan		Italy	Instruct Centre - Israel
Joana S Cristovao		Portugal	Instruct Centre - France 1

Fith Call			
Name	**Organisation Origin**	**Country of Origin**	**Host Organisation**
Pascal Albanese		Italy	Instruct Centre NL-Utrecht University
Phuong PHAM Ngoc		Czech Republic	Instruct-ERIC France 2
Ane Martinez		Spain	Instruct Centre UK -Diamond
Ritu Raj Kumar		Israel	Instruct Centre -Strubi, UK
Diogo Athayde		Portugal	Instruct Centre -Spain
Sixth Call			
Name	**Organisation Origin**	**Country of Origin**	**Host Organisation**
Gala Ramon		UK	Instruct-ERIC Centre – France 1
Irren-Laareb Mohammad Jabeen		Spain	Instruct-ERIC Centre – Czech Republic
Ferdinand Ngale Njume		Belgium	Instruct-ERIC Centre – France 1
Jesus Baltanas Copado		Spain	Instruct-ERIC Centre – France 2
Costanza Angeline		Italy	Instruct-ERIC Centre – France 2
Tanja Kuhm		Netherlands	Instruct-ERIC Centre -Belgium

Conference

The inaugural Instruct Structural Biology Meeting at Heidelberg in 2013 successfully showcased integrative structural biology and its impact on biological research and biomedicine.

The second Biennial took place in Florence in 2015 continuing the integrative line with an increased focus on innovation.

https://www.structuralbiology.eu/biennial2015

The 3rd Instruct Biennial will take place in Brno, Czech Republic in 2017, registration is now open https://www.structuralbiology.eu/biennial2017. This new edition will include sessions that represent recent structural biology highlights, emerging methods and technologies and results of biomedical importance.

The 4th Instruct-ERIC Biennial Conference will take place in Madrid, Spain from 22-24 May 2019. Organisation of the conference has started and registration is now open https://instruct-eric.eu/biennial2019.

Forum

6 new For a discussion has been set up . We are extending this to help structural biology communities in all member countries to communicate. The Fora can be found at: https://instruct-eric.eu/forums

Mailing list

We have the capability of contacting all Instruct users or subgroups of them (chosen per country, per role within Instruct) to inform them of issues of their interest. We are keeping this communication to no more than one message every two weeks and only to distribute information relevant to the community. The feedback so far has been very positive with most users visiting the site to read the relevant information.

General Data Protection Regulation

In preparation for the new regulation (EU)2016/679 changes were made to Instruct's ARIA web services and the Instruct-ERIC privacy policy was revised to be GDPR compliant. Legal bases for all aspects of Instruct-ERIC data processing were identified and the appropriate legitimate interest assessments completed.

ARIA changes included: the introduction of granular control of mailing preferences at registration, in the user profile and in email footers; the restriction of access to the web profiles of ARIA users from public, to only visible to those who are involved in peer-review of that user's proposals or delivery of access to that user; and replacing visible email addresses on public pages with contact forms.

Instruct-ERIC provides its ARIA platform for a number of other facilities and projects therefore, in compliance with the regulation, we established new data processing contracts with these partners. The organisations using ARIA are data Controllers for their data and Instruct-ERIC is the data Processor.

Instruct-ERIC provided training on data protection to all members of staff working in the hub. These training sessions were recorded and will be released to the Instruct centres as resources for their own staff training.

Research Funding

From time to time, Instruct publishes calls for small scale pilot research projects in integrated structural biology. Instruct allocates resources to support a limited number of pilot studies proposed by researchers from Instruct member countries (currently BE, CZ, DK, FR, IL, IT, LV, NL, PT, SK, ES, UK). Pilot projects may be funded up to a maximum of €15,000. The funds are expected to cover research expenses but not normally salaries. The intent of this support is to help researchers develop external funding for projects, i.e. the expectation is that a pilot study will lead to a grant submission to national or international funding bodies.

The study should be of limited scope and have well defined objectives. Ordinarily, a pilot study should be completed within one year. Proposed projects should be consistent with the Instruct objectives of using an integrated approach to structural cell biology and accordingly **must include the use of at least two technology platforms in the Instruct access catalogue** to undertake the research proposed.

A short proposal is required for the initiation of a pilot study. Proposals are peer reviewed and funding decisions are taken by the Instruct Executive Committee. Comments on the proposal are made available to the applicant. Proposals should have the approval of a Principal Researcher at the applicant's Institution or Department.

At the conclusion of a pilot study and within one year of the project start, a researcher must submit a progress report to the Instruct Executive Committee. On the basis of this report a researcher may exceptionally seek to extend the pilot study. As before, the approval decision will rest with the Executive Committee.

R&D calls are published on the Instruct website.

Successful proposals to First Call for R&D pilot projects
Lucia Banci, Italy.
Monserrat Barcena, The Netherlands.
François Bontems, France.
Afonso Duarte; Manuela Pereira and Frank Bernhard, **Portugal** and Germany.
Jose A. Marquez and Florent Cipriani, EMBL.
Marc Ruff and Arnaud Poterszman, France.
Musa Sani, Nicole van der Wel and Peter Peters, The Netherlands.
Holger Stark and Ashwin Chari, Germany.
Jan Steyaert, Biace: Belgium
Lukáš Trantírek and Vladimír Sklenář, Czech Republic.

