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India's Efforts in Open Access Publishing

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Introduction

For a long time, India has been generating a great deal of scholarly resources in all disciplines. After independence, there was a lot of investment in science and technology, and S&T were used to leverage development efforts and to improve the standard of living. However, one in four Indians still lives below the poverty line. There is a considerable research effort in a wide variety of areas including science, technology, medicine, humanities and social sciences. Research is performed essentially in three sectors: (1) higher educational institutions, such as universities and deemed universities (2) laboratories under different government agencies such as the Council of Scientific and Industrial Research (CSIR), Department of Atomic Energy (DAE), Indian Space Research Organization (ISRO), Defence Research and Development Organization (DRDO), Indian Council of Agricultural Research (ICAR), and Indian Council of Medical Research (ICMR), and (3) laboratories in the industrial sector, both public and private.

With difficulties such as lack of funds and infrastructure for good quality research, a very common problem for Indian scientists is access and visibility. The accelerating cost of subscriptions to academic serials has created a serials crisis in almost all libraries around the world, including India. Most Indian libraries cannot afford to subscribe to key journals needed by their users/scientists. As a result, it becomes difficult for researchers to have current knowledge. After spending so much effort on research and getting it published in journals, small or big, from around the world, their work is often not noticed by others elsewhere, even within India, working in the same and related areas. No wonder Indian work is poorly cited due to low visibility or circulation of such journals where their works have been published.

To overcome both these handicaps, one possible solution may be the publishing through Open Access (OA). Open-access publishing is the provision of free online access to quality scholarly material that is available on "open domain," and not having any restriction of copyright. Although the open access movement began before the advent of the Web, it became more widespread with the adoption of Web access in scholarly activities. The movement spread to all disciplines. There are many different models of open access publishing, for example sponsored OA, OA supported by author fees, and embargoed OA. The intention of all such models is to provide access to scholarly contents to clients. It is, however, assumed as one of the useful media to share research and getting wide visibility from around the world. Some countries like the UK and the US have made better progress, whereas many other countries are lagging behind. The primary goal of this study is to discover the present status of Indian open access ventures and help librarians to understand the opportunities in OA scholarly resources in India.

Related Studies

OA publishing in India is a major topic of discussion and a large quantity of papers has been published. It is impossible to mention them all. In this longitudinal study our attempt, therefore, is to recall some studies with particular relevance in the present context. Arunachalam (2008) is certainly one of the key papers on OA where the author's own engagement with the science academies and OA is discussed. He also mentions some key policymakers and hoped for the involvement of CSIR in OA. Sahu and Parmer (2006) projected OA activities by various academies such as the Indian Academy of Science, the Indian National Science Academy, Biolin International, and Medkow Publications, as well as explaining the impact of OA publishing.

Sawant (2009) studied open access journal initiatives in India with respect to its type, funding agency/host organization, full text availability, article charges, etc. Her study covered 178 open access journals that were peer-reviewed, indexed, and abstracted, listed with DOAJ and O-Jgate. Some subject specific studies on OA journals have been conducted in the recent past, e.g., Shahu (2003) studied OA journals in medical sciences, Mukherjee (2009) studied OA journals in library and information science, and Shau (2009) in economics.

Studies also indicate that increased accessibility and visibility have also increased the citations received by a journal (Bavdekar and Sahu, 2005; Sahu, Gogtay and Bavdekar, 2005). Shau and Parmer (2006) mention that the number of manuscripts submitted to the journals published by Medknow has increased many times, with increases in the number of articles coming from other countries ranging from 12–44% for various journals.

Objective

The specific objectives of the present paper are:

