Directory of Genetic Test Services and Counselling Centres in India

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ABSTRACT The conservative birth defects and genetic disorders estimate from India indicates that every year 6,78,000 infants with congenital anomalies, 22,477 with metabolic disorders, 34,000 with Down syndrome, 16,700 with β -thalassemia and sickle cell disease, 10,900 with congenital hypothyroidism and 2,700 with Duchene muscular dystrophy and 2,700 with spinal muscular atrophy are born; which suggests how acute the burden is in India. The total number of individuals who are at a higher risk of being afflicted with a genetic disease and consequently requiring diagnosis and counselling would thus be mind boggling. In this paper the researchers have created a state-of-the art directory of genetic test services and counselling centres in India to facilitate access to a comprehensive, accessible, and trust worthy web based genetic information and resources which will prove helpful to the physicians; academicians; scientists and the researchers requiring the above facility for better healthcare.

INTRODUCTION

India is the seventh largest country of the world in size and with a population of 133,17,84,905 (1.33 billion) (http://www.censusindia. gov.in) has the distinction of being the second most populous country in the world, housing 17.5 percent of all the humans (http:// www.prb.org). More than 50 percent of India's current population is below the age of 25 and over 65 percent is below the age of 35. Multiple events of migration, invasions and trade interaction from the north-western and the eastern sides have led to the population admixture giving rise to the highly heterogeneous population groups in this country. India has more than two thousand ethnic groups. Presently there are believed to be four main ethno-racial groups in India, which are the Indo-European, Dravidian, Austro-Asiatic and Tibeto-Burman (Lewis 2009). India is a home of 300-400 languages and 1,652 mother tongues, according to the linguistics. It is no surprise that India has 23 official languages (Mahanty 2007). Hindus are nominally about 80 percent of the population in India. Muslims are nominally about 14 percent and are a major-

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Phone: +91-44- 26561801 E-mail: drbibhas_kar@yahoo.co.in ity in Kashmir. The 23 million nominal Christians have a 2.2 percent share of the national population (Wood 2016). The rate of population growth between 2001 and 2013 was 20.22 percent and the predicted population size for 2030 is 1.46 billion. About 68.8 percent of the population lives in the villages and the rest 31.2 percent in the urban areas.

The total fertility rate is 2.3 births per woman. Life expectancy at birth is 68.89 years (67.46 years for men; 72.61 years for woman) (Census and Sample Registration System, O/o Registrar General of India). Infant mortality rate was 58 per 1000 live births in 2005, which came down to 40 in 2013. The under -five mortality rate in 2005 and 2013 were 74.3 and 49 per 1,000 live births respectively. The maternal mortality ratio in 2013 was 167 per 1,00,000 live births.

As is in the developing countries, India is facing an accelerating demographic switch to non-communicable diseases. In the cities, congenital malformation and genetic disorders are important causes of morbidity and mortality.

Objectives of the Study

To create a state-of-the art directory of genetic test services and counselling centres in India, to facilitate access to comprehensive, accessible, and trust worthy web based genetic information and resources which will prove helpful to the physicians; academicians; scientists and the researchers requiring the above facility for better healthcare.

OBSERVATIONS AND DISCUSSION

Health Services in India

The health services in India are available as a public service which are provided by the Government of India under the Ministry of Health and Family Welfare as well as a private service which is provided by the various corporate organizations in addition to the individual practice (Balarajan et al. 2011). Social development coupled with scientific advances and health care have led to a decrease in the mortality rates and the birth rates (Statement on National Health Policy). India spends 1.3 percent of its GDP on health, and provides completely free or highly subsidized health services to the economically deprived groups through the public health system.

Genetic Disorder

Genetics diseases are classified as chromosomal (numerical or structural), Mendelian or single-gene disorders, multifactorial/polygenic (complex) diseases, congenital anomalies or diseases associated with specific mitochondrial gene mutations. Apart from chromosomal disorders, essentially all genetic disorders result from some form of alteration or mutation occurring in a specific gene (single gene) or involving multiple loci spread across the human genome (Polygenic). Chromosomal disorders, where the entire chromosomes, or the large segments of chromosome are missing, duplicated, or otherwise altered (Kumar 2008).

Congenital and Genetic Disorder's Burden

Genetic disorder and birth defects are relatively common in India. According to the March of Dimes Report, 17,22,404 infants are born every year with birth defects due to genetic or environmental causes, that is, 64.3 infants per 1000 live births (Christianson et al. 2006). The conservative birth defects and genetic disorders estimate from India indicates that every year 6,78,000 infants with congenital anomalies; 22,477 with metabolic disorders; 34,000 with Down syndrome; 16,700 with β -thalassemia and sickle cell disease, and 10,900 with congenital hypothyroidism are born (Verma and Kumar 2012).

