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Report of the SAB to the Institute for Molecular Medicine Finland (FIMM)

The SAB met on the 17th of May, 2011. Present were Cornelia van Duijn, Carl-Henrik Heldin, Edison Liu, Nadia Rosenthal and Kai Simons (chair).

The SAB had received the Annual Report of FIMM as well as a document consisting of 149 pages to inform us of all aspects of FIMM activities.

We heard Olli Kallioniemi give an overview of FIMM and his plans for the coming years. He also presented a future vision for FIMM. All the FIMM EMBL group leaders presented short reports of the progress of their research. Their presentations were followed by reports from the senior principal investigators at FIMM. The SAB were also introduced to the present state of the service facilities and the progress in translational research. Next, there were presentations of external investigators funded by the FIMM National Network of Molecular Medicine. Finally, the SAB met with the PhD students and post-docs separately.

General impression of the progress of the FIMM build-up

The SAB was impressed by the generally enthusiastic atmosphere within the different groupings of the FIMM. Everyone seemed positive about their work and the progress that has been made. This included the young group leaders as well as the PhD students and the postdocs. This optimism promises well for the future and attests to the success of the FIMM leadership to shape a synergistic environment that will energize the ongoing research.



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Research focus and quality

The SAB also notes with satisfaction that the research efforts are merging such that links are being formed between the different research groups, creating synergies essential for future success. FIMM is indeed becoming a center for molecular medicine. These are still early times for FIMM but the productivity is already impressive. The level of external funding is also imposing and shows how capable the FIMM PIs are to attract competitive research grants.

Olli Kallioniemi posed three questions to the SAB. Here are our answers:

Question no. 1:

How to cope with the organizational change at the University of Helsinki and the strategic challenges this presents for the future of FIMM as an EMBL-partnership institute?

Due to the big change of the entire Finnish University system in 2010, new issues have arisen with respect to the funding of the FIMM. In the discussion of the future of FIMM the SAB emphasises that FIMM indeed should have a role beyond being one research institution within the University of Helsinki framework. The reason for founding FIMM was to establish an international center of molecular medicine in Finland. FIMM is on an excellent track to fulfil this goal. Without adequate core funding this will not be possible. Important for the success of FIMM is also the turning-over research structure that FIMM has adopted from EMBL. The young research group leaders have 5+4 years before leaving FIMM. The funding of such an inbuilt turnover must be secure. Only if this is the case can FIMM continue to attract international staff like it does successfully now. Thus, funding that FIMM has received in the start-up phase should be extended. EMBL partnership institutes in molecular medicine in Norway and Sweden receive direct support from the government or the research councils. SAB recommends that discussions should be held between the government, University of Helsinki and the other stakeholders to guarantee a future for FIMM after the startup period comes to an end. For example, EVO funding could be applied for the development of personalized medicine and thereby supporting FIMM.

Question no. 2:

What are the most promising strategic areas for FIMM in the near future? How to sharpen FIMM profile and create niche opportunities in molecular medicine?

It is not easy to give advice from the outside for research directions. The recruitment of new group leaders is the most important instrument that the FIMM director has at his disposal to shape the research strategy of FIMM together with the other PIs. The SAB finds the present mixture attractive. This consists of an infrastructure that can support research in molecular medicine. Important will be to strive towards quantitative excellence in the core technologies. Despite the tragic death of Leena Peltonen-Palotie, human genomics should remain a pillar of FIMM. There is no doubt in the committee that the group leaders in human genomics, associated with FIMM are able to do this, given their successes in the

past year. Combining the existing resources towards creating platforms for building up personalized molecular medicine into a second pillar of excellence seems appropriate. FIMM could become an internationally acknowledged center in this emerging field. Developing personalized medicine would be an optimal way to increase the quality of Finnish medical care

Naturally, an international research institution such as FIMM has to remain flexible to accommodate new elements in this rapidly changing environment and not stifle the creativity of its research groups by too much steering. The present international trends towards translation and immediate applications are fraught with problems.

There was a convergent focus on systems approaches to the molecular medicine promoted by most of the investigators - that is use of genomics and complexity analysis to uncover molecular truths in human biology. The SAB fully support this approach and wish for them to solidify it as a focal point of convergence for the investigators.

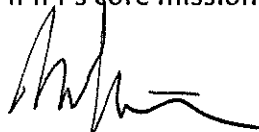
Question no. 3:

We ask the SAB for advice in evaluating the concept of the FIMM National Network for Molecular Medicine (NNMM) and its importance to the core mission of FIMM?

The FIMM National Network for Molecular Medicine (NNMM) is a new concept to link national research groups with FIMM. On the basis of the discussions that the SAB had with Lauri Aaltonen, Iiris Hovatta, Heli Nevanlinna, Anu Wartiovaara and Jukka Westermarck, we were very impressed with the results obtained so far. The NNMM could become an important and innovative instrument for FIMM to achieve its goals. In the next funding phase the SAB recommends that the concept should be changed to focus on personalized medicine, linking outside clinical research groups to FIMM infrastructure and PIs. How could such a scheme be financed? The SAB recommends that the EVO funding could be an instrument for this NNMM project. Funding the development of personalized medicine by this scheme would be an optimal way to increase the quality of Finnish medical care. Preliminary data from France is demonstrating that cancer therapy can be made cheaper and more efficient for the patients by introducing personalized treatment strategies. Finland could become a leader in this field by linking university clinics around the country to FIMM know-how.

Conclusions

The SAB notes with satisfaction that the FIMM build-up is proceeding in an outstanding way. Olli Kallioniemi and his team are indeed doing an excellent job. The government funding of FIMM needs to be extended beyond the start-up phase. The FIMM National Network for Molecular Medicine should be turned into a creative instrument for fulfilling FIMM's core mission. Funding from EVO should be sought with high priority.



Kai Simons

On behalf of the Scientific Advisory Committee