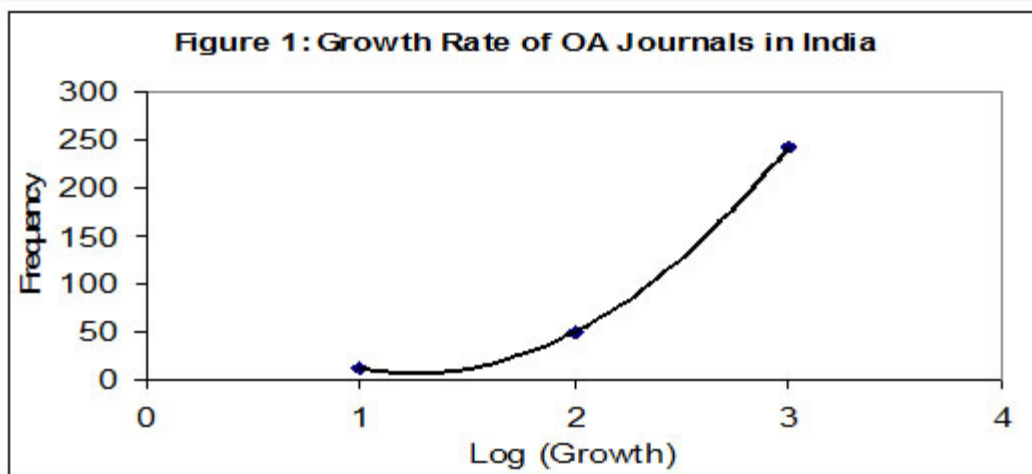
- To project India's growth on open access scholarly publications
- To identify prominent subjects, sub-fields in where open access journals are more prominent
- To identify leading publishers, societies, organizations who are actively involved in open access activity
- To measure the impact of OA journals published from India.

Methodology

Carried out in March 2011, these studies looked at the status of OA journals published from India in terms of year, subject, publisher and citations. In order to gather data we accessed [*Directory of Open Access Journals*](#) (DOAJ) and confined publications originated from India in all discipline. Metadata elements such as starting year, subject of the journal, scope of the journal, and publisher were identified. For comparison, in a few cases, we also consider the OA journals published from Japan and China. In order to measure citation we used Google Scholar.

Results and Discussion

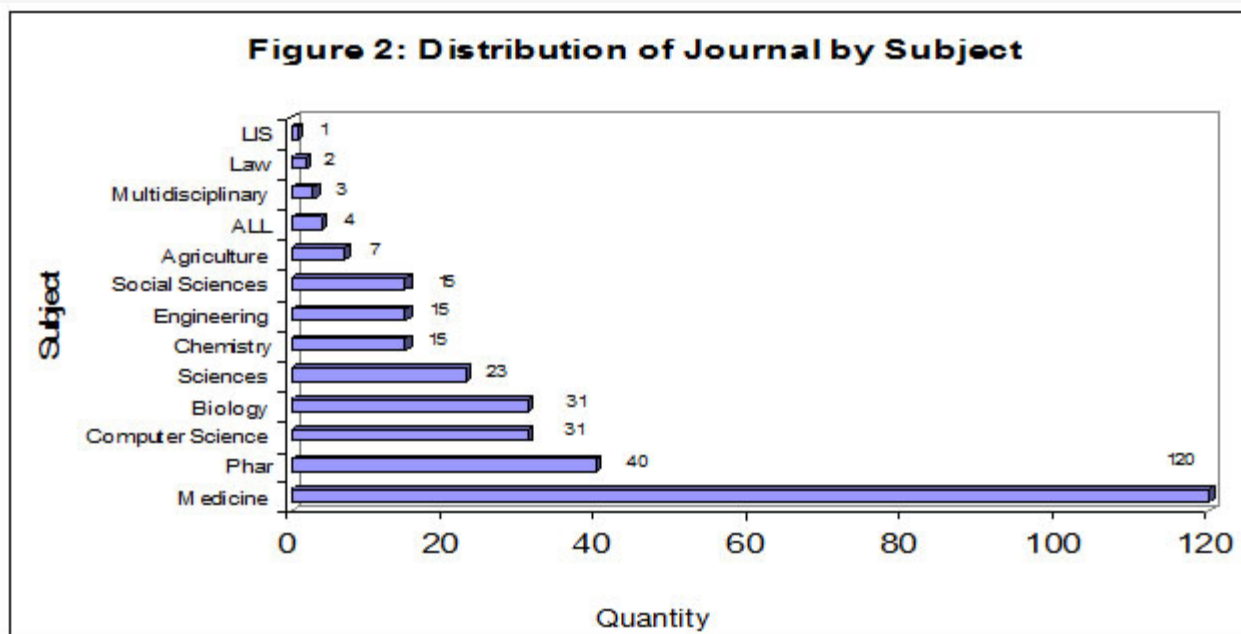
In Figure 1 we have projected the growth of open access publication in India. For comparison we have also used the dataset of DOAJ for other two Asian countries China and Japan. As listed in DOAJ, up to March 31st 2011, India's rank is fifth (307 journals) on production of OA journal preceded by United State (1200) Brazil (571), United Kingdom (492), Spain (381). Among Asian continents India is far ahead from Japan (105) and China (29). The growth rate of OA journals in the last five years is more prominent from 2005 onward. In the year 2005, 18 more journals have been added than previous year 2004. The addition continues with 19, 23, 50, 129, 22 new journals at end 2006, 2007, 2008, 2009, and 2010 respectively. The growth rate can be explained as almost polynomial. This is very inspiring for those who support OA.



