

**EMBO review of the
Centro Nacional de Biotecnología, Madrid, Spain**

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EXECUTIVE SUMMARY

The EMBO panel members were extremely impressed by the excellence of research conducted in the CNB. They consider that the performance of the different departments place them in the forefront of European and world science. Spanish science and CSIC should be proud of building such an excellent centre for research. The previous and current directors, the group leaders and the staff should be congratulated for their achievements and success. These are even more merited since the institutional support in budget and staff were considered as sub-optimal. The different groups should be congratulated for securing national, European and international funding to support their research.

The panel considers that the five research departments in the Centre: Structure and Bioinformatics, Molecular and Cellular Biology, Microbial Biotechnology, Plant Biotechnology and Immunology-Oncology are conducting excellent research on a broad spectra of subjects in life sciences. It believes that the research done in CNB has a strong link to biotechnology even though it does not involve product driven application in most of the cases. Studies in Virology, Microbiology, Plant Sciences and Immuno-Oncology have many potential applications in human and animal health, in agriculture and have implications in ecology and environmental protection. Research in Structural Biology and Bioinformatics also can give rise to applications as demonstrated in the report. The panel believes that the current research themes in the five departments should be further supported to build even more strength and attractiveness. Incursion in new areas like System Biology, Epigenetics and Stem Cells should be facilitated by the creation of well-funded emerging groups.

The panel believes that interdepartmental collaborations should be reinforced by following bottom up initiatives to create non-permanent frameworks for exchange of



knowledge and collaborations in fields like host-pathogen interactions, Systems Biology etc.

To bring the CNB to even higher summits, the CSIC and the Spanish government should increase the support to the Centre with core funding and positions. Efforts should be made to decrease bureaucracy at all steps, not least to facilitate the attraction for non-Spanish Ph.D. students and scientists to join the CNB. Finally, a greater effort should be made to reinforce the participation of the different constituencies of the Centre in the decision-making processes.



LIST OF ACTIONS

- Increase in stable financial support for the CNB by CSIC to assure continuity and increased competitiveness.
- Increase in the number of permanent positions for scientists and technical staff to ensure continuity and excellence.
- Make provisions for potential unfavourable external funding developments.
- Decrease the burden of bureaucracy and reduce the time required by group leaders to deal with administrative issues.
- Improve procedures for patenting and make an effort to export applied research to start ups.
- Contribute to the purchase of up to date equipment for research in Structural Biology, imaging and proteomics.
- Create start up packages including salary that will facilitate the recruitment of excellent young group leaders to build the future.
- Establish a clearer career scheme for scientists at the senior postdoctoral level.
- Create a Ph.D. programme to improve training at this level and enhance interactions between departments.
- Use a bottom up approach to establish light vertical programmes among the different departments to increase interactions and collaborations within the CNB.



- Reinforce Structural Biology by the recruitment of a second X-ray group.
- Reinforce research in Virology by recruitment of young group leaders in disciplines at the frontiers of Virology-Cell Biology and Immunology.
- Recruit emerging groups in the fields of Systems Biology, Epigenetics, Stem Cells etc, to build further strength in these promising areas.
- Establish clearer plans for the occupation of the new building.
- Consolidate and improve communications between the Director's Office and the different staff constituencies of the CNB.
- Reactivate the Scientific Advisory Board and use it to provide ongoing advice on future development of the CNB, promotions, etc.
- Promote scientists mentioned in the individual reports to the status of group leaders / senior scientists.
- Expedite specific recommendations for group leaders and departments that are mentioned in the individual reports.



COMPOSITION OF REVIEW PANEL

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