

To: Commissioner Ph. Busquin
European Commission
Office SDME 5/62
B-1049 Brussels

Zurich, 2 December 2003.

Dear Commissioner, cher M. Busquin,

Following the visit undertaken by members of the EURAB Bureau to Washington, D.C. in October 2003, we would like to share our impressions with you and come forth with suggestions that might prove useful for implementing ERA.

Our visit was initiated by Mr. Achilleas Mitsos who invited us to follow up his previous contacts and to engage in an exchange of views with high level scientific advisory bodies and federal agencies in the Washington, D.C. In preparation for our visit we drew up a list of questions which were sent in advance to the persons who had agreed to see us, indicating the main interests of our visit. The EU Delegation in Washington, D.C., in particular Ms. Mary Kavanagh, provided us with excellent logistic support and helped to prepare our visit in an exemplary way. The programme of our visit and the list of EURAB participants is attached for your information. Copies of the material we have received for our American counterparts are available with the Commission EURAB Secretariat.

1. One overriding impression we received is the flexibility of approaching research goals and the concomitant importance attached to management. Given the overall mission-orientation of the federal R&D system, efficiency manifests itself in how the goals are reached through an impressive flexibility. Since the mission is expressed in very general terms, this allows (and invites) that basic research is conducted problematically alongside research cooperation with industry.

The contrast to our European ways is striking: we seem to put all of our imagination into inventing rules for management. They suppress all initiatives that call for management fitting the objectives and not the reverse. We also cling in Europe to the in many practical respects obsolete distinction between basic and applied research. We should not be surprised to find that the general climate for university-industry cooperation is much more favourable in the US than in Europe, where research is still seen as belonging into two different boxes.

A stronger emphasis on priority setting, which presupposes clarity of goals and objectives, is warranted on European level. This should be accompanied by greater emphasis on management skills, including the recruitment of good programme managers, and coupling their enhanced responsibility with giving them greater flexibility in research management.

The advantage of a broader mission-orientation which allows both basic and strategic research to flourish together should be explored. The general conditions for university- industry cooperation needs to be improved.

2. Despite the overall mission-orientation, there exists a great diversity of mission-oriented agencies that fund and perform research and their respective 'agency cultures'. This

diversity translates also into a diversity of management styles and mechanisms. Our impression is that such diversity and differentiation is good for the scientific community who have learned which doors to knock on, depending on the objectives and volume of their proposals. By contrast, Europe faces the problem of fragmentation, rather than productive diversity and differentiation.

In order to move from fragmentation with its frequent insufficiencies and imbalances towards a more healthy system of diversity and competition, goals and differences in management style must be clearly spelled out and communicated. The scientific community must move closer towards embracing competition in research funding.

3. Shortly before our visit NIH has announced the results of its new 'Road Map'. This is an impressive achievement, both in the way it had been set up by drawing into the consultation process an excellent mixture of both 'internal' and 'external' voices, visions and expertise (involving 300 representatives of the US biomedical leaders from academia, government and the private sector). Again, this was accomplished by giving the persons in charge of managing the process a lot of freedom, while keeping the objective – to define a compelling, limited set of priorities that can be acted on and are essential to accelerate progress across the spectrum of the institute missions – in clear sight.

Both the process of setting compelling, but limited priorities which must be addressed by the agency as a whole and the results obtained deserve further detailed study in view of their transferability to other fields and different forms of organisation.

4. We were greatly impressed by the way how the famous DARPA model has been transferred and implemented inside the science and technology activities of the newly founded Department of Homeland Security (HSARPA). The guiding principle of utmost flexibility in management with firm and clear priorities extends across a large and varied spectrum-ranging from single individuals as inventors, to setting up a variety of collaborations across federal, university and private labs, founding or finding small firms to come up with a product to having the federal government develop a prototype. One particular strength of the DARPA model is the coupling of strategic research to basic research, achieved through highly ambitious projects.

We would like to suggest that the DARPA model be explored seriously as a possible mechanism to fund research in Europe.

5. We were also positively impressed by the skilled way in which initiatives are proposed and acted upon by US policy-makers. This may be expressed by saying that there seems to exist an enormous amount of determination and self-confidence. This contrasts unfavourably with the often heard lament of 'Europe lagging behind'. Closely related to this self-confidence and determination is a strong belief that leadership matters. It is firmly embedded in the system.

It is important not to confuse rhetoric and facts. Nevertheless, a sense of greater self-confidence and cautious optimism is known to favour better performance. This applies also to research organisations and firms. We suggest that efforts should be undertaken to highlight greater awareness of Europe's achievements (and not only its weaknesses) and to stimulate stronger identification with European objectives and goals in science, technology and culture. Care must be taken, and mechanisms put into place, to cultivate the idea of leadership on all levels of organization.

6. Excellence prevails in all funding activities. This means also that excellence is not a unitary or abstract concept, but is defined in accordance with objectives and differences in fields of R&D activities.

If and when excellence in research through competition (e.g. setting up an ERC for basic research) becomes a political reality, this is a lesson to be heard. We recommend to study more closely the

different mechanisms through which excellence is obtained in different funding agencies (including the private sector) and in different fields of research.

7. In general, we found an openness for transatlantic research collaboration, albeit with a careful drawing of lines. Such collaboration is wanted, but mainly in fields with no competitive spin-offs or wherever there is no promise of (short- or medium-term) wealth creation.

We believe that the reluctance to bring potential competition on board should be taken into account when proposing such collaboration. On the other hand, there is much to be gained from transatlantic cooperation in large international programmes or even projects if the terms of working together are carefully negotiated.

8. We raised the question how the tightened security regulations affect student enrolment from abroad. Although there is concern (more on the side of universities than on the side of the administration), it is too early to say how future students who have not yet enrolled will be affected. Our overall impression however was that confidence in the US remaining the most attractive place to study abroad prevails.

It would be an illusion to believe that foreign students who are currently deterred from studying in the US would flock to Europe en masse. Other means must be taken to increase the attractiveness of studying in Europe. A stronger and concerted effort to internationalize universities in Europe is needed.

9. We noticed a growing concern among universities that the increased focus on IPR/patents may limit the universities' capability of using patented research tools (research exemption). We also received clear warnings that setting up university IPR/transfer offices are likely to succeed only if a number of stringent requirements are met.

We advise further study of these issues and diffusion of the results to universities and the private sector in Europe.

During the meeting with Dr. Marburger, Chief Scientific Adviser to the President, we extended an invitation to him to visit Brussels and speak before the EURAB Plenary Meeting on June 15th. This invitation, if the date is convenient also for other visits, would need to be followed up.

Cher M. Busqin, this short summary of our impressions, personal as they necessarily are, and of our further suggestions for action in Europe, cannot capture the richness of information we obtained during our two-day visit. Nevertheless, we hope that they convey the main thrust of what can be learned from our US colleagues and counterparts in science policy – not in order to be imitated, but in allowing Europe to become more aware of its strengths. These include Europe's diversity which needs to be harnessed to clear objectives – and then followed up with both, determination and flexibility.

Professor Helga Nowotny

Annexes: (1) agenda of the visit to Washington D.C.
(2) list of EURAB Bureau participants

The information distributed by the US hosts are available in the office of M. Zanchi (SDME 6/71), secretariat of EURAB.

Cc: A Mitsos (Director-General DG Research),
A. Damiani, M. Kavanagh (EU Delegation in Washington D.C.)