Management
Director's Report
Review Report
Faculty Positions
Young Investigator Programme
Visiting Positions
Staff Positions
Honors
History
Visits
Trainees
Contact
Other Information

November 5, 2003

National Centre for Biological Sciences.

Tata Institute of Fundamental Research.

Review Committee Report.

The following is the complete and unedited text of the report submitted by the committee that reviewed NCBS from October 20-22, 2003 (Report received at NCBS on November 5, 2003)..

A committee comprising the following members was appointed by the NCBS Management Board to review the performance of all aspects of the Centre and to recommend future directions in a report to the Board Chairman, Professor Shobo Bhattacharya, Director, Tata Institute of Fundamental Research (TIFR).

1. Professor P. Balaram, Indian Institute of Science (Committee Chair)
2. Professor Utpal Banerjee, University of California, Los Angeles, USA
3. Professor Sankar Ghosh, Yale University, New Haven, USA
4. Professor Gautam Desiraju, University of Hyderabad, Hyderabad
5. Dr. J. Gowrishankar, Centre for DNA Fingerprinting and Diagnostics,Hyderabad
6. Dr. Shahid Jameel, International Centre for Genetic Engineering and Biotechnology, New Delhi (Committee Convenor).

The Committee met at NCBS on October 20-22, 2003. Prof. Desiraju was unable to attend.

The brief of the committee was to evaluate the progress made by NCBS and to provide constructive suggestions for changes to ensure future growth and continued prominence of this research institute at an international level. The committee attended research talks by all faculty and poster sessions by students and postdoctoral fellows. The Committee also met with the faculty, the students, the scientific management and the Head of Administration and Finance of NCBS, as well as the Director of TIFR to obtain a comprehensive feel for the research institute. The
Committee was also provided with short and thoughtfully written reports from the NCBS Director, Dean, Head of Academics and Head of Administration and Finance.

It was not the committee's charge to evaluate individual research, but the collective effect of such research on the growth of NCBS. As an overall summary, the committee is pleased to find that given its relatively young age, NCBS is functioning at a level comparable to biological science departments in major universities and research institutes around the world. The faculty is dedicated and excited by their research. The students are enthusiastic and intelligent. They were able to describe their research very effectively to us and discuss it meaningfully amongst
themselves. Similarly, the faculty presentations were clear, concise and reflected enthusiasm for their work. The recommendations of the committee are therefore only to convert an outstanding institute into a truly exceptional one. We hope that our recommendations, which can all be followed within the existing framework, will be adopted. As we hold no prejudice, it is the committee's wish that all of this report be made publicly available..

1. The biggest challenge faced by the institute is in the identification and hiring of new faculty. The general sense is that one new faculty hire per year is appropriate for the continued rejuvenation of the institute. There is also general agreement that the quality of the person hired is the primary criterion and should not be compromised at any cost. The old maxim of "hire people that you think are better than you" is the only way to keep NCBS going. The question is how one could achieve this, given the geographical realities. The fact remains that most new hires are made from a group of internationally trained Indian scientists. There needs to be a proactive network set in place to
advertise the merits of a NCBS position to the international research community at large. Simply advertising for positions in journals is not enough. There has to be a means to identify talented individuals early and provide them with the opportunity, through visits and contacts, to explore the NCBS environment. This process could start even before the individuals leave India and will be facilitated if there is a cooperative recruitment strategy worked out by the major research and training centers in the country.

2. The question of which field to emphasize in future hires comes up regularly. The general consensus if that while it is important to pay attention to existing strengths presented within the system, it is probably not practical to direct searches in a specific field. So, identification of the most talented individual should continue to be the goal with an eye towards opportunistic recruitment within an area of strength if such an individual were to be available.

3. While each member of the faculty would like to pursue his/her own research goals, the Institute as a whole will benefit from a limited number of research initiatives that enhance its international image. If the management wishes, a fund could be created to encourage existing faculty to come together and attract new hires that work on defined projects. The initiatives do not have to be "big" but have significant international impact. Thus, such broad descriptors as "nanoscience initiative" or "chemical biology" initiative should be avoided in favor of more focused goals. The exact nature of such initiatives has to come from within and not through the recommendation of a committee. But examples could include large-scale use of the local gene pool for pedigree analysis, genetic screens in model systems, a vigorous program in stem cell research or basic biology of tropical diseases. These and other such areas are unique niches available for a small window of time for NCBS to follow. No one member of the faculty can be asked to change his/her research program, but if the initiative is chosen carefully and funds are made available, this can lead to voluntary efforts by faculty towards such a common goal. The importance of increasing international visibility cannot be understated, particularly for a fledgling research institute such as NCBS.

