

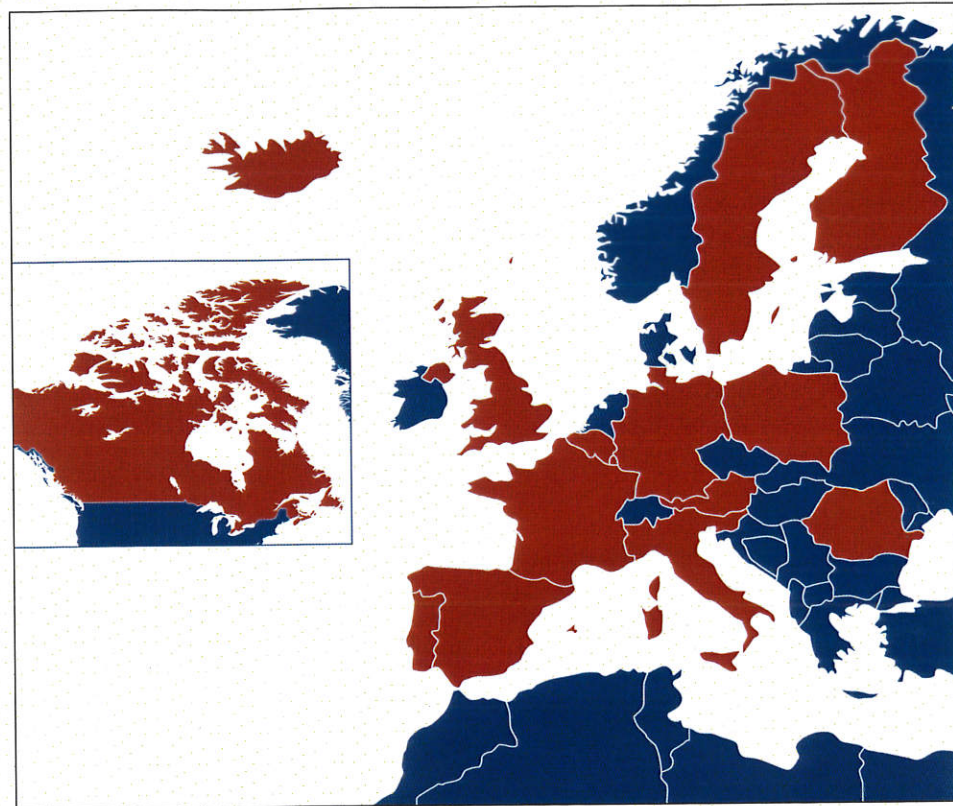


NEW SPIRITS – the ERA-NET NEURON moves on...

Super tankers have their advantages. They can carry a huge lot of different cargo on very long distances safely. Sometimes they are accompanied by smaller boats or trawlers, thereby building a swarm. So far for the metaphor of research funding by the European Commission. In the early years of the new century the Directorate General for Research and Innovation initiated - besides the already implemented huge funding measures - a new instrument, European Research Area Networks.

The objective of the ERA-NET scheme is to improve the cooperation and coordination of research activities carried out at national or regional level in the Member and Associated States. Through networking of ministries and funding agencies the coordinated implementation of national and regional research funding programmes is promoted.

In total 71 ERA-NETs have been funded under FP6. Almost all of them succeed in launching joint transnational calls for research proposals in various areas thus contributing to improve the coherence and coordination across Europe of such research funding programmes. In the Health sector five of the original 11 FP6 contracts in this area continued their activities under FP7. The ERA-NET NEURON - coordinating research funding programmes in the area of brain diseases - is one of these. Initiated by the German Federal Ministry of Education and Research (BMBF) and heading off with three other ministries and funding agencies from Israel, Luxembourg and Poland, the network now comprises 21 funding bodies in 16 different countries. The coordinator of this network, Dr. Marlies Dörlöchter explains the enthusiasm and drive of NEURON.



www.eranet-neuron.eu The NEURON partner countries, not only European but also Canada (inset) and Israel.

Dr. Dörlöchter what were your expectations when you first thought about building an ERA-NET?

Diseases of the brain are a heavy burden for patients, their families and society as a whole. Research into this area is therefore a priority in the funding portfolio of the German Ministry of Education and Research, BMBF. And - research is global. BMBF had for many years successful bilateral collaborations in neuroscience research funding with ministries in Israel and Poland and very much welcomed when the European Commission services announced the new ERA-NET instrument. Based on the bilateral reliable and long-standing experiences we strived for the extension of such cooperations with other countries.

