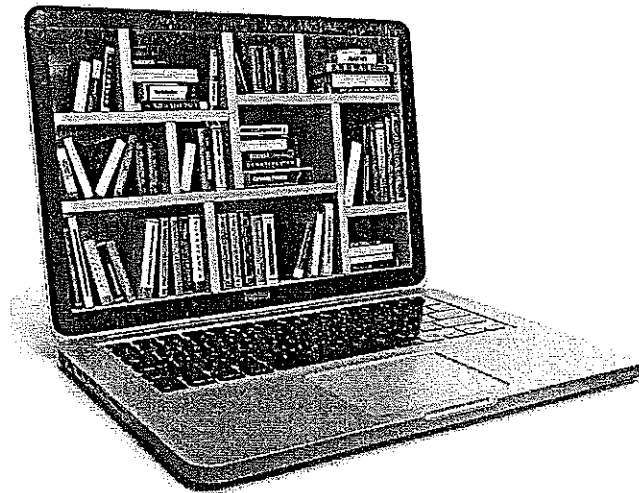




**JAIPURIA**  
INSTITUTE OF MANAGEMENT  
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# **LIBRARY TECHNOLOGIES, SERVICES & RESOURCES CURRENT GLOBAL TRENDS**



Editor  
Jitender Sharma

for  
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Jaipuria Institute of Management, Noida

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# Use of e-Resources of DeLCON Consortium: Its Impact on DBT Libraries in Delhi-NCR Region

D.D. Lal<sup>1</sup>

**Abstract**—The current developments in Information Technology (IT) changed the world scenario. The Libraries and Information Centres have adopted the new information technology much more than many other fields and most of them are currently using digital products and services. The Information Technology offering wonderful opportunities to provide solutions to some of the major challenges which libraries are facing. Online Publishing or e-publishing is an important media of the Information Technology. Now-a-days the majority of publishers are interested in publishing their documents in online format. Online journals are drawing reader attentions in today's digital environment. In this digital environment these e-journals open-up many thrilling opportunities and have already brought a revolutionary evolution in library philosophy. These are one of the main paths used by researchers for scholarly communication. The DeLCON consortium is an innovative scheme of the Department of Biotechnology (DBT), Government of India, implemented in India since the year 2009 to access scholarly scientific online journals in the DBT Institutions. During the Nodal Officers' Meeting of the DeLCON Consortium conducted last year at Trivendrum and the Nodal Officers and librarians of the DBT Institutions who are situated in Delhi-NCR opinions were sought regarding the impact of using e-resources offered through the DeLCON consortium. The paper highlights the impact of DeLCON Consortium on the DBT Institutions of the Delhi-NCR region.

**Keywords:** DeLCON Consortium, E-Resources, DBT Libraries

## INTRODUCTION

Knowledge and Information are an important national resource for developing countries such like India. It is tantamount with power. Sharing knowledge is essential for national development.<sup>1</sup> The marvelous information revolution and propagation have brought about extreme changes to the function and service in all types of libraries in India during the last two decades. Among sources of information, journals are considered to be a major source of communication. They are considered the notochord of any library's collection and have become crucial for research in any field. Without journals it is very problematic to ensure the development of any research in any discipline. The Libraries of the DBT Institutions in India are facing challenges due to crunch of budget, un-sufficient library staff, devaluation of Indian Currency, steep hike in conversion rates of foreign currencies, and boom in cost of publication. Due to these factors the DBT libraries are finding it difficult to subscribe to scholarly scientific journals and databases. Such a situation has adverse impact on the research and development programmes. Now-a-days it is impossible for individual

library to procure all the documents and subscribe to core journals which are in demand by the users. Realizing the requirement for scholarly scientific journals in teaching, learning and research the Department of Biotechnology (DBT) has launched 'DBT's Electronic Library consortium' in the year 2009, which is now popularly known as a National Consortium for Biotechnology i.e. 'DeLCON Consortium'. Under this DeLCON consortium, access is provided to 1171+ full text scholarly electronic journals from 21 publishers.

This DeLCON consortium provides current as well as archival access to core and peer-reviewed journals in different disciplines of life sciences. The aim of this DeLCON consortium is to provide the scholarly scientific literatures, papers, articles to the entire scientific communities through single point administration and subscription.

