

## Rank 3 - Rajiv Gandhi Center for Biotechnology, Thiruvananthapuram

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#### **A vibrant research hub**

*RGCB has gained recognition as an international hub for biotechnology as it provides the right combination of research and development. With a dedicated team of talented scientific and technical personnel, RGCB offers a vibrant research atmosphere*

In the year 1990, Rajiv Gandhi Center for Biotechnology (RGCB) stepped into the capital city of Kerala, Thiruvananthapuram, a famous tourist destination. The institute started amongst humble surroundings as a small charitable society called the Center for Development of Education, Science and Technology (C-DEST). In 1991, recognizing its potential, the C-DEST was made a grant-in-aid institute of the Government of Kerala and renamed as Rajiv Gandhi Center for development of Education, Science and Technology (RGC-DEST), becoming the country's first institute to be named after the former Prime Minister late Rajiv Gandhi. On April 18, 1994, the Government of Kerala took the landmark decision to restructure the institute into a comprehensive biotechnology center and thus was created the Rajiv Gandhi Center for Biotechnology (RGCB). The institute, an autonomous national institute of the Government of India, was then managed by the state government's committee for Science and Technology and Environment (STEC) and subsequently by the Kerala State Council for Science, Technology and Environment.

Under the consistent guidance of the founding director, Dr M Ramachandra Das and his successor Dr RV Thampan, RGCB started growing in stature, infrastructure and research output. Moving at a warp speed with a well-defined path, RGCB has geared-up to fulfill the task of contributing to make India a knowledge power in biotechnology. With a promise to reflect the future of Indian biotechnology, RGCB firmly pledges to fulfill its promise to the nation, which is 'delivery discovery for India'.

The uniqueness of the institute is its vibrant research atmosphere with talented scientific and technical personnel, who have the privilege to avail excellent infrastructure facilities. RGCB has efficient corporate culture in R&D administration, in obtaining

extramural funding and in project implementation.

RGCB pursues to be an international hub for biotechnology, providing the right combination of research and development. The institute is also a store-house of a large number of molecular biology and biotechnological research instruments.

RGCB's library is a repository of valuable collection of many sought-after international books and journals on life sciences. In January 2009, RGCB became the member of the Department of Biotechnology's Electronic Library Consortia (DeLCON). The institute has so far produced 39 doctoral thesis. RGCB has a full-time faculty strength of 26, with 21 of them having a PhD. The faculty on an average has 30 national publications and 1,902 international publications. The department has six biotech-related patents to its credit. The department runs PhD programs, post-doctoral, specialized training programs including short-term PG courses. It is the top ranked institute on the infrastructure score.

Some of the outstanding project or research works RGCB undertook in the recent years are on biomarkers for early detection of cancer, and development of specific targeted drug candidates for familial breast cancer, improvements in treatment by identifying primitive cancer cells during diagnosis and surgery, and screening of natural compounds for inhibiting hormones causing breast cancer.

### **“Biotechnology will soon influence our lives in a number of ways”**

— M Radhakrishna Pillai, director, RGCB

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#### **What are the major research activities that the center has introduced?**

RGCB has an excellent research ambience. Realizing that academic activity alone will not translate into biotechnology application, RGCB works with the industry from the beginning of an identified project instead of trying to find a partner longer way down or after having a product or process. We now have a joint technology development laboratory with the public sector, HLL Life Care, to develop point-of-care diagnostics for dengue fever. In August, 2009, RGCB will have another incubator to work on health and clinical informatics teaming with a software company. This sort of approach has made us understand biotechnology teaching and research in a different perspective allowing us to innovate much better.

#### **Over the years, what sort of changes have you seen in students?**

The outlook of students has changed in the last few years. PhD students now are much more picky and choosy about what they want. They come with definite ideas and expect much more out of an institute and the supervisor. Students are now conscious about publications and patents and have no hesitation in articulating these views.

#### **What are those changes that you brought to take the center to a higher level?**

We realized that to help students reach their goal, RGCB also has to adapt well. We have introduced mentoring committees for our PhD students. This committee with an external expert, two internal scientists and the thesis supervisor meets once every six months as part of the PhD program of a student. The committee provides advice and reviews the progress and coaxes the student into writing reports, publications and making effective presentations. The results have been very good. RGCB's PhD students win awards regularly at conferences and meetings, go for international meetings (sometimes students here travel more frequently to international meetings than the faculty). In short, along with the research atmosphere, (the labs are open 24 hours, all essential infrastructure is always accessible, the regular open presentations by PhD students before the whole institute and the on-campus accommodation provided to students) the professional nature of institute management has made RGCB a favored destination of students seeking higher standards in learning biotechnology

#### **Anything you want to say to the present generation that will inspire them to pursue career in biotechnology?**

Biotechnology will soon influence our lives in a number of ways including the way food is produced and processed, human illness is treated and the way fuel is produced. Biotechnology is therefore truly a transformative technology comparable to some of history's greatest events of creation including the invention of writing, the steam engine and electricity. Transformative technologies will always throw up challenges in governance and will need innovative thinking to frame questions and go about finding practical solutions.

Anjana Pradhan