The expectation was then to coordinate the implementation of common funding programmes in the area of brain diseases in a European network of funding organisations. On top of the existing national programmes we anticipated that greater scientific efforts could be stimulated by interdisciplinary and international cooperation on the level of research groups. Particularly flexible research funding instruments for small consortia were identified as most effective. During the last five years the expectations manifested indeed positively on all levels. On the NEURON network level, by the annual joint transnational calls and the high number of funded consortia (43) and research groups (180).

What is necessary to bring 21 organisations together?

The increasing societal and economic burden of brain diseases is a global and not merely a European challenge. It is necessary to increase our knowledge of brain function and its disorders, and find new strategies for preventing and treating these intractable disorders. All our 21 NEURON partners share the view of the importance and chances of internationally coordinated funding in disease-related neuroscience and acknowledge the added value of bundled capacities. This common interest in a societal most relevant question is a strong motivation to jointly promote research funding. In addition, the nationally rather well developed scientific communities called out for such flexible research funding possibilities that include pragmatic and transparent procedures. On the personal dimension, matters that count substantially are trust and mutual understanding, reliability and, not least, a curious and enthusiastic common spirit.

In retrospective, what can be seen as challenges in the establishment of a network of funding bodies?

The coordination of programmes and programme opening activities require joint concepts, standards, and agreement about cross cutting issues of programmatic and strategic importance. The highly diverse funding procedures in the participating funding organisations provided considerable hurdles at the beginning of NEURON. Therefore information was collected on the contents of existing and, where possible, future national funding programmes and research priorities in disease-related neuroscience. Thematic or strategic framework conditions for programme

development were explored. As one result a documentation of funding portfolios of each partner organisation (and other organisations in the respective countries) was published that summarized the funding activities. It was very important to understand and respect each other's national priorities and needs and try to find a common ground for joint research support. In retrospective, these initial steps were rather quickly done and we were able to start our most important network activities with the launch of the first joint transnational call for research proposals in 2008.



PD Dr. Marlies Dörlöchter, the coordinator of ERA-NET NEURON.

What are the main highlight(s) in NEURON?

Of the several highlights, the most prominent is of course the implementation of yet four joint transnational calls for research proposals, in fact, one each year, with a budget of about 40 million € so far. The calls cover very different research fields from methodology development to mental disorders and different types of research instruments from basic to clinical research. The number of excellent research groups that could be

funded by NEURON increased steadily, reaching 180 in 2011. Attribute of such high impact research are the over one hundred publications so far, some of them in highest impact journals. All these efforts pave the way for a better understanding of brain diseases, diagnostic measures and - eventually - cure, because knowledge is the first and major step towards helping the patients. Another tangible highlight is the support for young scientists. Since 2009, NEURON has launched the "Excellent Paper in Neuroscience" Award to recognize the most remarkable and outstanding scientific publications by young researchers in the field of disease-related neurosciences. The annual award is attractive to young researchers because on top of the prize money the winners are invited as special ERA-NET NEURON Young Investigator lecturers in an international conference.

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NEURON – advanced Origami of Joint Transnational Calls



The NEURON consortium, 2011 in Berlin.

The planning and execution of joint transnational calls for proposals is like high level Origami. Every single bit and piece has to fold into its perfect position, getting more complex the more partner countries or funding bodies participate. The **ERA-NET NEURON** created a strategically operating group of research funding organisations in Europe and beyond to implement research funding programmes in the area of brain diseases. The organisations are in their countries key players concerning neuroscience research funding and invest considerable funding volumes in this research area. Since 2008 **NEURON** conducted four joint transnational calls in a coordinated manner.

The **ERA-NET** scheme (ERA – European Research Area) is a funding instrument of the European Commission since the 6th Framework Programme. It supports networking of funding organisations in order to initiate coordination of national or regional funding programmes. One of the key objectives of **ERA-NETs** is the exchange of information as the initial step of a mutual learning process that will eventually lead to improvement of standards throughout partner countries and – as history and success proved – the highest level of cooperation among funding bodies: Joint Transnational Calls for proposals (JTCs).

When **NEURON** aimed in 2007 towards such ambitious goals, the indispensable preparations comprised exchange of knowledge about similarities and the variability among the partners of the consortium with regard to e.g. funding policies and philosophies, funding regulations, best practices with regard to review processes and programme management. An in depth survey¹ enabled the consortium to develop a joint concept for the first **NEURON** joint call for proposals in basic and translational research into neurodegenerative diseases in 2008.