The concept of the digital divide is more common for a country like India where university library budgets have largely varied from 5 corer to 5 lakhs per year. At the same time, quality research requires quality research articles for acquiring current knowledge. In spite of our limited library budgets, we are bound to provide quality services to our clients which are now possible if we simply have an Internet connection through which we may access open access journals. The only need is our eagerness to satisfy users' demands and a positive attitude toward open access.

By Subject

Science in general and medicine (120 number or 40%), pharmacy and materiamedica (40 journals or 13%), computer science (31 journals or 10%), and biology (31 journals or 10%) in particular are some of the fields where open access journal are more prevalent, whereas in disciplines like social science, arts and humanities, the quantity of such journals are very uneven. This may due to the fact that STM journals are very costly and people are paying more attention to narrowing the gap of digital divide.



(Phar=Pharmacy & Pharmaceutical sciences, ALL=Arts, Language, Literature)

While looking coverage of sub-fields of these journals it was found that a series new emerging sub-fields are covered in these journals. There are 682 different subfields which are covered by these OA journals. Among these subfield pharmacognosy , bioinformatics, biotechnology, medicinal chemistry, pharmaceutical chemistry, dentistry, genetics, pharmacokinetics, phytochemistry, pharmaceutical, technology, biochemistry, toxicology, biopharmaceutics, drug design, epidemiology, information technology, molecular biology, software engineering, alternative medicine, biomedine are some of the prominent subfield which is covered by at least 5 journals. The

details of all sub-fields are given in Annex 1. The scientists having specialization in these sub-fields have the opportunity to share their findings throughout the world.

Leading Publishers

There are 155 different publishers who are involved in 307 OA journals publishing in India. Among these publishers 18 publishers publishes more than one OA journals while remaining 133 publishers publishes only a single journals. Among leading publishers Medknow Publications publishes 77 journals followed by Academy & Industry Research Collaboration Center (AIRCC) 19 journals, NISCAIR 15 journals, Bio-Info 13 journals and Indian Academy of Science 8 journals. The details of all publisher are given in annexure 1. It is interesting to observe that some of the commercial publishers are putting their interest in publishing OA journals. The reason may be that OA journals receive more citations than close access because they are accessible without any authentication. A very common example is the *Journal of Postgraduate Medicine* (JPGM) was transformed into a much better journal after it became OA. As Arunachalam (2008) pointed that after being OA, JPGM attracts more submissions of better quality papers and from researchers from many countries; the circulation of the print version has increased; advertisement revenue has increased (both for the print version and for the online version). Its citation per document ratio has been increasing steadily. Dr Sahu, the CEO of MedKnow, has made several presentations on MedKnow journals and projected how open access is helping in improving the quality of the journals as well as their revenue. However, the most unfortunate part is that not many other Indian journal publishers are coming forward to make their own journals OA. Overall, it interesting to observe that a large number of the journals published from India belong to learned societies and associations, and are published by the association or the editor themselves without the involvement of any commercial publisher.

Impact of Research Output

The impact of OA journals from India has been measured by using Google Scholar. In Google Scholar we searched every journal by its name count the number of citations it received since its inclusion in DOAJ. The citation per year has been calculated dividing the total citation with number of years it is available as OA. Appendix 1 illustrates the journal-wise citations and the table below is a glimpse of top ten cited journals.

Journals	Citations	Effective years in DOAJ	Citations Per Effective Year
Annals of Neurosciences	188	1	188.00
Indian Journal of Medical Research	411	6	68.50
International Journal of Engineering and Technology	68	1	68.00
Journal of Biosciences	499	8	62.38
Journal of Vector Borne Diseases	154	3	51.33
International Journal of Engineering Science and Technology	51	1	51.00
Conservation & Society	298	6	49.67
International Journal of Bioinformatics Research	47	1	47.00
International Journal on Computer Science and Engineering	45	1	45.00
Journal of Natural Products	43	1	43.00

The above table illustrates only top ten OA journals arranged according to decreasing citation per year. Of the top ten OA journals, six journals become OA from 2010 onwards. Prior to that, all these journals were available only on print and on subscription basis. The *Annals of Neurosciences* was started from 2005 however it becomes OA only from 2010. However, it is interesting to observe that after becoming OA, these journals are receiving considerable number of citations. So, it is clear that Indian OA journals are well connected with mainstream researches as they are viewed widely. However most of these highly cited journals are in science discipline and at least twelve of them are very old. So by submitting article in these journals author can be confident that their article will be viewed widely. Many of us are reluctant to make the effort to post our articles on OA journals and are still unaware of the advantages of gaining greater visibility. After all, promotions and awards are often determined by the impact factor of the journals in which one's work is published.

