

REPORT OF THE EXPERT COMMITTEE APPOINTED BY THE
UGC TO EXAMINE THE PROPOSAL OF ~~JAWAHARLAL~~
~~NEHRU CENTRE FOR ADVANCED SCIENTIFIC RESEARCH,~~
BANGALORE, FOR GRANT OF DEEMED UNIVERSITY
STATUS UNDER SECTION 3 OF THE UGC ACT, 1956.

The University Grants Commission appointed an Expert Committee with the following members to examine the proposal of Jawaharlal Nehru Centre For Advanced Scientific Research, Bangalore, for grant of Deemed University status under Section 3 of the UGC Act, 1956.

Prof. S.S. Jha ... *Convener*
Director
Tata Institute of Fundamental Research
Mumbai

Prof. P. Rama Rao
Vice-Chancellor
University of Hyderabad
Hyderabad

Prof. K.N. Pathak
Vice-Chancellor
Panjab University
Chandigarh

Prof. S.K. Basu
Director
National Institute of Immunology
New Delhi

Prof. Seyed E. Hasnain
Director
Centre for DNA Finger Printing and Diagnostic
Hyderabad

Prof. O.N. Srivastava
Department of Physics
Banaras Hindu University
Varanasi



Prof. A. Chakravorty
Department of Inorganic Chemistry,
Indian Association for the Cultivation of Science
Kolkata

Prof. J.C. Ahluwalia
Former Professor of Chemistry
Indian Institute of Technology
New Delhi

Mr. Gurcharan Singh
Joint Secretary
University Grants Commission
New Delhi

... *Member Secretary*

The Committee visited the Jawaharlal Nehru Centre for Advanced Scientific Research on 6-7 February 2002. The Committee members discussed and developed a common approach to the relevant issues for considering the Centre to be the Deemed University. The Member Secretary of the Committee, apprised the members of the details of the proposal and related matters. A brief note on the activities of the Centre is annexed (APPENDIX I).

The Committee members had detailed discussions with the President, the faculty members and the students.

The Committee went round the campus of the Centre which included visits to the various Units, Laboratories, Library, Computer Centre, Students Hostel, Staff Quarters, Guest Houses, etc.

The Committee makes the following observations and recommendations:-

OBSERVATIONS

1. The Jawaharlal Nehru Centre for Advanced Scientific Research – JNC for short - is one of the youngest in the series of autonomous institutions set up by the Departments of the Ministry of Science and Technology. Established in 1989 to commemorate the name of Pandit Nehru and inspired by his faith in science - "I too have worshipped at the shrine of science" – JNC from its very inception has acquired a unique vision and adopted an all-together innovative approach in its functioning.
2. Beginning with a close academic link with the Indian Institute of Science (IISc), Bangalore, JNC has progressed in its work and in realisation of its defined objectives, with a rapidity and success which has not been commonly witnessed in recent times in our country. Among its innovative features, is the induction of honorary faculty drawn from IISc as well as from other leading teaching and research institutions in the country. With some of the most experienced and leading stalwarts thus getting involved along



with the first President Prof. C.N.R. Rao, FRS, JNC has developed its different Units dedicated to front-line and frontier research areas such as Chemistry and Physics of Materials, Fluid Dynamics, Geodynamics, Molecular Biology and Genetics, Chemical Biology, Evolutionary and Organismal Biology, Condensed Matter Theory and Theoretical Sciences. Once carefully selected faculty were recruited, the programmes of research flourished in these different Units. The Committee's interaction with the Leaders of the different Units and discussion separately with the members of the faculty as well as the visits to the Units, proved to be a most rewarding experience to each and every member of the Committee.

3. The dedication and commitment of everyone in the Centre, faculty, students and staff are exemplary. The research productivity of JNC today, if evaluated in terms of percapita output would be among the highest for scientific institutions in the country. The series of Discussion Meetings, Seminars, Special Lectures, Monographs and research publications in international highly rated journals and other products such as educational kits that have emerged from the Centre clearly bear the hallmark of one of India's exceptionally performing Scientific Centres.