1 http://www.neuron-eranet.eu/en/108.php#National_funding_programmes

Likewise important is to identify priority topics that link the partners' national strategies and priorities and international strategies in the field of disease-related neuroscience research. A continued dialogue between programme managers and a dedicated scientific advisory board is necessary to keep an eye on the burning research questions and problems in the field.

Understanding the brain and its diseases are among the most exciting research areas of the 21st century. The brain is the most critical and mysterious organ, and is what makes us human. Brain disorders are a result of a complex interplay of genetic and environmental factors with often long-term burdens to patients, their relatives and society. Due to the demographic development in coming years the topic is highly important and relevant for health and consequently funding is among the priorities in many European countries². Research is the key to unravelling the complexity of the brain and nervous system and the only hope for finding therapies and cures. Research into disease-related neurosciences gains enormously from an interdisciplinary approach and it is nowadays unimaginable that important questions of brain functioning or

2 Nature, Vol 478, October 2011, p 15

progress on preventive, diagnostic and therapeutic measures could be achieved without combination of different methodology, skills and expertise. The successful translation of research results into clinical application or the development of drugs and other therapeutic or diagnostic products needs to be tackled in multidisciplinary collaboration which is even more successful when the best international research partners work together.

Immanent to the topics different research types from basic science through translational to clinical research may serve best. However, some funding bodies focus on basic research while others prefer clinical research. Thus, together with foresight activities for relevant thematic specification of planned JTCs the research types must be individually considered.

This is why, as many other **ERA-NETs**, **NEURON** follows the 'variable geometry' and 'virtual common pot' schemes. Variable geometry means that for each planned call every partner may decide whether to participate or not. Taking into account national policies and – recently more sparse – available resources, there is no obligation to contribute to any JTC. 'Virtual common pot' reflects for an actual JTC the financial contribution a funding body can manage. Both parameters are for every planned call newly negotiated among the partners. Following a 'peer-review' scientific assessment procedure,

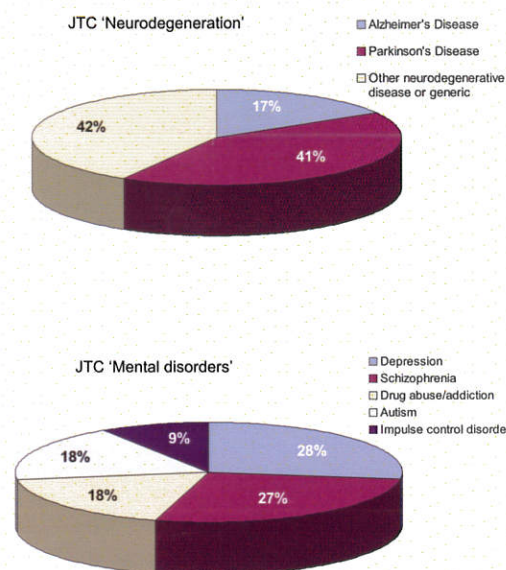
each **NEURON** partner provides the necessary funds for the successful researchers from their own country. JTC management, that is the timely fine-tuned publication of the call text in all partner countries with individualized regulations where appropriate, and the **NEURON** webpage, the consultation of (national) proponents, the conduction of the – two step – peer review by a board of international experts, and the panel meeting organisation are carried out by a Call Secretariat, a rotating task that also serves as focal point for all relevant communication.

The provision of a regular integrated funding opportunity to the science community working on developmental, neurological and psychiatric alterations of the nervous system has revealed an amazing number of positive results. The **NEURON** JTCs for proposals attracted increasingly high numbers of applications. Since 2008 in four different JTCs 43 research consortia have been funded, comprising about 180 research groups. Only excellent projects are funded, as is demonstrated by the funding rate of between 10 and 20%, more than 100 research publications from the funded projects so far, many of them in highest impact journals. There is, therefore, a large need for transnational projects as can be funded in the framework of the **ERA-NET NEURON**.

Research results very rarely translate into immediate cure or even improved treatment for a disease. However, in

the long run, funding of successful research projects by **NEURON** will help the patients and their carers and families whose quality of life is so heavily impaired by the many disorders of the brain. Research is necessary and greater scientific effort. International collaborations between research teams through direct support to transnational projects are facilitated by the **NEURON** JTCs. For each call the **NEURON** partners do not follow a beaten path but set out for a new round of advanced Joint Transnational Call Origami.

Figure 1. Thematic distribution of funded projects in two **NEURON** JTCs



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