To access these DeLCON resources, the users of the member Institutions, do not require any Login ID or Password because the access is provided through Institutional IP addresses. The IP addresses should be authenticated by the DeLCON. With these fixtures & facilitates the academicians, faculties, scientists, researchers, students and other users are able to browse, download and print the relevant articles for their research purposes. At present, the following 7 DBT Institutions are situated in the Delhi-NCR Region:

<sup>1</sup>(DeLCON Coordinator & Administrator),  
Department of Biotechnology,  
Ministry of Science & Technology, Govt. of India  
National Brain Research Centre, Manesar,  
Gurgaon-122050, Haryana, India  
E-mail: [ddlal.delcon@nic.in](mailto:ddlal.delcon@nic.in)

1. Department of Biotechnology (DBT), Ministry of Science & Technology, Govt. of India, Delhi
2. National Institute of Immunology (NII), New Delhi
3. National Institute of Plant Genome Research (NIPGR), New Delhi
4. International Centre for Genetic Engineering & Biotechnology (ICGEB), New Delhi
5. National Brain Research Centre (NBRC), Manesar, Gurgaon, Haryana
6. Regional Centre for Biotechnology (RCB), Faridabad, Haryana
7. Translational Health Science and Technology Institute (THSTI), Faridabad, Haryana

## INTRODUCTION ABOUT DELCON CONSORTIUM

To meet the increasing R&D information needs of the DBT Institutes, the DBT's Electronic Library Consortium (DeLCON), a big National Project of the Department of Biotechnology (DBT) to bring qualitative transformation in its research institutions was launched in January 2009. It is a national creativity for providing access to scholarly electronic resources including full-text and bibliographic databases in all the life science subject disciplines to DBT organizations in the country to improve teaching, learning and research.

Access to all major e-resources was given to 10 DBT Institutions in the commencement of the year 2009, where the 5 DBT Institutions (NBRC, NII, NIPGR, ICGEB, DBT) are in the Delhi-NCR. It was prolonged to 17 more DBT Institutions in the 2<sup>nd</sup> phase in the year 2010 and another 7 members were included in the 3<sup>rd</sup> phase the year 2011. The DeLCON offers current as well as archival access to more than 1171 core and peer-reviewed journals in different disciplines of the Life Sciences from 21 publishers and some of aggregators.

The DeLCON Consortium offers integrated library services and enable other cooperative projects that yield outstanding quality and value to its members. The DeLCON consortium continuing to strive to bring together a partnership of DBT Institutional libraries of all types to enable patrons to access and gain high quality information resources they need to enhance and enrich their lives. The DeLCON consortium also

continuing to bring new technologies, new services, and new resources to its member libraries to enabling the communities that they serve to achieve their economic, educational, and cultural goals. The DeLCON patrons' demands for more efficient, easy to use resources and services. The DeLCON consortium experiments with new models of service and resources in response to that need and to keep pace with the ever changing technology in the library environment.

## THE WEBPAGE OF THE DBT'S ELECTRONIC LIBRARY CONSORTIUM (DELCON CONSORTIUM)



Fig. 1

The above image has been taken as screenshot of the DeLCON Consortium (Website page: <http://delcon.gov.in>). The website of the DeLCON Consortium is very-very impressive and attractive designed by the INFLIBNET Scientists and all the information about the DeLCON Consortium are reflected in the first page of the DeLCON.

## MAIN ADVANTAGES OF DELCON CONSORTIUM

Some of the important advantages of the DeLCON consortium are as follows:

1. Consortia-based subscription to electronic resources provides access to wider number of electronic resources at substantially lower cost;
2. Optimum utilization of funds
3. Facilities to build up digital libraries
4. Helpful to provide better library services like CAS and SDI
5. Cost Sharing for Technical and training support

6. Electronic Journals demand neither library space nor shelving costs nor can they be stolen from the library
7. The DeLCON consortium have been offered better terms of licenses for use, archival access and preservation of subscribed electronic resources, which would not have been possible for any single institution; and
8. Available 24 hours a day, 7 days a week i.e. called 24X7 access
9. Economy in maintaining