R&D Pilot Projects were awarded in the second call to:
Jose Carazo, Spain
Lucio Frydman, Israel
Jason Schnell, UK
Bruno Almeida, **Portugal**.
Anne Houdusse, France.
Ondrej Vanek, Czech Republic.
Natalie Elia, Israel
Arnaud Poterszman and Joop Vanden Heuvel, France and Germany.

R&D Pilot Projects were awarded in the third call to:
Margarida Archer, **Portugal**
Martin Blackledge, France
Enrico Ravera, Italy
Remy Sounier, France
Maria Sanchez Barrena, Spain
Tanvir Shaikh, Czech Republic
Josep Rayo, Belgium

R&D Pilot Projects were awarded in the fourth call to:

Matthew Kraushar, Germany
Sonia Longhi, France
Yoni Haitinm, Israel
Axel Abelein, Sweden
Jan Blaha, Czech Republic
Senena Corbalan, Spain
Anna Maria D'Ursi, Italy
Hugo Fraga, Portugual
Joseph Gault, UK

R&D Pilot Projects awards in the fifth call in 2018

Carlos Oscar Sanchez Sorzano, Spain
Margarida Archer, Portugal
Julia Shifman, Israel
Arjen J. Jakobi, Netherland
Sophie Zinn-Justin, France
Mario Milani, **Italy**
Gaetan Bellot,
France
Richard Berry, UK

R&D Applications per country

- Belgium: 6
- Czech Republic: 14
- France: 40
- Germany: 15
- Italy: 31
- Israel: 15
- Netherlands: 13
- Portugal: 44
- Spain: 12
- Sweden:4
- UK: 18

We provide information regarding how Instruct funds research at https://instruct-eric.eu/rd-pilot-project-awards

Horizon 2020

Instruct has successfully applied as a partner on 10 Horizon 2020 projects:

- **CORBEL:** CORBEL (Coordinated Research Infrastructures Building Enduring Life-science Services) is a four-year €14.5 million EU project that will harmonise user access to biological and medical technologies, biological samples and data services, required by cutting-edge biomedical research

- **WestLife:** is a H2020 project set up to pilot an infrastructure for storing and processing data to support the growing use of combined techniques in structural biology - the study of the structure and function of the macromolecules of life.

- **iNext:** The iNEXT (infrastructures for NMR. EM and X-ray crystallography for Translational research) consortium aims to provide user access to a range of advanced and integrated structural biology technologies with the goal of promoting bio-sciences (medicine, technology and materials). iNEXT will help users to translate innovative research to the development of innovative therapeutics and diagnostics and contribute to the engineering of biotechnology tools and materials.

- **Instruct-ULTRA:** Instruct-ULTRA aims to accelerate the expanded implementation of Instruct by opening up to new members in Europe and partnerships at the global level and a sharp focus on increasing the effectiveness of user access to key technologies, working as appropriate with manufacturers.

- **Open SESAME:** The overall objective of OPEN SESAME is to support the training needs of the Synchrotron light for Experimental Science and Applications in the Middle East (SESAME) light source and to ensure its efficient exploitation by researchers across the nine SESAME Members (Bahrain, Cyprus, Egypt, Iran (Islamic Republic of), Israel, Jordan, Pakistan, the Palestinian Authority, and Turkey).

- **AARC2:** The AARC2 project aims to address policy and technical interoperability gaps that prevent researchers from accessing the whole research and infrastructure service portfolio with one login (SSO), regardless of where this takes place in the ecosystem. By enabling SSO among infrastructures, scientists worldwide will be able (using their existing credentials) to seamlessly and securely access infrastructure services, reducing administrative overhead and improving international collaboration.

- **Transvac2:** Transvac2 European Vaccine Research and Development Infrastructure, addressing the call INFRAIA-2016-2017.

- **ERIC Forum:** The ERIC Forum initiative aims to identify common challenges experienced by ERICs and to respond to these challenges and to share best practice. The forum also works collectively to develop visibility, impact and sustainability of ERICs. Following the success of early ERIC forum face-to-face meetings, the initiative has been supported by a new Horizon 2020 grant commencing in January 2019.

- **RI-VIS:** Expanding research infrastructure visibility to strengthen strategic partnerships addressing the call H2020-INFRASUPP-2018-2020. The RI-VIS project starts in February 2019 and is coordinated by Instruct-ERIC. The RI-VIS consortium is formed of 13 partners and two linked third parties from 12 research infrastructures mostly in the biomedical sciences but also in social and environmental sciences. The infrastructures involved also span a range of maturities from those in the preparatory phase to ERICs. RI-VIS will identify new target communities, and new geographical target regions for European research infrastructure services and enable new partnerships with these communities.

- **EOSC-Life:** Providing a collaborative space for digital biology in Europe. EOSC-Life brings together a consortium of 46 partners from the 13 ESFRI Biomedical Science Research

Infrastructures. EOSC-Life will provide access and integration through the European Open Science Cloud for life-science data for analysis and reuse in research providing. Instruct is represented in this project by three partners, Instruct-ERIC, CSIC, and CIRMMP and is involved in the co-leadership of three work packages 2, 3, and 5.

A subgroup of the Executive Committee has been established to work on the engagement with Industry.

We engage with the Structural Biology community in Europe through our website, with an extensive mailing list and Twitter @instructhub.

Jobs

Many partners have already used the facility to advertise their jobs opening through Instruct (https://instruct-eric.eu/jobs). In the future we are planning to include both the opportunity of advertise a job opening and also to upload your C.V.

Engagement

A subgroup of the Executive Committee has been established to work on the engagement with Industry.

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