Conclusion

With the promising figure 307 in 2011 it can be said that India has made important contributions towards the growth of open access publishing after similar low income country like Brazil. Leading learned societies, associations and publishers and certainly government role is very much important in this regards. The advocacy programs conducted by NCSI, IISc, Indian Medlars, MedKnow etc. to create awareness among the scholarly community may be one basic reason toward successful venture of OA in India. The scenario can be more favourable if institutions of higher learning like universities, CSIR pay attention towards development of interoperable institutional repositories which allow researchers to make versions of their articles publicly available online both before and after publication. Additionally, scenario become more successful if government pay interest in publishing OA journals.

Free access for scholarly materials also requires adequate computer hardware and Internet connectivity. Many universities and research institutions in the India still lack both computers and high bandwidth Internet connectivity, so part of the strategy of open-access proponents must include campaigning for improved ICT facilities. Recently, the costs of both hardware and Internet bandwidth are coming down and this may help in promoting OA.

Even though the overall picture of open access publishing in India looks promising, it makes an unhappy situation for subjects in social science, arts and humanities. The quantity and impact of journals in these subjects are not at par with subjects like medicine, sciences and technology. During investigation it is observed that, of the total 307 journal, 294 journals are indexed in Google Scholar while rest of the journals is not. In order to view by Google Scholar journals published should comply correct metadata, so that their contents get indexed by robot of google. Minj et al. (n.d.), in this regard, found that most of these online Indian open access journals do not comply with indexing standards of OA, i.e. the Open Access Initiative – Protocol for Metadata Harvesting (OAI-PMH) protocol and thus lie outside the OAI interoperability framework. The search and display interface of these journals revealed lack of support for field-based metadata search and display. A consequence of this is that in spite of their online presence, the articles in these journals tend to be less used, as they are not easily "discoverable" due to poor metadata and poor indexing.

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Appendix 1. Sub-fields and Number of Journals Covered

Sub-fields	Frequency
medicine	25
pharmacology	22
pharmaceutical sciences	16
pharmaceutics	16
pharmacognosy	15
biology	12
bioinformatics	10
biotechnology	10
medicinal chemistry	10
pharmaceutical chemistry	9
pharmacy	9
computer science	8
dentistry	8
genetics	8
pharmacokinetics	8

phytochemistry	8
pharmaceutical technology	7
biochemistry	6
technology	6
toxicology	6
biopharmaceutics	5
chemistry	5
drug design	5
engineering	5
epidemiology	5
information technology	5
molecular biology	5
software engineering	5
alternative medicine	4
biomedicine	4
chemical engineering	4
computational chemistry	4
dental care	4
life sciences	4
pharmacy practice	4
social sciences	4
algorithms	3
analytical chemistry	3
ayurveda research	3

bioscience	3
commerce	3
computational biology	3
data mining	3
drugs	3
ecology	3
electronics	3
finance	3
inorganic chemistry	3
intensive care	3
management	3
materials science	3
mathematics	3
medical sciences	3
mental health	3
microbiology	3
natural products	3
neurology	3
neurosciences	3
ophthalmology	3
pharmaceutical research	3
pharmaceutical science	3
pharmaceuticals	3
pharmacogenomics	3

physical chemistry	3
physics	3
psychiatry	3
public health	3
science	3
urology	3
anaesthesia	2
andrology	2
anesthesiology	2
applied research	2
artificial intelligence	2
arts	2
Ayurveda	2
biological science	2
biomedical	2
biomedical research	2
biopharmaceuticals	2
botany	2
business	2
cardiology	2
cell biology	2
chemical processes	2
children	2
clinical research	2

computational mathematics	2
computer architecture	2
computer networks	2
computer security	2
conservation	2
cosmetic product development	2
crop protection	2
dermatology	2
diabetes	2
disease prevention	2
drug development	2
emergency medicine	2
endocrinology	2
engineering science	2
environment	2
environmental science	2
ethnopharmacology	2
genomics	2
geology	2
green chemistry	2
health professionals	2
health science	2
health sciences	2
India	2