4. The Centre currently runs regular Ph.D programmes in all its areas of research activity. In addition, it conducts Integrated Ph.D programmes in Chemical Sciences which includes an award of M.Sc degree on the way to a Ph.D degree. Recently, the Centre has introduced a special programme for M.Sc (by research) allowing students, with initial training in engineering or medicine, who are inclined to take up higher education in science as part of their training.

5. JNC entered into an arrangement with Manipal Academy of Higher Education (MAHE) as a result of which, while their work is carried out at JNC, the students are awarded the respective degrees by MAHE. The Centre is now poised to become its own degree awarding institution. This aspect became abundantly clear during the Committee's discussion with the faculty members who displayed an unusual urge to develop innovative approaches to teaching. During the Committee's separate meetings with the students, they voiced forcefully, while responding to the Committee queries, their genuine aspiration to acquire degrees awarded by JNC.

6. The Centre is an autonomous institution fully funded by the Department of Science and Technology, Government of India. The Committee members were informed by the President that the Centre will continue to receive financial support from the DST for its maintenance and development in the event of its being accorded the status of a Deemed University.

RECOMMENDATIONS

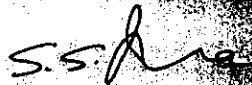
1. The Committee recommends that JNC should pursue its articulated plan to initiate an undergraduate programme leading to B.Sc degree. Such a programme could cover basic courses in science allowing contact with research at an early stage. Again, there should be flexibility to choose novel combinations of subjects, for example, Mathematics along with courses in Life Sciences, Physics and Chemistry along with Computer Science, Theoretical and Experimental Physics along with Evolutionary Biology, etc.



2. The Committee recommends the development of new areas at JNC, such as, Nanoscience both in Chemistry and Physics on the one hand and in Biology on the other in a way as to receive emphasis not only through research projects but also through well-designed courses for students. The Centre is also well equipped to carry out simulation work in a wide range of problems of futuristic significance such as in evolutionary and developmental biology relating to Life Sciences, environmental geology related to geosciences, dynamics of clouds related to climatology and insect flight which bears upon the future aircraft design. JNC has over 20 approved faculty positions still to be filled. Future faculty recruitment by the Centre may pay special attention to such new areas.
3. The Committee is unequivocal in its view that the broad and enterprising approach to science educational programmes would be possible with the participation of its gifted faculty which includes not only core faculty which is 26 in number but also with the active participation of faculty occupying special chairs. The faculty of JNC is further augmented by the association of honorary faculty, 51 in number and research fellows 6 in number.
4. The Centre like JNC, as it has shaped, fulfils a need for an educational, research and degree awarding institution to have flexibility in programmes so as to respond to changes in different academic fields. It is worthy of note that traditional boundaries in the technical areas are quickly dissolving and this needs to be reflected in the nature of teaching programmes and research streams such as those which JNC has already evolved with considerable success.
5. The Committee strongly recommends the award of the Deemed University status to Jawaharlal Nehru Centre for Advanced Scientific Research. This status, in the Committee's view, is bound to harness the capability of the Centre to introduce innovative new courses, encourage the students to take up cross disciplinary areas while ensuring that the basic foundations in science are solidly covered.



The Committee records its appreciation of the cooperation and help rendered by the management, faculty members and the non-teaching staff in carrying out its task.



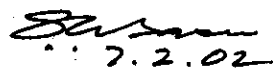
(Prof. S.S. Jha)
Convener



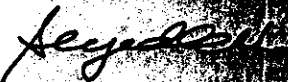
(Prof. P. Rama Rao)



(Prof. K.N. Pathak)



(Prof. S.K. Basu)



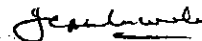
(Prof. Seyed E. Hassan)



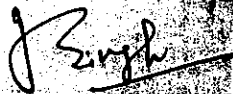
(Prof. O.N. Srivastava)



(Prof. A. Chakravorty)



(Prof. J.C. Ahluwalia)



(Gurcharan Singh)
Member Secretary

Bangalore
7th February 2002