



## EMBL Hamburg Unit Review 2015

EMBL Hamburg was reviewed on 24 and 25 February 2015 by a panel of 12 experts, including two members of SAC and two observers from EMBL Council. The review was chaired by Andrea Musacchio, Max Planck Institute of Molecular Physiology, Dortmund, Germany.

### Evaluation Summary

The quality of research, services and leadership of EMBL Hamburg were all ranked as outstanding. The environment at DESY, in which the Outstation is embedded, has undergone substantial new developments since the last review in 2011, including the decommissioning of the old storage ring, DORIS, and its replacement with Petra III, the construction of the X-ray free electron laser (XFEL), which is underway, and plans for enhancing structural biology on campus. The Outstation has been at the forefront of these developments. Main elements of novelty were the commissioning of macromolecular beamlines at Petra III, the affiliation with the Centre for Structural Systems Biology (CSSB) and the development of plans to establish biological user infrastructure for sample preparation and characterisation at the XFEL. The Panel looks highly favourably on the latter development. The uniqueness of the Hamburg Outstation will be further enhanced through its planned participation in the establishment of biological user facilities at the XFEL.

During the period of reference, the small angle X-ray scattering (SAXS) beamline P12 and the two MX beamlines P13 and P14 were commissioned and are now ready for resumption of operation in April-May 2015. Impressive developments have been made regarding beamline instrumentation, which will configure the EMBL Hamburg Outstation as an absolute world leader in the provision of SAXS and macromolecular crystallography beamline time to end users. EMBL Hamburg has maintained its very high profile in the area of software development, with the ARP/wARP and ATSAS suites being clear, but not the only, showcases. These activities are world-class and contribute to the international stature and visibility of the Outstation. There have also been very important contributions in structural biology research, such as the work on the Netrin-1/DCC complex and the elastic protein myomesin.

As Head of Outstation with ultimate responsibility for all activities, Matthias Wilmanns has been very successful in developing the overall strategy and recruitment plan for the commissioning of the EMBL beamlines at Petra III. At the same time, he has been working to increase the research profile of the Outstation in structural biology, running a competitive research group, being very active and successful in critical fundraising, and devoting a significant part of his time to the direction of the CSSB. Wilmanns' dedication to the Outstation is admirable. His national and international visibility represents a decisive asset for EMBL and for the viability of the Outstation. However, given the increased range of duties of the Head of Outstation, the Panel recommends delegation of specific responsibilities and accountabilities to other senior staff members and the establishment of effective structured mechanisms for the senior staff to support the Head in the increasingly complex environment.

Finally, providing adequate funding for access to services, including synchrotron beamlines and affiliated activities, is an absolute requirement for making the services offered by EMBL Hamburg available to the community at large. Due to decreasing European resources for transnational access current funding for access to infrastructure is inadequate, and this is of course also true for the Outstation. The Panel takes the occasion to urge the EMBL Member States, through its Council, to dedicate appropriate consideration to this urgent and crucial problem.



## Response to the Panel's Recommendations

I would like to begin by thanking the Panel for their thorough review of the activities of the Hamburg Outstation. It is clear that they grasped the specificities of both EMBL Hamburg's range of activities, which are distinct from all other EMBL Units, and the considerable change in the local environment that has occurred over the four-year review period. I am very pleased that their overall opinion of the performance of the Hamburg Outstation is so positive. I also acknowledge the suggestions that they made for further improvement, both to the individuals under review and to EMBL management as a whole. I will take up several of the general issues they raised here.

As pointed out by the Panel, the two main areas of focus in the four-year period were those recommended for priority in the last EMBL Hamburg review, continuation of the EMBL@Petra3 beamline project and participation in the build-up of the Centre for Structural Systems Biology. While these have both been pursued very successfully, this led to an unusual pressure of work for the five people mainly involved in leading these activities, Matthias Wilmanns, Dmitri Svergun, Thomas Schneider, Rob Meijers and Stefan Fiedler. All were evaluated as having given outstanding performance by the Panel, an opinion which reflects my own. It is also gratifying that the collaboration between EMBL Hamburg and EMBL Grenoble on the beamline projects at both locations continues to function extremely well.

Looking forward, the stressful recent period underlined the need for some change in the organisation of the Outstation leadership. The Panel recommended that some of the responsibilities currently in the remit of Matthias Wilmanns should be delegated to senior staff members. This will enable Matthias to devote more of his time to those activities where he is most urgently required and establish a more collegial form of leadership. I have discussed this with Matthias and he plans, and indeed has already begun, to implement the changes suggested by the Panel.

As recommended by the Panel, it is clear that the four group and team leaders responsible for implementation of EMBL@Petra3 should now be given the opportunity to both document what they have done during the project and also to pursue a greater level of research and research-related activity than was possible during the review period.

The Panel recommends timely planning for succession in the area of small angle X-ray scattering, where Dmitri Svergun, one of the world leaders in the SAXS field, is nearing normal retirement age. A plan was presented as part of the review documentation, which the Panel endorsed and EMBL intends to follow.

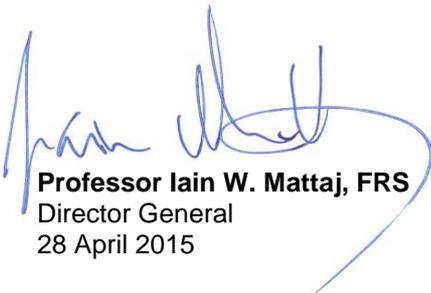
The Panel recommends to EMBL Council that the member states should consider funding access to the EMBL service facilities, in light of the reduction of support for structural biology infrastructure access that will occur during Horizon 2020. I will transmit this recommendation to EMBL Council and discuss it with them during preparation of the next indicative scheme.

In view of the progress toward the inauguration of the European X-ray free electron laser (XFEL) in 2017, and the very promising results obtained from structural biology projects carried out at existing, smaller XFELs, the Panel strongly supported EMBL Hamburg's involvement in a consortium that will set up and run a sample preparation and characterisation facility for structural biology users of the XFEL. I support this initiative because of EMBL Hamburg's successful history of providing synchrotron-based services to the structural biology community. However, because the (long-term) staffing required has clear financial implications, I will have to discuss this with EMBL Council in preparing the next indicative scheme.



Two issues that need attention were raised by both pre-doctoral and postdoctoral fellows. The first concerns the need for an in-house course in crystallography and SAXS techniques. This course has normally been offered regularly but because of the other pressing commitments referred to above, was cancelled last year. It was always intended to reinstate the course and this will be done.

Several aspects of the mentoring of fellows, including encouragement to attend scientific meetings, preparing publications in a timely way and, for postdoctoral fellows, designating a second mentor with whom the postdoctoral fellow would regularly meet are not being uniformly carried out in a satisfactory manner. EMBL has policies and guidelines on mentoring, and I am following up to ensure that these are upheld uniformly in future.



**Professor Iain W. Mattaj, FRS**  
Director General  
28 April 2015