4. Modern biology is guided by experimentation and through its interactions with the physical sciences on the one hand, and the medical and biotechnological fields on the other. The theoretical base and the interface between physics/chemistry is, as it should be, quite strong at NCBS. Future directions should be rooted in more experimental approaches and strengthening the interface with the biomedical sciences.

5. Although support for major equipment is important, particularly where such equipment is useful for multiple investigators, it is also important to recognize that for some kinds of research, increased support for consumables could substitute for equipment support and

this may encourage greater productivity.

6. The animal housing center needs to be expanded and supported more vigorously. Although, ultimately, it will be good to have transgenic facility on location. The immediate need is for a facility where animals are taken care of by professionals. This is particularly important for those participating in research that involves behavioral assays as the animals have to be kept in a reduced stress environment.

7. The level of interaction of the Institute research scientists with their counterparts in other prestigious research institutes in Bangalore seems adequate. Scientific interactions with other academic and research centres, in particular TIFR Mumbai should be strengthened.

8. A fellowship program for independent post-doctoral fellows who can be allowed to carry on autonomous research projects, in collaboration with regular faculty, will greatly improve the chances of new hires and also allow NCBS to seed other institutes in India with the kind of training that is available here. Such positions should strictly be for 5-7 years, at the end of which the individual is either hired as a regular faculty or encouraged to join another institution within the country. This process will allow NCBS to have broader impact on the development of Indian science.

9. There is a clear need for a reevaluation of the courses taught by the faculty. There is a need for a comprehensive curriculum that emphasizes the basics. This cannot be replaced with courses that are based in research. The Ph.D. pool is diverse as some are admitted after their M.Sc. while others after their B.Sc.

10. There is a need for a M.Sc. degree to be awarded midway through the Integrated Ph.D. student's tenure at NCBS to make them eligible for other fellowships, such as the CSIR/UGC NET.

11. The students are the backbone of this Institute. They have numerous small suggestions that need to be addressed in an internal forum. It will be valuable to have the students choose a few representatives that talk to the academic advisor about issues arising for them as a collective group. This committee was particularly sympathetic to their universal request for a gym (exercise) and sports (release of stress) facilities. Happy students are more productive and some of the faculty could also have use for such facilities.

12. The possibility of having one external member in the advisory committee for each student at NCBS should be explored.

13. Seminar programmes and workshops currently in place are excellent means for keeping in touch with the outside world. These should be encouraged and strengthened. However, for this purpose, there needs to be a new administrative hire who would ideally have a scientific background. This individual will arrange the meetings, workshops, liaison with visitors and also prepare annual reports and other items for NCBS publicity. This person can also function to strengthen the recruitment network. For maximum flexibility, such a person will be integrated into the existing administration. On the scientific front, the students requested that the themes of meetings and workshops be more diverse than in the past.

14. In our meeting with him, we were all incredibly impressed by the level of enthusiasm, knowledge and drive shown by Mr. Pradip Pyne.

Changes to administration will be quite effective under his able guidance. We recognize that NCBS is adopting innovative methods for administration, which if successful, may serve as a role model for other government-funded laboratories, and strongly encourage these attempts. One aspect that needs immediate attention is the time it takes within the NCBS system for a purchase order to be generated. Computerization and perhaps additional personnel or reorganization of effort could eliminate this difficulty.

15. At present, there appears to be some overlap between the set-ups at NCBS and TIFR, Mumbai for overseeing financial and administrative matters pertaining to NCBS. After discussing this issue at length with the Directors of TIFR and NCBS, we would like to recommend that NCBS be given full autonomy (and responsibility) for management of its administration and finances (including audit), under the supervision of its Management Board. The Financial Adviser, TIFR, or his/her nominee may be included as a member of the Management Board.

16. The committee thanks members of the NCBS community for their hospitality. We thank the TIFR Director for affording us this opportunity and for his attention to life sciences. His obvious interest was reflected by his presence at all the presentations. We also recognize Professor Obaid Siddiqi for his visionary role and Professor K. VijayRaghavan for his able leadership skills. We had a wonderful time participating in this review process.

Respectfully submitted by:

Sd/-	Sd/-	Sd/-	Sd/-	Sd/-
(Prof. P.Balaram)	(Prof. Utpal Banerjee)	(Prof.Sankar Ghosh)	(Dr. J.Gowrishankar)	(Dr. Shahid Jameel)
Chair				Convenor