Genetic disorders and birth defects are relatively common in India and, are due to the fact that many communities marry consanguineously. Consanguinity rates in India vary from as low as 1 percent to 4 percent in the northern regions to as high as 40-50 percent in the southern regions (Bittles 2008). Indeed due to the large number of births per year (20.22 births/1000 population), March of Dimes Report estimated that India had the largest number of infants born with birth defect in the world.

Genetic Services

Genetic disorders are emerging as an important group of medical ailments requiring attention at a priority level. Clinical genetic and cytogenetic services developed in India in the late 1980s in a few premier cities as multicentric research programs for the prevention of mental retardation and neural tube defect. These services have progressively expanded over the last 35 years and many trained Medical and Clinical geneticists practice all over the country at present. The growing significance of molecular genetics and cytogenetics in diagnosis as well as the management of various cancers have led to the expansion of genetic diagnosis and counselling services in the country. The main aim of this research is to collect data from a well researched and exhaustive study and to prepare a directory of genetic test services and counselling centres in India in the field of human genetics which can be used as a desk reference.

Availability of Genetic Services

Diagnostic laboratory facilities are available both as part of an integrated medical genetics department/centre or as an independent facility (See Annexure). Newborn screening, diagnostic testing, carrier testing, prenatal testing, predictive and presymptomatic testing, forensic testing are all available in most of these centres. Recent years have seen a marked expansion of private laboratories in the field of genetic diagnosis services. Pre-implantation genetic diagnosis and pharmacogenetics testing are also available in some of the laboratories.

Newborn screening shortly after birth for inborn errors of metabolism and hearing loss offers the opportunity to begin treatment or intervention for these serious disorders as soon as possible. Diagnostic genetic testing, like other types of diagnostic testing, is used to confirm or rule out an known or a suspected genetic disorder in a symptomatic person. Although there are often other methods to make a diagnosis, DNA-based testing may provide the same information at a far lower cost and often with less risk to the patient. Carrier testing is used to identify individuals who have a gene mutation for a disorder inherited in an autosomal recessive or X-linked recessive manner. Usually the carrier does not have symptoms of the disease itself but seeks the information to make informed reproductive choices. Prenatal testing is used to identify the genetic status of a pregnancy at risk for a genetic disorder. Current prenatal testing options include maternal serum screening and the invasive procedures of amniocentesis and chorionic villus sampling, which are widely available, and also the more highly specialized techniques of placental biopsy and periumbilical blood sampling (Pagon 2008). Non-invasive prenatal testing (NIPT) is an advancement in the detection of fetal chromosomal aneuploidies that analyses cell-free fetal DNA in the blood of a pregnant woman. NIPT is more accurate than serum screening and produces fewer false positives, but is not currently diagnostic. Predictive testing is used to clarify the genetic status of an asymptomatic family member at risk for a genetic disorder (Allyse 2015). Predictive testing is presymptomatic or predispositional. Forensic testing is used for identification, not to identify individuals at risk for a genetic disease. Forensic testing is performed for legal purposes such as criminal investigations, questions of paternity, and identification after catastrophic events. Preimplantation genetic diagnosis (PGD) is used to select early embryos for implantation that have been conceived by in vitro fertilization. Testing determines whether the embryos are free of a particular genetic condition and provides an alternative to prenatal diagnosis and termination of pregnancy. Pharmacogenetic testing provides information about a patient's likelihood to have an adverse response and/or a therapeutic response to a medication, enabling the potential for a tailored and personalized approach to medication therapy (Haga et al. 2013). Very few genetic service centres are available in the rural areas, apart from a few outreach clinics provided by the academic/private centres, but referral to the tertiary care level can be made by the secondary and primary levels.

There is a growing interest in the Birth Defect Registries in India (BDRI). In Chennai a BDRI has existed from 2001 and currently receives data from 700 hospitals all over India. So far, 10,00,000 deliveries have been analysed. BDRI has associated with the Federation of Obstetricians and Gynaecologists of India to extend coverage of other hospitals. Regulation of genetic diagnostic services is presently governed by the IC-MR's Ethics Guidelines for Biomedical Research as no separate standards are available for the same. Prenatal diagnostics services are more stringently regulated by the preconception and prenatal diagnostic techniques (PNDT) Act, 1994, which is primarily intended to curb prenatal sex determination.