The DeLCON comprises the currently following 34 Member Institutions which the phase wise details are given below:

#### DELCON MEMBERS

- National Brain Research Centre (NBRC), Manesar
- Department of Biotechnology (DBT), New Delhi
- National Institute of Plant Genome Research (NIPGR)–New Delhi
- National Institute of Immunology (NII)–New Delhi
- National Centre for Cell Science (NCCS)–Pune
- Institute of Life Sciences (ILS)–Bhubaneswar
- Institute of Bioresources and Sustainable Development (ISBD)–Imphal
- Centre for DNA Fingerprinting and Diagnostics (CDFD)–Hyderabad
- Rajiv Gandhi Centre for Biotechnology (RGCB)–Thiruvananthapuram
- International Centre for Genetics and Engineering Biotechnology (ICGEB), New Delhi
- The Wellcome Trust-DBT India Alliance, Hyderabad (further excluded in the year 2011)
- Dibrugarh University (DU), Assam
- Assam University (AU), Silchar
- North Eastern Regional Institute of Science & Technology (NERIST), Arunachal Pradesh
- North East Institute of Science & Technology (NEIST), Assam
- Mizoram University (MizU), Mizoram
- D.M. College of Science (DMC), Manipur
- Sikkim University (SU), Gangtok
- College of Veterinary Science, Assam Agricultural University (CVSAAU), Guwahati
- St. Anthony's College (SAC), Meghalaya
- Biotechnology Industry Research Assistance Program (BIRAP), New Delhi
- Gauhati University (GU), Assam
- Manipur University (ManU), Imphal
- College of Veterinary Science & Animal Husbandry Central Agricultural University (CVSAHCAU), Mizoram
- Rajiv Gandhi University (RGU), Arunachal Pradesh
- Nagaland University (NU), Nagaland
- North-Eastern Hill University (NEHU), Shillong
- Indian Institute of Technology Guwahati (IITG), Guwahati, Assam
- National Agri-Food Biotechnology Institute (NABI), Mohali, Punjab
- National Institute of Biomedical Genomics (NIBHG), Kalyani, Kolkata
- Regional Centre for Biotechnology (RCB), Gurgaon
- Tezpur University (TU), Tezpur, Sonitpur, Assam
- Transnational Health Science & Technology, Institute, Gurgaon
- Sikkim State Council of Science and Technology (SSCST), Gangtok, Sikkim
- National Institute of Animal Biotechnology (NIAB), Hyderabad

In terms of number of users, the DBT's Electronic Library Consortium (DeLCON) is the largest Consortium in India constituted in the area of Biotechnology and life sciences with a vision and plan

to reach out to all DBT Institutions departments, Research Institutions, Universities, and their colleges affiliated to the DBT, over a period of time.

### COVERAGE OF DELCON CONSORTIUM

The DeLCON Consortium subscribes to e-resources covering all most important Life Science & Biotechnology subject discipline being taught in the DBT research Institutions, Universities & Colleges. It includes wide variety of materials e.g. e-journals, bibliographic databases, reviews published by scholarly societies, university presses, institutional and commercial publishers. The DeLCON Consortium subscribes to 1171 full-text e-resources and 01 bibliographic databases from 21 renowned foreign publishers and some of aggregators. The member institutions are provided differential access to these resources based on their needs and activity profile as per the recommendation of the National DeLCON Steering Committee.

The complete list of full-text resources (e-Journals) and bibliographic databases subscribed under the DeLCON Consortium is given below:

### LIST OF COVERED JOURNALS UNDER DELCON CONSORTIUM

Name of Publishers/ Journals, Hyperlink of the publishers & No. of Journals

- American Association for Advancement of Science (AAAS); <http://www.sciencemag.org>; (3 Journal)
- American Association for Cancer Research (AACR); <http://www.aacr.org>; (9 Journals)
- American Chemical Society (ACS); <http://pubs.acs.org>; (47 Journals)
- Annual Reviews (AR); <http://www.annualreviews.org>; (23 Journals)
- American Society for Biochemistry and Molecular Biology (ASBMB); <http://www.jbc.org>; (2 Journal)
- American Society For Microbiology (ASM); <http://www.asm.org>; (17 Journal)
- Cold Spring Harbor Laboratory Press (CSHL); <http://www.cshl.edu>; (4 Journals)
- Taylor & Francis (T&F); <http://www.informaworld.com>; (40 Journals)
- Lippincott William & Wilkins/ Wolter Kluwer/ OVID; <http://ovidsp.ovid.com>; (11 Journals)
- Mary ANN Liebert (MAL); <http://www.liebertonline.com>; (92 Journals)
- Nature Publications; <http://www.nature.com>; (36 Journals)
- Oxford University Press (OUP); <http://www.oxfordjournals.org>; (22 Journals)
- Springer India; <http://www.springerlink.com>; (339 Journals)
- Society for General Microbiology (SGM); <http://mic.sgmjournals.org>; (3 Journals)
- American Society for Hematology (ASH); <http://bloodjournals.hematologylibrary.org>; (1 Journal)
- Wiley-Blackwell; <http://www3.interscience.wiley.com/cgi-bin/home>; (84 Journals)
- Elsevier Science (Science Direct); <http://www.sciencedirect.com>; (432 Journals)
- American Society of Plant Biologist; <http://www.aspb.org>; (2 Journals)
- American Association of Immunologist; <http://www.aai.org>; (1 Journals)
- Scopus Database; <http://www.scopus.com>; (1 Database)
- The New England Journal of Medicine (NEJM); <http://www.nejm.org>; (1 Journal)
- Proceedings of National Academy of Sciences (PNAS); <http://www.pnas.org>; (1 Journal)

### AREA COVERAGE OF THE DELCON

The DeLCON Consortium cover-up all the disciplines and subjects coming under Life Sciences i.e. Biotechnology, Bioinformatics, Biochemistry, Biology, Chemical Biology, Sciences, Immunology, Neuroscience, Plant Genome, Plant Biology, Microbiology, Physiology, Psychology, Physiotherapy, Psychotherapy, Genome, Gene, Genetics, Mathematics, Physics, Chemistry, Radiology,



Medicines, Computational Biology, Cell Biology, Cell Sciences, Molecular Biology, Molecular and Cellular Biology, Computational Neuroscience, System Neuroscience etc.

### IMPACT OF DELCON CONSORTIUM ON DBT LIBRARIES IN DELHI-NCR REGION

#### IMPACT OF DELCON CONSORTIUM ON THE NATIONAL BRAIN RESEARCH CENTRE (NBRC), MANESAR

Prior to the DeLCON Consortium the NBRC was subscribing 311 online journals and approximately 77 print journals. The NBRC had taken the major task and responsibility to constitute the DeLCON consortium and with the hard efforts the DeLCON Consortium started functioning w.e.f. January 2009. After formation of the DeLCON Consortium the NBRC has discontinued maximum online journals & print journals as the NBRC is getting 1171 resources through DeLCON Consortium. Now, currently some major & prime journals are being subscribed with own Institutional Budget which were not covered under the DeLCON Consortium. Due to DeLCON Consortium the NBRC has saved own Institutional budgets. A wider range of major journals have been covered under DeLCON Consortium, which fulfill the requirements to the NBRC Scientists & researchers in their research areas. The DeLCON resources help to improve the growth of the NBRC in the terms of quality of research works as well as publications. It would not be possible for any single institution to negotiate better terms for subscription, archival access and preservation of licensed e-Resources, which the DeLCON Consortium currently providing with lower cost, suitable terms and a wider range of journals to the DBT Institutions.

#### Scientific Achievements at NBRC Due to DeLCON Consortium

The NBRC faculties & Scientists have published many papers and the publications increased every year, which are given below. The NBRC scientists have also won various National awards like Young Scientists awards, Shanti Swaroop Bhatnagar and DBT IYBA awards, to name a few.

