

## Evaluation Summary Report

**Proposal number:** 211800-2  
**Call:** FP7-PEOPLE-2007-1-1-ITN (25/09/2007)  
**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	%
1	Centre National de la Recherche	FR		0,00		
2	International Institute of Molecular and	PL		0,00		
3	Instituto Tecnologia Química Biológica-	PT		0,00		
4	Ecole Polytechnique Fédérale de	CH		0,00		
5	Technische Universität Dresden	DE		0,00		
6	Max-Planck-Gesellschaft zur Förderung	DE		0,00		
7	ZoBio BV	NL		0,00		
<b>Total</b>				<b>0,00</b>		

### 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 12 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 (EM), atomic force microscopy (AFM), single-molecule force spectroscopy (SMFS), liquid and solid state NMR, numerical simulations. Seven partners from 6 different countries are involved: France, Poland, Portugal, Switzerland, Germany and the Netherlands.

### Evaluation Summary Report - STAGE 2

Marie Curie Initial Training Network (ITN))

#### Criterion 1. S&T QUALITY

**(Threshold 3,00/5,00)**

##### Strengths:

- The proposed program integrates a large number of advanced biophysical approaches aimed at comprehensive structural studies of membrane proteins.
- The proposal is intersectorial; several industrial partners are participating which reflects the importance of this field for the pharmaceutical industry.
- The proposal has a comprehensive description of the major biophysical approaches used in the field, and shows a very good knowledge of the state of the art.
- The role of the associated partners is clear.
- A strong point of the network is the participation of several renowned scientists outside of Europe as visiting scientists.
- The joint effort in combination of different experimental methodologies is innovative.
- The experimental research programme is of high quality.
- The experimental research methodologies are appropriate.

Mark: 4,4  
Weight: 0,30

##### Area for improvement:

- The research collaborations could have been better balanced among all partners of the network.
- The description of the specific research goals, especially concerning the theoretical approaches could have been more clearly presented.

##### - Overall comments:

The network is overall of a good scientific quality presenting a proposal with important intersectorial aspects but could have been better balanced.

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Issues to be addressed when assigning an overall mark for this criterion:

- S&T objectives of the research programme, including in terms of inter/multi-disciplinary, intersectorial and/or newly emerging supra-disciplinary fields.
- Scientific quality of the research programme.
- Appropriateness of research methodology.
- Originality and innovative aspect of the research programme. Knowledge of the state-of-the-art.

Please use the following structure in your comments to this criterion:

- Strengths of the proposal (in bullet point format):
- Weaknesses of the proposal (in bullet point format):
- Overall comments:  
(reflecting the relative importance of the strength and weaknesses above mentioned)

( copy the text above in the commentbox )

## Criterion 2. TRAINING

**(Threshold 4,00/5,00)**

Strengths:

Mark: 4,3

- The training is of good quality with a clear distinction between the network activities and the local training.

Weight: 0,30

- The training program is very well described with the research projects of the ESRs well defined.

- The need for scientists with this particular background is timely because of the particular importance of structural biology of membrane proteins in the pharmaceutical and biotech industries.

- The network capacity will be enhanced by the involvement of well recognized visiting scientists that will be involved in the network activities.

- Dual diplomas recognized by the respective universities are encouraged.

- Access to international events organized by members of the network will be provided and also access to the network events for external participants.

- The role of the industrial partners in the training is well described and appropriate.

- Training in complementary skills will be organized by one of the industrial partners of the network and will cover relevant topics.

Area for improvement:

- The ER research training could have been more clearly presented.

- More details are needed for the planned conference and the internal workshops.

Overall

The training is of good quality. It is timely as it addresses one of the most important areas of modern biology ( structure determination of membrane proteins). Some activities organized by the network could have been defined in more detail.

Issues to be addressed when assigning an overall mark for this criterion:

- Quality of the training programme. Consistency with the research programme.

Complementary skills offered: Management, Communication, IPR, Ethics, Grant writing, Commercial exploitation of results, Research policy, Entrepreneurship, etc.

- Importance and timeliness of the training needs (e.g. multidisciplinary, intersectorial and newly emerging supra-disciplinary fields).

a) For multi-site proposals: Adequate combination of local specialist training with network-wide training activities.

b) For mono-site proposals: Adequate exploitation of the international network of the participants for the training programme.

