

**Project Number:**

21-ESOF-178

## Application Type

Conference Session

## Number of speakers and Moderator

5

## Session format

Please provide information on the session format (panel discussion/interactive round table/(hybrid) workshop/House of Commons style...) - 100 words maximum

In a 1 hour and 15 minute panel discussion, three renowned scientists in the life sciences domain, and a representative of the League of European Accelerator-based Photon Sources, in the presence of a moderator, will give a 10-minute talk each, which will be followed by a Q&A session with the audience. Throughout the panel discussion, and before each talk, the audience will be engaged on the topic of "open data for healthier societies", with questions through an online platform (e.g. Slido) for the panelists to address them in their talk and further stimulate the discussion.

## Theme

Please specify the conference theme the session/presentation fits into.

Healthy Societies

## Conference Session/Poster Presentation Title

Open Data for healthier societies: a virtuous cycle?

## Top 5 keywords

Five keywords maximum, separated by semicolon; and space

Open data, life sciences, 3D imaging, data bank, COVID-19

## Abstract

450 words maximum

The COVID-19 pandemic illustrated the challenge the world faces in the fight against infectious diseases, and has further highlighted the challenges associated with data and its re-use. A fast, effective and coordinated science response has been critical to deliver such a fast turnaround of vaccines and novel therapies.

Health researchers need accessible data to support their endeavours from imaging of tissues to data about the basic building blocks of life in proteins. Sharing data for re-use is key to further improve diagnostics and health prevention, as well as develop new and more efficient medications, to be affordable and equally accessible to all countries worldwide. This session will showcase the needs and achievements so far for data to be open, but also the role of global mobilisation in the face of challenges like pandemics, and will highlight some of the achievements, which have led to therapies being developed, including medication for low- and middle-income countries.

Three expert scientists in the life sciences domain will present three virtuous examples: the Protein Data Bank (PDB), COVID Moonshot Consortium and the Human Organ Atlas, which led to setting up open data banks and portals for faster discoveries and breakthroughs in the life sciences domain and beyond.

The Protein Data Bank (<https://www.rcsb.org/>) archives information about the 3D shapes of proteins, nucleic acids, and complex assemblies that helps students and researchers understand all aspects of biomedicine and agriculture, from protein synthesis to health and disease.

The COVID Moonshot is a worldwide, non-profit, open-science consortium involving scientists, academics, pharmaceutical research teams and students, which aims to release all the data generated by the consortium's partners, to help researchers in the discovery of new antiviral molecules against coronaviruses, that would be globally affordable and easily-manufactured. The open access Human Organ Atlas (<https://human-organ-atlas.esrf.eu/>) collects data on studies using the new technique Hierarchical Phase-Contrast Tomography (HIP-CT), an X-ray tomography technology, for imaging whole human bodies at

multiple anatomical levels, from organs up to the micron scale in 3D.

Finally, the coordination board chair of LEAPS will present how European photon sources embraced and reacted to the new challenge posed by the pandemic. By making the infrastructures remotely accessible, LEAPS member facilities joined forces and offered their expertise and capacities to the scientific community at large. Several facilities opened calls for rapid access to dedicated beamtime for prioritising research on the SARS-CoV-2 virus, and developing therapies and vaccines against the COVID-19 disease, with an increased effort to make data open and easily findable and reusable.

The public will be invited to take part in the discussion on the importance of open data, and on the challenges still to be tackled, and will be engaged with live questions through a dedicated online platform.

## Speakers

### Speaker #1

<b>Title:</b> Dr	<b>Affiliation:</b> Drugs for Neglected Diseases initiative, DNDi
<b>First Name:</b> Ben	<b>Country:</b> Switzerland
<b>Last Name:</b> Perry	<b>Linkedin:</b>
<b>Gender:</b> Male	<b>Role:</b> Speaker
<b>Email:</b> bperry@dndi.org	<b>Status:</b> Confirmed

Ben Perry is Discovery Open Innovation Leader at DNDi, and medical chemist with 15+ years' experience for conducting early-stage drug discovery across a variety of diseases. His research interest includes the use of 50 words chemoinformatic and computational tools within maximum medicinal chemistry, and of new technologies to further the drug discovery process.

### Speaker #2

<b>Title:</b> Dr	<b>Affiliation:</b> UCL, University College London
<b>First Name:</b> Claire	<b>Country:</b> United Kingdom
<b>Last Name:</b> Walsh	<b>Linkedin:</b>
<b>Gender:</b> Female	<b>Role:</b> Speaker
<b>Email:</b> c.walsh.11@ucl.ac.uk	<b>Status:</b> Confirmed

Claire Walsh is a Senior Research Fellow who manages the HiP-CT imaging project and specialises in image analysis. The ESRF-UCL team have created the Human Organ Atlas, an openly accessible database of human organs in health and disease, imaged across multiple scales with HiP-CT.

## Speaker #3

**Title:** Dr  
**First Name:** Katherine  
**Last Name:** McCauley  
**Gender:** Female  
**Email:** katherine.mcauley@psi.ch  
**Reason for inviting:** Katherine McAuley (PhD in Chemistry, post-doc in structural biology) is beamline scientist in the macromolecular crystallography group of the SLS. Her research interests include X-ray crystallographic studies of oligonucleotides, membrane proteins from photosynthetic bacteria and industrial enzymes. She now works at the automation and optimisation of macromolecular crystallography beamlines @PSI.

**Affiliation:** Paul Scherrer Institute - PSI  
**Country:** Switzerland  
**Linkedin:**  
**Role:** Speaker  
**Status:** Contacted

## Speaker #4

**Title:** Dr  
**First Name:** Gaston  
**Last Name:** Garcia  
**Gender:** Male  
**Email:** gaston.garcia@uam.es  
**Reason for inviting:** Gastón García López, PhD in Physics, is director of CMAM (Centre for Micro Analysis of Materials). He is coordination board chair of the LEAPS initiative (League of European Accelerator-based Photon Sources), Spanish delegation scientific advisor of the ESRF council, and managing director of the European Physics Journal Plus.

**Affiliation:** LEAPS - League of European Accelerator-based Photon Sources  
**Country:** Spain  
**Linkedin:** .  
**Role:** Speaker  
**Status:** Confirmed

## Speaker #5

**Title:** Mrs  
**First Name:** Isabelle  
**Last Name:** Boscaro-Clarke  
**Affiliation:** Diamond Light Source  
**Country:** United Kingdom  
**Linkedin:**

**Gender:** Female

**Role:** Moderator

**Email:** isabelle.boscaro-clarke@diamond.ac.uk

**Status:** Confirmed

Isabelle Boscaro-Clarke is Head of Communications and

**Reason** Impact for Diamond LightSource and has embedded a

**for** strong programme of engagement activities at the heart of

**inviting:** the facility. Diamond welcomes +7,000 visitors yearly and

50 words +14,000 researchers from across life and physical

maximumsciences both from academia and industry use Diamond to

conduct experiments.