

SIG1: Macromolecular Crystallography

Reported Period: 2013-2014

Report Date: 22 July 2014

Reported by: Gerlind Sulzenbacher

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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://www.afmb.univ-mrs.fr/SIG1>

3. Number of ECA individual members registered with the SIG according to **(<http://www.xray.cz/eca/im-payment.htm>)**

SIG1	Macromolecular Crystallography	185
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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 : 22

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

SIG1 currently has 185 registered members (from <http://www.xray.cz/eca/eca-sig.asp?id=SIG1>), while meetings are normally attended by ~30 individuals. Several dozens of researchers are involved in SIG1 activities, especially in the organization of courses and workshops, but unfortunately they do not necessarily renew their ECA membership on a yearly basis.

6. List of MS organized by the SIG at the last ECM

MS 1 XFEL and time resolved crystallographic methods

MS 2 Multi-crystal techniques

MS 3 Hybrid approaches (SAXS, EM, etc + MX)

MS 4 Advances in refinement, phasing and autobuilding

MS 5 Structure and function of biomacromolecules

MS 6 Macromolecular assemblies

MS 7 Membrane proteins

MS 8 Cell signalling – interactions and allostery

MS 9 Protein-nucleic acid complexes

MS 10 General interests of single molecule crystallography, both large and small (joint with SIG7+13)

MS 11 Twinning: problems and advantages (joint with SIG6+9)

MS 12 Radiation damage (joint with SIG6+9)

7. Prizes sponsored/coordinated

Title : RCSB Protein Data Bank Poster Prize

Field : Macromolecular Crystallography

Sponsor : RCSB PDB

Eligibility : Best student posters related to macromolecular crystallography

Title : IUCr Poster Prize

Field: Biological, Chemical and Physical Crystallography.

Sponsor : IUCr

Eligibility : Best poster from a graduate or undergraduate student

Marresearch Poster prize for Outstanding Young Scientist

Field: Any

Sponsor: Marresearch

Eligibility : Ph.D. students or undergraduate students

8. 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.

SIG1 endorsed specifically the following events:

Workshop "Strategic pipeline planning: from sample preparation to 3D structure determination with bio SAXS and other biophysical techniques", Athens, Greece, April 5-10, 2014.

Workshop "Hot Topics in Contemporary Crystallography" (HTCC), Šibenik, Croatia, May 10-15, 2014.

47th Course of the International School of Crystallography – "Structural Basis of Pharmacology: Deeper Understanding of Drug Discovery through Crystallography", Erice, Italy, May 30 – June 8, 2014

2014 : Crystal (cl)Year, Turin, Italy, 16-17 October 2014.

9. Future/Programmed Activities.

Currently SIG1 is actively organising a number of keynote lecture and microsymposia for the forthcoming ECM29 meeting in Rovinj.

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.

10. Other matters. The last annual meeting of SIG1 took place at ECM28 in Warwick. 38 people attended the meeting and provided ideas and input for the forthcoming ECM29.

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

The main activity of SIG1 involves the organization of the microsymposia 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.

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

Chair: Keith Wilson, York, United Kingdom, keith@ysbl.york.ac.uk

Vice-Chair: Marjolein Thunnissen, Lund, Sweden Marjolein.Thunnissen@biochemistry.lu.se

Secretary: Gerlind Sulzenbacher, Marseille, France, Gerlind.Sulzenbacher@afmb.univ-mrs.fr