The Year wise publication of NBRC is given below during the year 2009–2016:

Table 1: NBRC Publication during the Year 2009–2016

Year	Published Papers
2009	34
2010	47
2011	41
2012	47
2013	44
2014	38
2015	51
2016	69

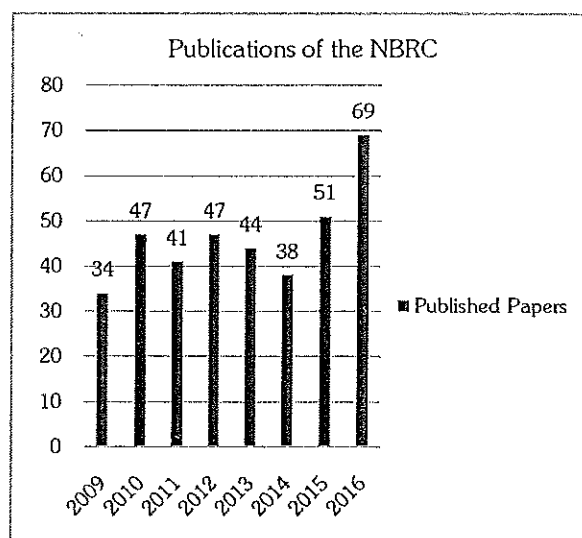


Fig. 2: A Graphical View of the NBRC Publication during the year 2009–2016

#### IMPACT OF DELCON CONSORTIUM AT INTERNATIONAL CENTRE FOR GENETICS ENGINEERING & BIOTECHNOLOGY (ICGEB), NEW DELHI

The DeLCON consortium membership came as a boon to the researchers at ICGEB just at the time when the institute was going through a financial crisis and was struggling for its existence. The scientists were able to get access to a more numbers and wider range of Journals subscribed by the consortium, at substantially lower cost. Moreover, the journals are now available round the clock. Moreover, due to shortage of manpower and space, the membership helped us by reducing the time and resources required to maintain the library. In a nutshell, despite hardships faced by the organization, the scientists were not handicapped by non-availability of journals—a fact which is also reflected by steady rate of publications by the ICGEB researchers in past few years. This is also evident by the usage statistics for ICGEB from the year 2012–2015 (Figure 1 and Figure 2). Both the overall usage as well as the per-publisher usage has shown a fairly active and growing usage at ICGEB.

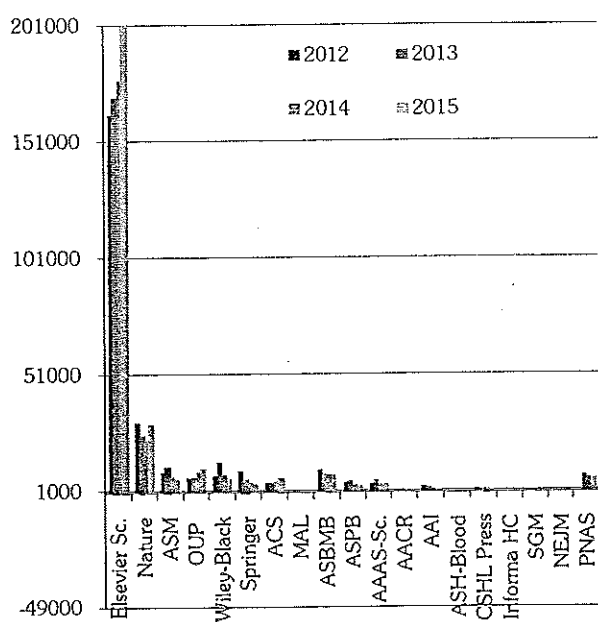


Fig. 3: ICGEB Usage for Each Publisher from 2012-2015

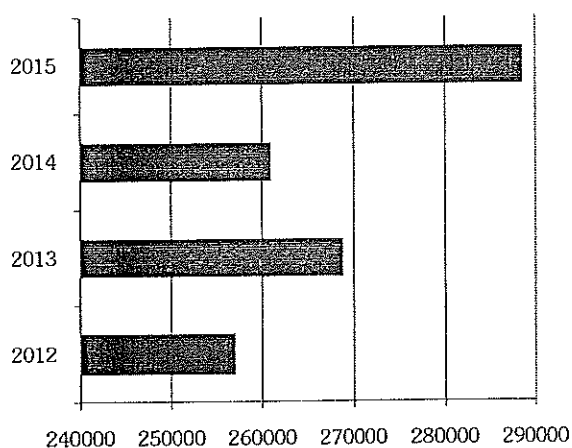


Fig. 4: Total ICGEB Usage 2012-2015

DeLCON resources provided at the DeLCON website gives a very user friendly and searchable e-catalogue of subscribed journals, which helps in searching full text journals of interest to the readers of the ICGEB.

