



# Federation of European Biochemical Societies



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FROM THE SECRETARY GENERAL

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Professor J. Duszynski  
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Dear Professor Duszynski,

Referring to the visit to your Institute by the FEBS Evaluation Panel, we are very pleased to send you enclosed the report of the Panel.

I thank you again for your warm hospitality and the friendly and well-organised sessions in Warsaw.

Best wishes,

Julio E. Celis, Professor  
Secretary General

Encl.





**Report of the FEBS evaluation panel visit  
to the Nencki Institute of Experimental Biology,**

**Polish Academy of Sciences**

**Warsaw, September 23-26, 2003**

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## **Introduction**

The members of the evaluation panel received extensive electronic documentation describing the Institute organisation and scientific activities prior to the visit. The panel visited the Nencki Institute for a whole day on September 25<sup>th</sup>.

Following a general introduction by the director of the Institute, Prof. Jerzi Duszynski, the panel listened to brief presentations by the heads of the different departments and by young scientists representing these departments. Panel members also had constructive discussions with PhD students and postdoctoral fellows. This was followed by a session with the board of directors and representatives of the scientific council. Finally, the panel had a closed session to exchange their views concerning the day's events. The visit ended with a social dinner together with the senior scientists.

On Friday the 26, the panel met with the director and senior members of the Institute to inform them of the outcome of the evaluation. The Chairman of the Panel, Prof. Moshe Yaniv, started by congratulating the director for having taken the initiative to solicit the visit, and for the warm reception the panel committee received in Warsaw.

The panel congratulates the director and the staff for their efforts in achieving a very high standard of science. The panel members were likewise impressed by the written report, by the details provided on infrastructure and by the openness of the staff, students and postdoctoral fellows during discussions. The director and the management are commended for their efforts to create good working conditions conducive to the promotion of excellent science. The evaluation panel also congratulates the Institute for setting up numerous international collaborations, and for success in securing national and international funds, including EU funds, Wellcome Trust etc and not least for obtaining the recognition by the EU as a centre of excellence.

Both, the congenial atmosphere in the Institute and the friendly working environment impressed the panel. They were also amazed by the students' professionalism, capacity to communicate, determination and proficiency in English.

The panel is unable to make a detailed appraisal of the different research groups on the basis of such a short visit. They were impressed, however, by the Institute efforts to follow modern trends in biological research.

The department of Cell Biology excels in the study of ion channels and receptors in bacteria, unicellular or multicellular organisms. Signalling pathways downstream of receptors and their implication in biological response are also studied. The studies on Paramecium will certainly profit from the newly available data on the sequence of the genome of this organism.

The Department of Cellular Biochemistry studies the regulation of cell fate under normal or stress conditions. Major achievements involve understanding of pathways that lead to cell apoptosis or survival and the role of mitochondria and calcium homeostasis. The links between cell receptors, signal transduction pathways and nuclear transcription factors in these processes and cell fate should open new perspectives for understanding cell fate decisions.

The groups working in the Department of Muscle Biochemistry on muscle, the cytoskeleton and motor proteins have a distinguished track record of publications over many years and continue to contribute to topical themes.

Neuroscience forms a strong component of the Nencki institute's research portfolio. The research themes are grouped within the Department of Molecular and Cellular Neurobiology and the Department of Neurophysiology. The research benefits from several international collaborations. The department's classic strengths in behavioural research on rats are being exploited by developing transgenic rats as a model system in a new facility. The research topics being pursued are often timely and of international interest. These include studies on the role of zinc in plasticity, LTP, neurotrophin receptors as well as the use of viral constructs to introduce useful transgenes. Neurophysiology also includes classic strengths in systems level research. The panel perceived an impressive desire to achieve as much as possible in very competitive areas of the Neurosciences.

The scientists we talked to were remarkably well informed, and what we heard certainly hold promises for the future. The openness, the self-criticism, the intense desire to "do more and know better" are strong indications that with better funding and increasing links with Western Europe, the Nencki Institute has a very bright future. Most important, the impression of all members of the panel was that the students and young post-docs are remarkably motivated and determined.

## **The future**

In the very near future, Poland will integrate into the European Community. In parallel, Poland will become an active player in the European Research Area. These steps constitute both an opportunity and a challenge for Polish science. The Barcelona agreement should

lead to increased national and European funding for basic research and development. To face this exciting period as well as opportunities it may provide, we believe that some major steps should be taken both by the Nencki Institute and the Polish science policy makers to ensure that Polish science benefits from these developments.