- Appropriateness of the size of the requested training programme with respect to the capacity of the h

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(reflecting the relative importance of the strength and weaknesses above mentioned)
- ( copy the text above in the commentbox )

<b>Criterion 3. IMPLEMENTATION</b>	<b>(Threshold 3,00/5,00)</b>
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Strengths:

- The network possesses all necessary expertise, facilities and infrastructure to achieve the scientific objectives of the proposal.
- The network has the necessary infrastructure and capacity to accommodate the requested number of researchers.
- There are very good complementarities between the scientific partners.
- The management of the network is well planned and corresponds to the needs of a large size network.
- The plans for networking and dissemination are appropriate.
- The work plan schedule gives a good overview of activities with a time table.
- There is a Supervisory Board to co-ordinate the network-wide training activities.
- A Scientific Council for research training, student selection and student examination will be established.
- The budget allocation to the individual network participants is very well elaborated and it is based on the individual tasks defined in the application.

Mark: 4,3  
Weight: 0,20

Area for improvement:

- The recruitment strategy and in particular the allocation of ESRs and ERs among the groups of each partner could have been better defined.
- The involvement of the industrial partners in the scientific part of the training should be more explicit.

Overall comments:

The implementation of the network is well considered and the management tools necessary for a large size network will be put in practice. The flexibility of the considered recruitment strategy could lead to an unbalanced allocation of ESRs and ERs among the groups of each partner.

Issues to be addressed when assigning an overall mark for this criterion:

- Capacities (expertise / human resources/ facilities /infrastructures) to achieve the research, and adequate task distribution and schedule.
- Appropriateness of industry involvement.
- Adequate exploitation of complementarities and synergies among partners in terms of research and training.

- How essential is non-ICPC Third Country participation, if any, to the objectives of the research training programme.
- Appropriateness of the plans for the overall management of the training programme (demarcation of responsibilities, rules for decision making, etc.).
- Networking and dissemination of best practice among partners. Clarity of the plan for organizing training events (workshops, conferences, training courses).

- Clarity of the recruitment strategy (including time table), based on competitive international recruitment and incorporating an equal opportunity policy. Coherence of the conditions of recruitment and employment with the principles of the "Code of Conduct for the recruitment of researchers".

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  - Overall comments:  
(reflecting the relative importance of the strength and weaknesses above mentioned)
- ( copy the text above in the commentbox )

Criterion 4. IMPACT	(Threshold 0,00/5,00)
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Strengths:

- The recruited researches will receive state of the art training in the field of structural biology of membrane proteins.
- The expertise in the field of structural analysis of membrane proteins attained by the ESR and ER during the training period will provide them with numerous career opportunities in biomedicine, biotechnology and pharmaceutical industry.
- The network will ensure multidisciplinary training in a context of close collaboration with several industrial partners of different sizes and expectations.
- The visiting scientists will bring additional strength to the training and the network as well as additional professional contacts to the trainees.
- The project is based on exploiting high performance techniques and facilities available within the network.
- The training supervised by highly qualified scientists will provide young researchers with an excellent start in their scientific careers.
- The project will provide additional benefits by enhancing the number of already existing contacts and collaborations between the institutions involved.
- The choice of the visiting scientists is relevant and appropriate.

Mark: 4,7  
Weight: 0,20

Area for improvemet:

- The impact of the network could be enhanced if the organised training courses could accommodate more participants from the network.

- Overall comments:

The proposal will have a strong impact both on the researcher careers and the partners organisations in an area of strong scientific importance.

Issues to be addressed when assigning an overall mark for this criterion:

- Contribution of the proposed training programme to improvement of the career prospects of the fellows.
- Provision to establish longer term collaborations and /or lasting structured training programme between the partners' organizations, including between private and academic partners.

- Where appropriate, justification of the training events open to external participants and their integration in the training programme.
- Where appropriate, mutual recognition of the training acquired by multi-partner hosts.
- Where applicable, relevance of the role of visiting scientist with respect to the training programme.

Please use the following structure in your comments to this criterion:

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TOTAL	(Threshold 70,00/100,00)
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Total: 88,2

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Does this proposal raise ethical issues?

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

No

Recommendations for negotiation and/or indicators of progress of project

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Consortium agreement should be signed before signing the contract. The allocation of ESRs and ERs among the groups of the partners should ensure equitable allocation between groups and also that the projects with industrial participation presented in B5.1 are included.

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