infectious diseases	2
life science	2
man and health relationship	2
marketing	2
maxillofacial injuries	2
medical science	2
medicinal plants	2
metabolism	2
microbial biotechnology	2
molecular drug design	2
natural product research	2
network protocols	2
neurosurgery	2
nuclear medicine	2
occupational health	2
odontology	2
oncology	2
oral health	2
oral medicine	2
oral pathology	2
organic chemistry	2
pathology	2
pediatrics	2
periodontal diseases	2

physiology	2
preventive medicine	2
radiology	2
routing	2
simulation	2
surgery	2
taxonomy	2
thoracic surgery	2
trauma	2
ubiquitous computing	2
wireless communication	2

Publishers and Number of Journals Published

Publisher	Frequency
Medknow Publications	77
Academy & Industry Research Collaboration Center (AIRCC)	19
NISCAIR	15
Bioinfo Publications	13
Indian Academy of Sciences	8
Kamla-Raj Enterprises, Delhi	7
Integrated Publishing Association	5
Advanced Research Journals	3
Engg Journals Publications	3
Indian Academy of Sciences, Springer	3
Pelagia Research Library	3

Association of Pharmaceutical Innovators	2
eDent Journals	2
Educational Research Multimedia & Publication	2
Kamla-Raj Enterprises	2
KEJA Publications	2
Scholars Research Library	2
Sphinx Knowledge House	2
Abhilasha Jain	1
Academic Sciences	1
Anaesthetists' Forum, Jodhpur	1
Anil Aggrawal	1
Applied Science Innovations Private Limited	1
Association of Physicians of India	1
Biomedical Informatics Publishing Group	1
Cafet-Innova Technical Society	1
Calicut Medical College	1
Chauhan Publishers	1
CMC Alumni Association	1
Crop Protection Research Centre	1
Defence Scientific Information & Documentation Centre, Delhi Court	1
Dentaquest	1
Dr. Hemant Jain and Premchand Shantidevi Research foundation	1
Dr. K. Jaishankar	1
Dr.B.S.Patil	1

E Business Navigators	1
Editor	1
Endocrine Society of India	1
Engg Journals Publication	1
Eswar Publications	1
Excogitation & Innovation Laboratory	1
German Stem Cell Society	1
Global Research Online	1
Global Scientific Research Forum	1
Green Earth Research Foundation	1
GVGS	1
Himchal Dental College and Hospital	1
Hygeia	1
IJCRR	1
IJoAT Foundation	1
IJPT	1
Indian Academy of Geriatrics	1
Indian Academy of Neurosciences	1
Indian Academy of Pediatrics	1
Indian Association for Child and Adolescent Mental Health	1
Indian Association of Physical Medicine and Rehabilitation	1
Indian Association of Preventive and Social Medicine	1
Indian Association of Preventive and Social Medicine, Gujrat	1
Indian Council of Medical Research	1

Indian Heart Rhythm Society	1
Indian Institute of World Literature	1
Indian Journal of Medical Specialities	1
Indian Journal of Stomatology	1
Indian Society for Education and Environment	1
Indian Society of Plant Breeders	1
INSDOC/ NISCAIR	1
Institute of Integrative Omics and Applied Biotechnology (IIOAB)	1
International Crops Research Institute for the Semi-Arid Tropics	1
International Journal of Advanced Research in Computer Science	1
International Journal of Applied Biology and Pharmaceutical Technology	1
International Journal of Ayurvedic Medicine	1
International Journal of Cyber Criminology	1
International Journal of Dental Clinics	1
International Journal of Enterprise Computing and Business Systems	1
International Journal of Pharmaceutical Science and Biotechnology	1
International Journal of Pharmaceutical Sciences and Drug Research	1
International Journal of Pharmacy and Pharmaceutical Sciences	1
International Journal of Pure and Applied Sciences and Technology	1
International Journal of Research in Ayurveda and Pharmacy	1
International Journal of Students' Research	1
International Research Journal of Pharmacy	1
JK Science	1
JK Welfare & Pharmascope Foundation	1