DeLCON membership also helped ICGEB to get in touch with librarians and scientists of member institutions, which helped in getting access to more journals by making use of loan facility by the participating institutes.

DeLCON access also attracted students from neighboring institutes and Universities to visit ICGEB library, which is now equipped with PCs, which provide access to DeLCON, subscribed journals.

DeLCON membership also promoted readership amongst ICGEB researchers, which is evident by analyzing the ICGEB journal usage statistics over the past years which show that despite the small size of the organization, the usage has been quite high.

Being in Consortium, ICGEB along with other members also enjoyed no-commitment trials by various publishers, which includes Bentham, BioOne, Web of Science, WILEY, Nature journals, Springer, JoVE and several others. Few of the publishers also help demonstration and training at the Centre.

### Major Achievements at ICGEB through DeLCON Consortium

It's difficult to segregate the contribution of DeLCON towards achievements of ICGEB, separately but the impact and benefits of DeLCON resources is quite evident and widely acknowledged by students, scientists and staff at ICGEB.

### Scientific Achievement by ICGEB through DeLCON Consortium

Steady rise in number of publications and number of grants received by scientists is definitely facilitated by easy access to a diverse range of Biotechnology Journals provided by DeLCON. Several ICGEB scientists have won national awards like Infosys, Shanti Swaroop Bhatnagar and DBT IYBA awards, to name a few. The ICGEB-BIF has been commended by DBT for its publications in the field of Bioinformatics.

### IMPACT OF DELCON CONSORTIUM AT NATIONAL INSTITUTE OF IMMUNOLOGY (NII), NEW DELHI -

#### Scientific Achievement by NII through DeLCON Consortium

Access to resources is now considered more important than the collection building. The consortium facilitates the libraries to get the benefit of wider access to electronic resources at an affordable cost and at the best terms of licenses. In a case of NII Library, the benefits are measured on two parameters; that is for Scientists and for Department of Library and Documentation Services.

**For Scientists:** The scientific journals have played a major role in the creation and transmission of knowledge. Consortia based subscription to E-resources provides access to a wider number of E-resources at substantially lower cost. The research

productivity of the institute is expected to improve with increased access to international databases and full-text resources. The consortia have been offered better terms of licenses for use, archival access and preservation of subscribed E-resources, which would not have been possible for any single institution.

**For Library Staff:** The major impact of the library of NII is Subscription Workload reduced tremendously and thus the staff get time to concentrate on other Library activities as well as provide other value added services more actively. Then, co-ordination and co-operation with other Libraries increased benefitted to both Library staff and Scientists, as they get Full-text whenever they want which is not available in the NII databases from the networked libraries. The impact of Inter-Library Connectivity increased due to consortium creates a competitive attitude among the Library staff.

#### **Scientific Achievements at NII Due to DeLCON Resources**

A scientific experiment, no matter how spectacular the results, is not completed until the results is published. In fact, the cornerstone of the philosophy of Science is based on the fundamental assumption that original research must be published, only thus can new scientific knowledge be authenticated and then added to the existing database that we call Scientific Knowledge. The output of Scientific research is publications, patents and technology transferred. Thus, the scientists must not only "do" science but also "write" science, Unfortunately, therefore no school or courses for writing Science. Only exists the database of Journals to review and follow the style. Thus, DeLCON opens the door of the full-text of huge Journals database to the Scientists.

#### **IMPACT OF DELCON CONSORTIUM AT NATIONAL INSTITUTE OF PLANT GENOME RESEARCH (NIPGR), NEW DELHI**

##### **Impact of DeLCON Consortium at NIPGR**

The NIPGR has been the member of DeLCON consortia since its inception and is having access to e-resources w.e.f. January 2009. Before DeLCON, the NIPGR had access to selected 45 high impact online journals on the NIPGR institution LAN. Earlier NIPGR used to subscribe to hard copies of journals also in addition to e-journals. After DeLCON membership from 2009 onwards, NIPGR started phasing out

subscription of hard copies of journals as it was duplication of journals. Now NIPGR has subscription to only e-resources in case of Journals from DeLCON as well as Institutional Subscription. The requirements of e-resources are being met out of mainly through DeLCON and some other are bring met out through Institutional Subscription.

