

SIG1: Macromolecular Crystallography

Reported Period: 2015-2016

Report Date: 21 July 2016

Reported by: Ronan Keegan

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1. Introduction. (50 words max.)

The principal objectives of the Macromolecular Crystallography SIG are to support advances in macromolecular crystallographic research by both theoretical and experimental methods and their applications, and to represent and bring together researchers interested in these areas.

2. SIG web site:

SIG1 url: <http://sig1.ecanews.org/>.

3. Number of ECA individual members registered with the SIG according to

(<http://www.xray.cz/eca/im-payment.htm>)

SIG1	Macromolecular Crystallography	302
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There has been a substantial increase in SIG1 membership since last year.

4. Existence of a SIG mailing list : Yes

Address of the mailing list: <https://groups.google.com/forum/#!forum/sig1eca>

Number of members in the SIG mailing list : 31

5. Approximate total number of researchers involved in the SIG (please indicate the basis for the estimate)

SIG1 currently has 302 registered members (from <http://www.xray.cz/eca/eca-sig.asp?id=SIG1>), while meetings are normally attended by ~30-50 individuals. Several dozens of researchers are involved in SIG1 activities, especially in the organization of courses and workshops.

6. List of MS organized by the SIG at ECM30 in Basel

MS 1 SAXS in structural biology

MS 2 Development of new types of sample preparation (both XFEL & synchrotrons)

MS 3 Data collection and processing software (XFELS & synchrotrons)

MS 4 New developments in phasing and refinement

MS 5 Structural information in drug design

MS 6 Molecular machines and big complexes

MS 7 Protein & glycobiology structure determination

MS 8 Membranes and membrane interacting proteins

MS 9 Enzyme reactions and dynamics in crystals

MS 10 H-bonding & weak interactions in crystals: neutrons and X-rays

MS 11 Hybrid approaches and validation (X-ray and electron microscopy)

MS 12 Biophysical characterization and crystallization

MS 13 Hot structures in biology

7. Past Activities other than Microsymposia at ECM

An important number of workshops and courses have been organized by individual SIG1 members, including CCP4 initiatives, EMBO training courses and other courses financed with European or national funds. Some of the activities have been sponsored by ECM or IUCR.

8. Future/Programmed Activities.

Currently SIG1 is actively organising a number of keynote lecture and microsymbosia for the forthcoming ECM30 meeting in Basel

As for past activities, a large panel of workshops and courses are foreseen for the coming year. A specificity of SIG1 is the fact that sample preparation is an important part of structural biology and the theme of many courses goes well beyond crystallography. Many of the activities will be organised by INSTRUCT, <http://www.structuralbiology.eu/>, the network for structural biology in Europe.

9. Other matters. The next annual meeting of SIG1 will take place at ECM30 in Basel. At the ECM 29 meeting in Rovinj SIG1 chair Keith Wilson and secretary Gerlind Sulzenbacher departed from their positions. Marjolein Thunnissen was promoted to chair from the vice-chair position. Jan Dohnalek was appointed as the new vice-chair and Ronan Keegan appointed as secretary.

10. Brief annual activity report (100 words max.)

The main activity of SIG1 involves the organization of the microsymbosia and keynote speakers for the individual European crystallographic meetings. The aim is to offer a wide variety of topics to structural biologists with a view to increase the attendance of our current and potential members at the annual meetings. In addition, individual members participate in organizing workshops and conferences of interest to European structural biologists.

11. List SIG officers, name and e-mail, and specify their main function in the SIG:

Chair: Marjolein Thunnissen, Lund, Sweden, Marjolein,Thunnissen@maxlab.lu.se

Vice-Chair: Jan Dohnalek, Prague, Czech Republic, dohnalek007@gmail.com

Secretary: Ronan Keegan, Oxford, UK, ronan.keegan@stfc.ac.uk