Journal of Advances in Developmental Research	1
Journal of Advances in Drug Research	1
Journal of Chemical and Pharmaceutical Research	1
Journal of Global Pharma Technology	1
Journal of Global Research in Computer Science	1
Journal of Global Trends in Pharmaceutical Sciences	1
Journal of Natural Products	1
Journal of Pharmaceutical and Biomedical Sciences	1
Journal of Physical Therapy	1
Kairali Society of Oral & Maxillofacial Pathologists	1
Kaizen Publications	1
Kashmir Academy of Private Physicians	1
Kashvet Society, Kashmir	1
Kedar Amar Research and Academic Management Society	1
Kerala Agricultural University, Kerla	1
Madras Agricultural Students Union	1
Mandsaur Institute of Pharmacy	1
Medicinal and Aromatic Plants Association of India	1
MediPOEIA Publication	1
Mens Sana Research Foundation	1
National Folklore Support Centre Chennai	1
National Institute of Malaria Research	1
National Institute of Science Communication And Information Resources, Delhi	1
National Journal of Community Medicine	1

National Law University	1
Omics Group	1
Pharma Info Publications	1
Pharma Science Monitor	1
Pharmaceutical Research Foundation	1
Pharmacie Globale	1
Pharmainfo Publications	1
PharmSciDirect Publications	1
PharmTech Publications	1
Pravara Institute of Medical Sciences (DU), Loni	1
PSIT Kanpur	1
Punjab College of Technical Education	1
Puthiya Panuval	1
Radiance Bahu-uddeshiya Sanstha	1
Raju B. Akondi	1
Rasayan Journal of Chemistry	1
Research Society of Anaesthesiology Clinical Pharmacology (RSACP)	1
rtechnology	1
Sadguru Publications	1
Sanben Agency	1
School of Oriental and African Studies	1
Scientific Review Board	1
Sevas Publication	1
Sibar Institute of Dental Sciences	1

Society for Biomaterials and Artificial Organs - India	1
Society for Research in Social Sciences	1
Society of Applied Sciences	1
Society of Earth Scientists	1
Society of Pharmaceutical Education & Research	1
Society Of United Life Sciences, India	1
Sri Ramachandra University	1
Sri Siddhartha Dental College	1
SRM Publications Pvt. Ltd	1
Sudarshan Publication	1
Tarun Tapas Mukherjee	1
Technomathematics Research Foundation	1
Technopark Publications	1
TechScience Publications	1
The Neurotrauma Society of India	1
Trendz Publications	1
Triveni Enterprises	1
Vallabhbhai Patel Chest Institute, University of Delhi and the National College of Chest Physicians	1
VBRI Press	1
Veterinary World	1
Wildlife Information Liaison Development Society	1
www publications (P) India	1
www.mjai.org	1
Xinnovem Publishing Group	1

OA Journals and Citations

Journal	Citations	Effective years in DOAJ	Per year Citation
Annals of Neurosciences	188	1	188.00
Indian Journal of Medical Research	411	6	68.50
International Journal of Engineering and Technology	68	1	68.00
Journal of Biosciences	499	8	62.38
Journal of Vector Borne Diseases	154	3	51.33
International Journal of Engineering Science and Technology	51	1	51.00
Conservation & Society	298	6	49.67
International Journal of Bioinformatics Research	47	1	47.00
International Journal on Computer Science and Engineering	45	1	45.00
Journal of Natural Products	43	1	43.00
Journal of Carcinogenesis	85	2	42.50
Asian Journal of Pharmaceutics	125	3	41.67
IETE Technical Review	77	2	38.50
The Indian Journal of Chest Diseases and Allied Sciences	283	8	35.38
Journal of Ayurveda and Integrative Medicine	35	1	35.00
International Journal of Ayurveda Research	32	1	32.00
Annals of Cardiac Anaesthesia	183	6	30.50
E-Journal of Chemistry	106	4	26.50
Sadhana	182	7	26.00
Indian Journal of Pharmaceutical Sciences	130	5	26.00
International Journal of ChemTech Research	51	2	25.50
Journal of Emergencies, Trauma and Shock	75	3	25.00

Indian Pediatrics	198	8	24.75
Journal of Genetics	148	6	24.67
IETE Journal of Research	23	1	23.00
Journal of Life Sciences	22	1	22.00
International Journal of Computer Science & Applications	87	4	21.75
Journal of Scientific & Industrial Research	64	3	21.33
International Journal of Green Pharmacy	84	4	21.00
Current Science	163	8	20.38
Indian Journal of Medical Microbiology	132	7	18.86
International Journal of Wireless & Mobile Networks	36	2	18.00
Indian Journal of Psychiatry	69	4	17.25
Indian Journal of Experimental Biology	49	3	16.33
International Journal of PharmTech Research	31	2	15.50
Bulletin of Materials Science	123	8	15.38
Indian Journal of Dental Research	107	7	15.29
Earth Science India	15	1	15.00
Journal of Earth System Science	99	7	14.14
Pharma Research	14	1	14.00
Physicians Academy	14	1	14.00
Studies of Tribes and Tribals	14	1	14.00
Studies on Ethno-Medicine	14	1	14.00
Indian Journal of Ophthalmology	81	6	13.50
Mens Sana Monographs	54	4	13.50
International Journal of Computer Networks & Communications	26	2	13.00

