

Evaluation Summary Report

Proposal number: 211800-1
Call: FP7-PEOPLE-2007-1-1-ITN
Funding Scheme: MC Support for training and career development of researchers (Marie Curie)
Proposal acronym: SBMPs
Proposal title: Structural Biology of Membrane Proteins
Duration (Months): 48

N.	Proposer Name	Country	Total Cost (euros)	%	Grant Requested (euros)	%
1	Centre National de la Recherche Scientifique	FR				
2	International Institute of Molecular and Cell	PL				
3	Instituto Tecnologia Quimica Biologica-	PT				
4	Ecole Polytechnique Fédérale de Lausanne	CH				
5	Technische Universität Dresden	DE				
6	Max-Planck-Gesellschaft zur Förderung der	DE				
7	ZoBio BV	NL				
Total						

Abstract:

Membrane proteins (MPs) are known to be key molecules in cellular communications, from signal transduction to transport of ions, metabolites and other molecules. They also participate in the synthesis of ATP, the import of soluble or MPs from the cytosol, and they protect living organisms from toxic factors.

The proposal consists in a joint training effort involving the major biophysical methods that are -or soon will be- the major techniques used in the field of structural biology of MPs. A collaborative effort is essential for the training of the future generation of biologists dedicated to membrane proteins. It will pave the way to an integrative approach for the study of structure-function relationships of membranes. It will therefore open new strategies for structure-based drug design, in particular toward G-protein coupled receptors (GPCR), which are major drug targets (GPCRs represent 30% of current drug targets). The training proposed in this program will not only form high-level academic researchers but will also largely contribute in forming the main actors of the future developments in biotechnology and personalized medicine.

This network combines 13 academic research groups and 3 industrial companies interested in collaborating with these groups and involved in drug discovery or scientific equipment for SBMP. These groups are internationally recognized for analysing the structure and dynamics of membrane proteins by a combination of experimental and theoretical approaches: in vivo and in vitro expressions systems, functional/biochemical/biophysical characterisation, X-Ray diffraction, Electron Microscopy, Atomic Force Microscopy, Single-Molecule Force Spectroscopy, liquid and solid state NMR, numerical simulations. Seven partners from 6 different countries are involved: France, Poland, Portugal, Switzerland, Germany and the Netherlands.

ESR - Evaluation Summary report

Marie Curie Initial Training Network (ITN)

0= Fails or missing/incomplete information; 1=Very Poor; 2=Poor; 3=Fair; 4= Good; 5=Excellent. Marks for each criterion are given to one decimal point. Note that the maximum is 5.

Criterion 1. S&T QUALITY

Strengths of the proposal (in bullet point format):

- The project is of high scientific and technological quality. The proposed research is highly ambitious, but it appears feasible if taking into account the combined expertise of the partners.
- The proposal is innovative because of the combination of methodologies that will be used, and because of their application to a problem that is at the forefront of biological sciences.
- The consortium includes several industrial partners.
- The majority of the academic groups involved have mutual collaborations as well as collaboration with the private sector.
- The proposed program illustrates a very good knowledge of the state of the art in the field and combines several state-of-the-art highly relevant techniques.

Weaknesses of the proposal (in bullet point format):

- The proposal could be improved by including more detailed information on specific projects, the collaborations between the different partners and especially the role of the industrial partners.

Overall comments:

This research project is very large and ambitious, but it appears realistic due to the high quality of participating teams. The specific individual projects and envisioned collaborations between teams should be better specified.

Evaluation Summary Report

Proposal number: 211800-1

Criterion 2. TRAINING

Strengths of the proposal (in bullet point format):

- The training programme proposed covers important needs of scientists required in the field, with the proper combined expertise and methodological competence.
- Dual diplomas recognized by the respective universities are encouraged
- Excellent network-wide training programme, including workshops and courses with practical training in several areas of structural biology.
- The network capacity will be enhanced by the involvement of well recognized visiting scientists.
- Access to international events organized by members of the network will be provided and access to the network organized events for external participants will be open.
- The balance of the requested ESR/ER is reasonable.

Weaknesses of the proposal (in bullet point format):

- The role of the industrial partners in the training activities should be more explicit.
- Contribution of visiting scientists in the research training program, especially in the light of the high number of requested person/months (44), needs to be better described.

Overall comments:

The training is of very good quality. It is timely as it addresses one of the important fields of modern biology – structure determination of membrane proteins. Some activities need more detailed description.

TOTAL

Does this proposal raise ethical issues?

Please refer to the list of issues in the Ethical Issues Report (EIR)

Decision for Second Stage GO