EUROCORES Programme
European Collaborative Research

Membrane Architecture and Dynamics (EuroMEMBRANE)

Consensus statement EuroMEMBRANE Review Panel
(Final evaluation)

Teleconference of Monday 22 October 2012

List of participants

Bergeron	**John J.M.**	McGill University	Montréal	CA
Subramaniam	**Shankar**	University of California at San Diego	La Jolla	US
Tengholm	**Anders**	Uppsala University	Uppsala	SE
Weissenhorn	**Winfried**	University Joseph Fourier	Grenoble	FR
Nogueira	**Maria Manuela**	European Science Foundation	Strasbourg	FR

In addition, evaluations were received prior to the teleconference from:
- Oliver Fackler, Hygiene Institut des Universitätsklinikums Heidelberg, DE
- Joen Luirink, Vrije Universiteit, Department Molecular Microbiology and Pharmacology, Amsterdam, NL

In total, six out of 11 Review Panel members will have evaluated the EuroMEMBRANE Programme.

Progress of the CRP: achievement of CRP goals, integration of teams' outputs

The Programme provided an excellent platform for the individual groups to collaborate. The individual Collaborative Research Projects made good to excellent scientific progress, each of them achieving many of their initial goals. Integration within each CRP also appears to have worked very well, with those teams working best where members had been collaborating before. However, they mostly consisted of close interactions between two partners and larger concerted efforts were rarely pursued. Also, there were not as many cross-disciplinary collaborations as would have been possible even within the same CRP (e.g. between cell biologists and physiologists, (patho)physiologists and biophysicists, cell and molecular biologists).

The scientific output from most CRPs was excellent and new advances within the respective membrane biology field have been reported. Among them are new insights into lipid regulation of EGFR signaling (Lipidprod), new molecular tools to study PIP signaling (TraPPS), new insights into endocytosis regulation including a first endocytosis inhibitor (SYNAPSE). The work from the SYNAPSE group is well put together with significant discoveries (stonins, pitstops, proteomics) published in

high impact journals. The Lipidprod group demonstrated that the lipid rafts are of major importance for the spectrum of cell biological to biochemical to biophysical definitions and made this model understandable to the majority of biological scientists, which is a huge step forward in membrane research. The reagents and tools generated by the very active TraPPS goup are highly relevant and used by the project members themselves as well as other groups in the Programme (SYNAPSE, Lipid Specific). The UPS group has documented that the various models of unconventional protein secretion under study may not be related as a single coherent mechanism which is a substantial advance *per se* even if this outcome appears rather disappointing. The remaining groups have demonstrated high productivity with varying degrees of integration but nevertheless greater than expected.

Programme integration of CRPs into the EuroMEMBRANE programme

Interactions between different CRPs increased during the funding period but could have been more intense. For instance, there were few EuroMEMBRANE-derived common publications across CRPs: 1 TraPPS / SYNAPSE and 1 TraPPS / Lipid Specific. This certainly reflects that a 3-year funding period is too short to fully integrate such a large number of investigators in a common effort and to establish effective cross-disciplinary collaborations. The true value of the programme can only be assessed in a couple of years.

All investigators have benefited from EuroMEMBRANE since it would have been difficult for most of them to gather such a large amount of funding from other sources. Without this funding the field would not have advanced and it seems that the Programme had a real stimulating effect on the individual CRPs. In this regard, the most prominent and excellent interaction between SYNAPSE and TraPPS that led to the identification of a new phospholipid involved in the control of endocytosis is certainly the scientific highlight of the Programme. The impression is however that while most researchers saw this as an obvious opportunity to invest in their own research, they did not fully embrace the chance to establish a pan-European network.

Networking, training, and dissemination activities

Interactions within individual CRPs were good but much less developed across the CRPs although all Project Leaders and Principal Investigators from all CRPs participated to all activities.
The main interaction took place at the occasion of two Euromembrane meetings, one in Heidelberg in 2010 (kick-off meeting) and one in Basel in 2012 (final conference). There was clearly a high level of networking via meetings, conferences and workshops, particularly in 2012. Due to the development of new technologies in some CRP labs, such workshops are highly useful for training and dissemination of expertise.
TraPPS was seen as outstanding in terms of public outreach and organisation of meetings and events including the final conference in Basel this year.
The environment for young trainees in each of the groups has been exceptional especially considering the cross-disciplinary methods mastered by each group. The most valuable teaching experience for young scientists is to be part of a high quality research network and this “training the next generation” goal was fulfilled. In addition, short visits and dissemination travel grants were offered this year to the least active groups who had less benefited from the Programme networking and dissemination funding.

Potential follow-up activities and future perspectives

As an extension of EuroMEMBRANE is not possible, financial support from the ESF can only come from applications for funding for a Research Conference within the ESF-EMBO partnership (next call in 2013) or for an Exploratory Workshop (next call in 2013).

A close interaction with the European and US lipidomic consortia (LipidomicNet and Lipid MAPS, resp.) is also encouraged.
It is important to highlight that European funding is key in the field of cell membrane biology and a lack of funding in this research area could be seriously detrimental in the future.

Conclusions and final remarks

The Review Panel took into account (a) the short duration of the Programme (3 years only), (b) the difficulties in getting started due to the unavailability of funding and (c) the fact that funding was limited with many Associated Partners who were not fully supported contrary to what was originally planned. All this was seen as a major hurdle to the full success of EuroMEMBRANE. An extension of funding would have been beneficial for the Programme to achieve its full potential.

Overall the programme resulted in high quality scientific output and the generation of tools that expanded the scientific knowledge, provided the basis for future investigations, and strengthened the position of European science in this research area. Given the importance of the work from at least some of the groups and the major discoveries indicated, the programme has exceeded expectations.

EuroMEMBRANE did not yet result in a tight European network but this cannot be expected after 3 years of funding. However, the level of participation was high despite a variable activity among PIs and between CRPs. The true value of the Programme will only become apparent over the next couple of years since some of the recent collaborations look very promising.