Journal of Environmental Biology	13	1	13.00
Journal of Biopesticides	38	3	12.67
Journal of Conservative Dentistry	25	2	12.50
Journal of Young Pharmacists	25	2	12.50
Trends in Biomaterials & Artificial Organs	86	7	12.29
International Journal of Distributed and Parallel Systems	12	1	12.00
International Journal of Research in Pharmaceutical Sciences	12	1	12.00
Indian Journal of Pathology and Microbiology	35	3	11.67
Indian Pacing and Electrophysiology Journal	79	7	11.29
International Journal of Human Genetics	56	5	11.20
Journal of Human Ecology	53	5	10.60
Journal of Cytology	31	3	10.33
Middle East African Journal of Ophthalmology	20	2	10.00
Journal of the Indian Society of Pedodontics and Preventive Dentistry	68	7	9.71
Journal of Global Infectious Diseases	19	2	9.50
Indian Journal of Community Medicine	66	7	9.43
Contemporary Issues and Ideas in Social Sciences	54	6	9.00
Indian Journal of Chemistry : Section B	27	3	9.00
International Journal of Cyber Criminology	27	3	9.00
Journal of Advanced Pharmaceutical Technology & Research	9	1	9.00
Journal of Pharmacy Research	9	1	9.00
Journal of Physical Therapy	9	1	9.00
International Journal of Integrative Biology	35	4	8.75
Journal of Chemical Sciences	17	2	8.50

Annals of Pediatric Cardiology	25	3	8.33
Journal of Astrophysics and Astronomy	57	7	8.14
Indian Journal of Pure & Applied Physics	24	3	8.00
Indian Journal of Chemical Technology	16	2	8.00
Journal of Forensic Dental Sciences	16	2	8.00
Journal of Current Pharmaceutical Research	8	1	8.00
Law, Environment and Development Journal	39	5	7.80
Indian Journal of Cancer	60	8	7.50
Asian Journal of Pharmaceutical and Clinical Research	15	2	7.50
Indian Journal of Biotechnology	15	2	7.50
Journal of the Association of Physicians of India	52	7	7.43
Indian Folklife	42	6	7.00
Indian Journal of Orthopaedics	28	4	7.00
Journal of Human Reproductive Sciences	21	3	7.00
Journal of Pharmaceutical Sciences and Research	14	2	7.00
Proceedings of the Indian Academy of Sciences : Chemical Science	14	2	7.00
International Journal of Drug Delivery	7	1	7.00
Journal of Advanced Pharmaceutical Research	7	1	7.00
Pharmacognosy Research	7	1	7.00
Journal of Cancer Research and Therapeutics	41	6	6.83
Journal of Intellectual Property Rights	13	2	6.50
Oman Journal of Ophthalmology	13	2	6.50
Indian Journal of Dermatology	36	6	6.00
International Journal of Diabetes in Developing Countries	30	5	6.00

Lung India	12	2	6.00
International Journal of UbiComp	6	1	6.00
Journal of Scientific Review	6	1	6.00
Journal of Minimal Access Surgery	35	6	5.83
Asian Journal of Transfusion Science	23	4	5.75
International Journal of Yoga	17	3	5.67
Annals of Thoracic Medicine	27	5	5.40
Journal of Tropical Agriculture	20	4	5.00
Indian Journal of Traditional Knowledge	10	2	5.00
Journal of Pharmaceutical Science and Technology	5	1	5.00
Neurology India	38	8	4.75
International Journal of Shoulder Surgery	19	4	4.75
Drug Invention Today	9	2	4.50
International Journal of Network Security & Its Applications	9	2	4.50
Journal of Threatened Taxa	9	2	4.50
Indian Journal of Occupational and Environmental Medicine	24	6	4.00
Indian Journal of Palliative Care	24	6	4.00
Indian Journal of Nephrology	16	4	4.00
Contemporary Clinical Dentistry	4	1	4.00
Electronic Journal of Plant Breeding	4	1	4.00
Indian Journal of Anaesthesia	4	1	4.00
International Journal of Environmental Sciences	4	1	4.00
International Journal of Pharma Sciences and Research	4	1	4.00
International Journal of Pharmaceutical Sciences : Review and Research	4	1	4.00

