



EMBL Developmental Biology Review 2015

EMBL's Developmental Biology Unit was reviewed on 6 and 7 May 2015 by a panel of 14 experts, including six members of SAC. The review was chaired by Pernille Rørth, until recently with A*Star in Singapore and currently in Copenhagen, Denmark.

Evaluation Summary

The Developmental Biology Unit is one of the world's leading centres for the study of developmental processes. It strikes a delicate balance between the diversity of biological problems and model systems used, and depth of investigation into fundamental principles, while retaining cohesion within the Unit. Despite having only eight investigators, the Unit manages this challenge excellently by means of extensive collaboration with other EMBL Units and Core Facilities.

Each of the Unit's investigators has mounted a strong, independent research programme. For example, more than half of the group leaders have succeeded in getting ERC starting or advanced grants. The strong focus on mechanistic studies using genetic as well as other perturbations is a particular strength of the Unit. It is one of the Unit's major contributions to the scientific and intellectual environment of EMBL.

The Developmental Biology Unit's contribution to training continues to be very significant. This includes EMBL-wide training: Anne Ephrussi has a long-standing leading role as Head of the EMBL International Centre for Advanced Training (EICAT) and Detlev Arendt heads up the very successful postdoctoral programme. In addition there is strong scientific training within the Unit (predocs, postdocs and young group leaders). The panel did note some issues arising from pressure for top-level publications among fellows. Most of the group leaders in the Developmental Biology Unit have also served as lead organisers for major conferences at EMBL during the review period showing broad commitment to development of their scientific fields.

As Head of Unit for the past eight years, Anne Ephrussi has done an outstanding job. She is internationally highly recognised for her own work. In addition, she has led the Unit successfully both by hiring a truly impressive set of innovative group leaders, who are now producing top-level science, by mentoring them and by providing a supportive structure in which they can interact productively with their colleagues. The junior group leaders were unanimously happy with the support they are given in the Unit and the collegial spirit. Apart from Anne Ephrussi and Detlev Arendt, the remaining six group leaders are expected to turn over during the next review period, thus the upcoming four years will be one of change and new opportunities for the Unit. This should be exploited by recruiting insightful and innovative scientists who will seize the possibilities of new technologies, utilise the unique collaborative EMBL environment, but most importantly, ask key biological questions to provide functional insights.

Overall, the review panel ranked the Developmental Biology Unit as outstanding in terms of its overall performance, the quality of its research and its contribution to the training and development of young scientists.



Response to the Panel's Recommendations

I would like to thank the panel for their time and considerable effort in reviewing the Developmental Biology Unit, as well as for their constructive feedback. I am gratified by the highly positive overall evaluation of the Unit and would like to congratulate the Unit members and in particular Head of Unit Anne Ephrussi. Beyond the excellent research of the Unit, several of its members show an additional level of commitment to EMBL and its community. As the report mentions, Anne Ephrussi and Detlev Arendt play vital roles in EMBL's training efforts and Alexander Aulehla is highly committed to his additional responsibilities as Head of EMBL's Laboratory Animal Resources.

The review report notes some issues around the publications strategy of groups in the Unit. In particular, the panel was concerned that some PhD students graduated without a first author paper. This was deemed to result from a combination of the strict four-year duration of PhD studies at EMBL and the highly ambitious scientists in the Unit, including both group leaders and trainees. I acknowledge that there is a tendency for some EMBL groups (also beyond the Developmental Biology Unit) to focus perhaps too strongly on high-impact publications, which may lower the overall numbers of publications produced by a lab. This is largely due to a combination of science becoming more interdisciplinary, which usually lengthens the time a project takes, and the changing and ever-increasing requirements of journals for publication. However, this trend can have negative consequences for predoctoral and postdoctoral fellows, who need to produce first-author publications in order to apply for fellowships or to obtain independent positions. I will continue to encourage all EMBL group and team leaders to consider these issues and aim for balance in their publication strategies and to discuss these issues openly and transparently with the members of their groups and teams.

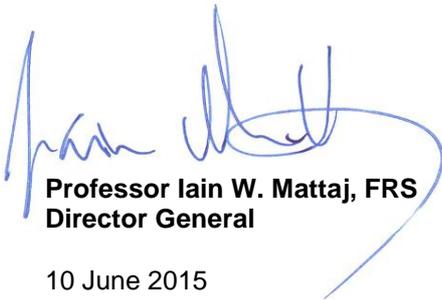
The panel made useful specific recommendations regarding this topic, which we will consider carefully. For the predoctoral fellows these include rigorously enforcing thesis submission by the end of the 4th year of the PhD (which is the basis for a 6-months contract extension beyond 4 years to finish a project or a publication), encouraging joint research efforts between members of a group to increase the likelihood of co-authorships and joint-first-authorships and discussion of publication strategies by the student's thesis advisory committee (TAC) at the end of the 2nd and 3rd years. Regarding the latter point, EMBL has recently revised its guidelines to make the development of a publication strategy mandatory for the second year committee meeting and a review of this strategy obligatory for the third year. Furthermore, SAC suggests a 3.5 year ad hoc TAC to further monitor thesis completion and preparation of publications. I will discuss this suggestion with EICAT and senior faculty.

The panel also pointed out that it is important for fellows to take advantage of the large variety of meetings and networking opportunities available at EMBL, ranging from seminars over courses and conferences to fostering connections with both local and visiting PIs. We actively encourage this participation and consider it an integral part of PhD and postdoctoral studies at EMBL.

In addition the panel noted that effort should be made to expose postdoctoral fellows to teaching experience, for example through the supervision of trainees, and to involve them in discussions with external visitors. Both of these recommendations are common practice in postdoctoral training at EMBL and should be followed wherever possible. We will continue to actively encourage the involvement of postdoctoral fellows in such activities but note that EMBL can only accommodate a limited number of trainee visitors.



Finally, the review report states that the contribution of the Developmental Biology Unit to integrated activities in European Life Science research has not been discussed in detail. While this may have been the case during the review, I would like to point out that the Unit is in fact very active in this area. This is particularly evident from the high number of major conferences organised at EMBL by group leaders of the Unit (e.g. EMBO|EMBL Symposia “Complex Life of mRNA”, “Biological Oscillators: Design, Mechanism, Function” and “Germline – Immortality through Totipotency” etc.) and illustrated further by the large number of scientific advisory and review boards of research organisations and funding bodies (e.g. ERC, EMBO, HFSP etc.) that members of the Unit regularly serve on.



Professor Iain W. Mattaj, FRS
Director General

10 June 2015