#### **Major Achievement at NIPGR through DeLCON Consortium**

Easy accessibility of the e-resources through DeLCON, has motivated NIPGR researchers and has resulted in growth of research output, both quantitative and qualitative during the last seven years. It has helped the NIPGR Researchers to get updated with latest development in their research fields and in designing of experiments for their research work.

In 2015, the NIPGR Institute crossed 100 mark in producing research publications. The Institute published 118 research publications in 2015, out of which about 50% were published in Open Access Journals.

#### **Scientific Achievement of NIPGR through DeLCON Consortium**

Due to easy accessibility of e-resources through DeLCON, NIPGR has produced good number of high impact publications, filed national/ international patents. Scientific contributions for the NIPGR Scientists have been recognized/ awarded by many Academies like NASI, INSA, NAAS, ISCA, TOSI, IGC etc. and Govt. Depts. Like DBT, DST etc.

#### **IMPACT OF DELCON CONSORTIUM AT BIOTECH SCIENCE CLUSTER (BSC), FARIDABAD**

##### **Impact of DeLCON Consortium at Biotech Science Cluster (RCB & THSTI), Faridabad**

The twin institutions within the NCR Biotech Science Cluster, Regional Centre for Biotechnology (RCB) and Translational Health Science & Technology Institute (THSTI) are complementary yet independent and are established by Department of Biotechnology (DBT), to synergize the growth of biotechnology through proactive and collegial interactions. The NCR Biotech science cluster begun to function at interim campus at Gurgaon in late 2009. It became a member of DeLCON Consortia in 2011 after getting the trial access

for more than six months in 2010. Recently, the NCR cluster moved to its new permanent campus at Faridabad in early 2015.

### **Impact of DeLCON Consortia on RCB & THSTI**

DeLCON Consortium has provided easy access to research publications. Online access around-the-clock to the NCR Biotech Cluster scientific community on electronic devices (PC, iPads, mobiles, etc.) significantly promotes research and saves time, library fund and space. Biotech Science Cluster has benefited by DeLCON since beginning in research, teaching and training.

Biotech Science Cluster (RCB & THSTI) has become a member in the DeLCON Consortia in 2011. The multi-disciplinary scientific programs were begun actively in the interim campus at Gurgaon during 2010-11. Scientific community of NCR Biotech cluster that includes faculty members, Young investigator awardees, Ph.D. scholars, Project assistants/ associates, trainee students and technical assistants have heavily utilized the DeLCON resource for research, manuscripts writing, grant proposals, Ph.D. proposals, journal club presentation, teaching, training/ workshops, conference proceeding, annual reports, seminars, and several other scientific reports. The size of scientific community has grown significantly during last five years, and at present it consists of more than 350 members. The usage is constantly increasing as clearly seen from the research outputs. It will continue to expand in the future as new research programs, courses have been planned. The usage will certainly increase further in the future.

### **CONCLUSION**

In the view of the budget crunch being faced by all the DBT libraries in India, the DBT has formed a DeLCON Consortium and this DeLCON Consortium has come as a significance supportive solution for the DBT Institutions.

The DeLCON Consortium is really much-much useful & valuable for the DBT Institutions which are available in the Delhi-NCR as well as their faculties, scientists, researches, students and other user community of the member Institutions. All the readers & users of DBT Institutions are extremely benefitted. As it is a known fact that some of the users are unaware about resources of DeLCON Consortium, where an awareness programme must be organized.

So, DBT should spread awareness in those member Institutions through seminars and conferences to make them to provide a good library environment in those Institutions. The DeLCON was constituted by DBT for the libraries of DBT institutions in India, which providing the information & resources to meet the needs of the users. Since the year 2009, the DeLCON consortium has grown in terms of the number of resources and users. The DeLCON consortium is set to grow further in the coming years and predicts catering to all the biotechnology and life science institutes in the country.

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