International Journal of Phytomedicine	4	1	4.00
Journal of Global Pharma Technology	4	1	4.00
Journal of Mid-Life Health	4	1	4.00
Journal of the Indian Society of Periodontology	7	2	3.50
Studies on Home and Community Science	13	4	3.25
Journal of Oral and Maxillofacial Pathology	19	6	3.17
Journal of Clinical and Diagnostic Research	6	2	3.00
International Journal of Advances in Pharmaceutical Sciences	3	1	3.00
Journal of Craniovertebral Junction and Spine	3	1	3.00
Open Access Journal of Medicinal and Aromatic Plants	3	1	3.00
Pravara Medical Review	3	1	3.00
Indian Journal of Neurotrauma	14	5	2.80
Indian Journal of Dermatology, Venereology and Leprology	22	8	2.75
Journal of Orthopaedics	19	7	2.71
Journal of Cutaneous and Aesthetic Surgery	8	3	2.67
Journal of Social Sciences	13	5	2.60
Annals of Library & Information Studies	5	2	2.50
Indian Journal of Engineering & Materials Sciences	5	2	2.50
Indian Journal of Psychological Medicine	5	2	2.50
Urology Annals	5	2	2.50
Journal of Pediatric Neurosciences	12	5	2.40
Indian Journal of Human Genetics	19	8	2.38
Indian Journal of Biochemistry & Biophysics	7	3	2.33
Journal of SAT Agricultural Research	7	3	2.33

Indian Journal of Pharmacology	15	7	2.14
Indian Journal of Medical Sciences	17	8	2.13
Journal of Postgraduate Medicine	17	8	2.13
Indian Journal of Fibre & Textile Research	8	4	2.00
Advances in Information Mining	2	1	2.00
Chronicles of Young Scientists	2	1	2.00
Defence Science Journal	2	1	2.00
Indian Journal of Marine Sciences	2	1	2.00
Indian Journal of Medical Specialities	2	1	2.00
International Journal of Chemical Research	2	1	2.00
International Journal of Database Management Systems	2	1	2.00
International Journal of Web & Semantic Technology	2	1	2.00
Journal of Chemical and Pharmaceutical Research	2	1	2.00
Indian Journal of Sexually Transmitted Diseases	11	6	1.83
Calicut Medical Journal	14	8	1.75
Hepatitis B Annual	6	4	1.50
Indian Journal of Science and Technology	3	2	1.50
Journal of Gynecological Endoscopy and Surgery	3	2	1.50
Journal of Medical Physics	7	5	1.40
Pramana : Journal of Physics	11	8	1.38
Madras Agricultural Journal	4	3	1.33
Anil Aggrawal's Internet Journal of Forensic Medicine and Toxicology	5	4	1.25
Indian Journal of Plastic Surgery	7	7	1.00
Al Ameen Journal of Medical Sciences	2	2	1.00

Indian Journal of Radio & Space Physics	2	2	1.00
Journal of Pharmacy and Bioallied Sciences	2	2	1.00
Asian Journal of Experimental Biological Sciences	1	1	1.00
International Journal of Advancements in Technology	1	1	1.00
International Journal of Biotechnology Applications	1	1	1.00
International Journal of Geomatics and Geosciences	1	1	1.00
International Journal of Machine Intelligence	1	1	1.00
International Journal of Multimedia & Its Applications	1	1	1.00
International Journal of Parasitology Research	1	1	1.00
International Journal of Software Engineering & Applications	1	1	1.00
Journal of Biochemical Technology	1	1	1.00
Indian Journal of Radiology and Imaging	6	7	0.86
Annals of Indian Academy of Neurology	4	5	0.80
Journal of Anaesthesiology Clinical Pharmacology	4	5	0.80
Indian Journal of Chemistry : A	2	3	0.67
Journal of the Indian Academy of Geriatrics	2	3	0.67
JK Science : Journal of Medical Education & Research	3	5	0.60
Journal of Indian Association of Pediatric Surgeons	4	7	0.57
Modern Journal of Applied Linguistics	1	2	0.50
Indian Anaesthetists' Forum	2	5	0.40
Online Journal of Health & Allied Sciences	2	8	0.25
Bioinformation	1	6	0.17

(Citations up to 31st March 2011)