### **Institutes future science vision**

- The Nencki Institute should make an effort to concentrate and focus its research on a limited number of model organisms. This will help to increase competitiveness in their respective fields of research.
- In this context, we encourage the Nencki Institute to focus on neurobiology and cell- and molecular biology. A continuum of experimental and conceptual approaches from the molecular to the system level has to be applied.
- Genetic approaches and studies of genetically tractable organisms would help bring the current studies to the forefront of international science. The feeling of several of the panel members was that the Institute should consider adding the use of the mouse as a model to study questions of interests using molecular biology techniques, including in particular the generation of *null* and conditional *null* mutations. This would appear feasible given the availability of substantial tissue culture and animal facilities. Models drive much of current neurobiology as they link molecular mechanisms with the all-important dimension of the organism. It is recommended that this particular model should be considered in addition to the plan to develop transgenic rats.
- The Nencki Institute researchers should increase their links with European and worldwide laboratories developing mouse models for neurobiological studies. This will capitalise on their expertise and permit to dissect molecular mechanisms in depth. The neuroscience departments may benefit in the future from greater cross collaboration. One of the aims should be to increase the number of grants held across the faculty so that all faculty members have grant income. Another aim that would help international exposure would be to publish in international journals rather than in-house journals.
- Generally, an effort should be made to formulate biological concepts and to put the technology oriented research into a biological context.
- The Nencki Institute scientific staff should take advantage of their expertise to establish better links with clinicians.

## **Institute Governance**

- The current scientific council is too large to make decisions. Instead the Institute should create a more compact forum that includes the best scientists of the institution. This forum should make important scientific decisions, discuss strategic issues and create a vision for the Institute.
- The panel recommends that the Nencki Institute should install a permanent Scientific Advisory Board (SAB) composed exclusively of foreign scientists that excel in science. The SAB should meet once a year to evaluate the scientific activities, organisational issues, recruitments, as well as promotions at the senior scientist levels etc. Its activities should be complemented by thematic 4-year reviews of research activities by ad hoc site visits of specialist review panels.
- The Nencki Institute has the ambition to reach the forefront of European science. This can be achieved by focusing on excellence in recruitment and promotion.
- The panel found that the past system of recruitment favoured inbreeding. This has restricted the flexibility to initiate new research directions and bottom up innovation.
- All open positions should be advertised and a major effort should be made to recruit from outside.
- Group leader positions should be created to allow the recruitment of young, independent group leaders, on a competitive basis.
- An effort should be made to increase the interactions between groups as well as between institutes. Also, efforts should be made to share equipment and increase collaborative research.
- Regular seminars by speakers from Europe and elsewhere should be organised to expose students and scientists to major developments in world science, including fields that are not a major concern of the Nencki Institute.
- The continued efforts to expose students to foreign laboratories were greatly appreciated and should be pursued in the future.

## **Academy and government science policy**

- Alignment with Western European institutions in terms of infrastructure and research potential will require increased national funding for science and technology. Polish science cannot rely predominantly on an increase in external funding.

- Continued efforts by EU and other organisations will be required to help Polish science close the gap with Western Europe. The Institute should be given assistance to achieve these goals.
- Mobility of scientists should be favoured inside Poland by changing the financial conditions of the scientific community. Incentives should be created to promote mobility within the country.
- A Young Investigators Programme (YIP) should be initiated for scientists under 40, along the line of programmes existing in other European countries.
- A framework to cultivate the creation of biotech start-ups should be established. Such a framework should help create employment for PhD students.
- Participation of excellent Polish scientists in the decision process of EU and other European instances should be secured.
- Well paid tenure track, 5 years positions should be created for talented scientists returning from postdoctoral training.



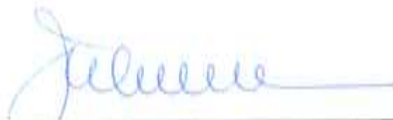
## The Members of the Evaluation Panel



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**Yves-Alain Barde**

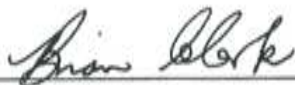
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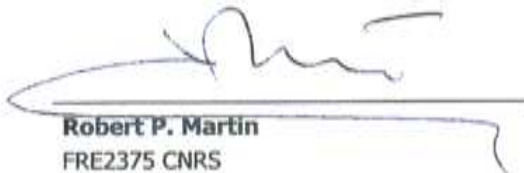
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\*A brief CV of the panel members is joined in the enclosed annex.

## **Annex**

### ***Brief Curriculum Vitae of panel members***

#### **Yves-Alain Barde**

Yves-Alain Barde is Professor of Neurobiology at the Biocenter of the University in Basel. He was previously Director of the Max-Planck Institute of Neurobiology in Martinsried (Germany) and of the Friedrich Miescher Institute in Basel. He is a member of EMBO and served on the Course and Workshop Committee of EMBO. He was Chairman of this year's Gordon Conference on "Neurotrophic Factors" and is Associate Editor or on the Editorial Board of several scientific journals. He was awarded the Ameritec Award, the IPSEN Award and the DANA Foundation award.

#### **Julio E. Celis**

Julio E. Celis is currently scientific director of the Institute of Cancer Biology of the Danish Cancer Society. Prof. Celis main areas of expertise include translational research in bladder and breast cancer. He has also been very active in the development of the field of proteomics, in particular its clinical applications. Prof. Celis is currently President of the European Molecular Biology Conference (EMBC), the intergovernmental organisation that funds the activities of EMBO, and is Secretary General of the Federation of European Biochemical Societies (FEBS). He is also President of the European life Sciences Forum and has been chairman of the Council of the European Molecular Biology Laboratory (EMBL).

#### **Brian F.C. Clark**

Brian Clark is Professor of Biostructural Chemistry at the University of Aarhus in Denmark. The department, which he founded in 1974, merged into the new Department of Molecular Biology in 1996. He was on the scientific staff of the British Medical Research Council Laboratory of Molecular Biology from 1964-74 working in the Division of Molecular Genetics coheaded by Francis Crick and Sydney Brenner.

His expertise involved decoding of the initiation of protein synthesis and the structural elucidation of transfer RNA. His current research interests centre on relation structure and function and identifying functional protein in functional genomics. He also advises on protein engineering and molecular gerontology. His scientific contribution comprises more than 200 articles. He is presently Vice-Chairman of the European Molecular Biology Organisation Council (EMBO), member of the BankInvest advisory board, past chairman of the Federation of European Biochemical Societies (FEBS), past President of the International Union of Biochemistry and Molecular Biology (IUBMB) and Chairman of TGIR (Task Group on International Relations) of the European Federation of Biotechnology (EFB).

### **Kevin Fox**

Kevin Fox is a professor at Cardiff University and Head of Neuroscience. He currently chairs the Medical research Council's co-operative on plasticity learning and memory at Cardiff and is deputy director of research in Biosciences. His publications on the molecular basis of plasticity include papers in Science, Nature and Nature Neuroscience. He is a member of the British Physiological Society and the American Society for Neuroscience. He is or recently has been a member of the MRC advisory board, The MRC career establishment grant panel and the advisory group on the National Institute of Medical Research.

### **Carl-Henrik Heldin**

Carl-Henrik Heldin is since 1986 the director of the Uppsala Branch of the Ludwig Institute for Cancer Research and since 1992 a professor in molecular cell biology at Uppsala University. He has published 310 research articles and 160 reviews. C-H Heldin is a member of EMBO, Academia Europaea and The Swedish Royal Academy of Science. He is a senior editor of Cancer Research and an associate editor of several other journals. He has also served, and is serving, on many grant committees and on several advisory boards for companies and institutes, including present chairmanship for the scientific advisory committee of EMBL.

### **Kjeld A. Marcker**

Kjeld Marcker is professor at the Department of Molecular Biology, University of Århus Denmark. He is author and coauthor of about 100 publications in major scientific journals. He is a member of EMBO. He served on the EMBO council in three 4-year periods. He is member of the Royal Danish Academy of Sciences and Letters, the Danish Academy of Technical Sciences and Academia Europaea. Kjeld Marcker was member of the Danish Natural Science Council 1986-1994. In this capacity he played a leading role in the implementation of the government's national biotechnology programmes. He has also served in several EU committees involved with the various EU biotechnology programmes. Kjeld Marcker is the recipient of the NOVO Medical Prize and Anders Jahres Medical Prize.

### **Robert Martin**

Robert Martin is a Director of Research in CNRS. He is currently directing the CNRS Unit "Yeast Models of Human Pathologies" with groups working on regulation of the actin cytoskeleton, intracellular trafficking, and mitochondrial biogenesis & diseases, at the University Louis Pasteur of Strasbourg, France. Robert Martin is an author or co-author of around 100 publications in major scientific journals. He was awarded by the Bronze Medal of the CNRS.

### **J. Victor Small**

Vic Small is Head of the department of Cell Biology of the Institute of Molecular Biology of the Austrian Academy of Sciences. He is author or coauthor of around 200 scientific publications in major scientific journals. He is an elected member of EMBO and has served on various advisory boards and committees (DFG, FEBS advanced courses committee, Fellowship committee of the Austrian Academy of Sciences) and has regularly organised

international meetings and workshops (EMBO, FEBS, Jacques Monod Conferences) focusing on the cytoskeleton.

**Moshe Yaniv**

Moshe Yaniv is a professor at the Pasteur Institute in Paris and Director of Research in the CNRS. He currently directs the Unit on Gene Expression and Disease. He has been the chairman of the Department of Molecular Biology (1986-1988) and Biotechnology (1992-1994) in the Pasteur Institute. He is author or co-author of close to 300 publications in major scientific journals. Moshe Yaniv is a member of EMBO (Vice Chairman on the Council 1992-1995, Chairman 1996), French Academy of Sciences, the American Academy of Arts and Sciences, Academia Europaea, HUGO etc. He has served as the chairman of the Scientific Council of the Pasteur Institute (1999-2000) and is a past (or present) member of a number of granting or scientific advisory boards (EMBO fund committee, HFSP fellowship committee, Wellcome Trust International Interest Group, DFG, RIKEN-SAB, FMI-SAB etc). He is Chevalier dans l'Ordre de la Légion d'Honneur.

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