Genetic Counselling

The early diagnosis of many genetic diseases, coupled with a timely interventional therapy, can prevent several disease associated disabilities. The predictive genetic testing, pre-natal diagnosis and timely genetic counselling can help to prevent the recurrence of genetic diseases. Genetic counselling deals with the human problems associated with the occurrence, or the risk of occurrence, of a genetic disorder in a family (Ad Hoc Committee). Genetic counselling is essentially a communication process about the medical facts, the contribution of heredity to certain conditions, the interpretation of test results, and the options available. It also involves supportive counselling to enable the patients to make decisions and to make the best possible adjustment to the presence or to the risk of a genetic disease. Genetic counsellors play an important role in providing expert genetic services. In educating and counselling about genetics, the counsellors convey the varying nature of genetic risk and our varying ability to predict such risks. Our ability to predict genetic risk varies with the mode of inheritance, severity of the disorder, and other essential factors, such as environmental and/or combinations of genetic factors that must be present before the genetic susceptibility is expressed as a disease. The prediction of genetic risk also depends on the sensitivity and the specificity of the test itself and the quality of laboratory procedures.

CONCLUSION

There is tremendous variability in genetic counselling as provided today and as envisioned for the future. As genetic testing expands with the growth of new genetic tests, genetic counselling and education will need to adapt to new modes and settings for the delivery of genetics services, without sacrificing quality. It is hoped that this directory would highlight the existing genetic laboratory and counselling centres in India. The researchers endeavour would be to continuously update this directory and make it more comprehensive, accurate and include more about the kind of test services that are available in each of the centres. The efficient registries, databases and continued investment in genetic research are the key to successful public health interventions.

REFERENCES

- Ad Hoc Committee on Genetic Counselling 1975. Report to the American Society of Human Genetics. *Am J Hum Genet*, 27: 240–242.
- Allyse M, Minear MA, Berson E, Sridhar S, Rote M, Hung A, Chandrasekharan S, Geraedts JP, De Wert

- GM 2009. Preimplantation genetic diagnosis. *Clin Genet*, 76(4): 315-25.
- Balarajan Y, Selvaraj S, Subramanian SV 2011. Health care and equity in India. *Lancet*, 377: 505-515.
- Bittles AH 2008. A community genetics perspective on consanguineous marriage. *Com Gen*, 11: 324–330.
- Christianson A, Howson CP, Modell B 2006. March of Dimes Global Report on Birth Defects. The Hidden Toll of Dying and Disabled Children. White Plains, New York, USA: March of Dimes Birth Defects Foundation.
- Haga SB, LaPointe NMA 2013. The potential impact of pharmacogenetic testing on medication adherence. *Pharmacogenomics J*, 13: 481–483.
- Kumar D 2008. Disorders of the genome architecture: A review. *Genomic Med*, 2(3-4): 69-76.
- Lewis MP 2009. Ethnologue: Languages of the World. Dallas, TX: SIL International.
- Mohanty AK 2007. How are Dominated and Minority Languages Maintained? Study of Collective Action in Two Tribal Cultures in India. *Invited paper presented at University of Hawaii*. Manoa, October 29.
- Pagon RA, Hanson NB, Kaiser WN, Covington ML 2001. Genetic testing. West J Med, 174(5): 344-347.
- Verma IC, Kumar D 2012. Epidemiology of Genetic Diseases in the Indian Subcontinent. In: D Kumar (Ed.): Genomics and Health in the Developing World. New Delhi: Oxford University Press, pp. 923-926.
- Wood P 2016. The Fall of the Priests and the Rise of the Lawyers. London, UK: Bloomsbury Publishing.

ANNEXURE

List of Genetic Test Services and Counselling Centres in India

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Department of Genetics and Molecular Medicine

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Telephone: +91-40-23296086

Department of Human Genetics

Advaced Science Bhavan, College of Science and Technology, Andhra University, Visakhapatnam - 530003 Telephone: +91-8912844724

Path Care Labs (P) Ltd.

Survey No. 34, Opp. Geetanjali Engineering College, Cheeryala Village, Keesara (M) Greater Hyerabad - 501301 Telephone: +91-40-30913333

Krishna IVF Clinic,

Z.P. Junction, Krishna Nagar, Maharanipeta, Visakhapatnam - 530002 Telephone: +91-891-2706164

CHANDIGARH

Genetic Centre

Government Medical College and Hospital, Sector 32-C, Chandigarh - 160031 Telephone: +91-172-2665253

Department of Haematology

Postgraduate Institute of Medical Education and Research (PGIMER), Sector-12, Research Block,

Chandigarh - 160012

Telephone: +91-172-2755125

Altus Diagnostic Pvt. ltd

SCO 35 Sector 16-D, Chandigarh - 160015 Telephone: +91-172-5017001

CHHATTISGARH

School of Studies in Anthropology

Pt. Ravishankar Shukla University, Amanaka G.E.Road, Raipur - 492010

Telephone: +91-771-2262818

Department of Biochemistry

Pt. Jawahar Lal Nehru Memorial Medical College, Jail Road,

Raipur - 492001

Telephone: +91-771-2525602

GUJARAT

Department of Cancer Biology Cell Biology Division, The Gujarat Cancer and Research Institute, The Gujarat Cancer Society, Civil Hospital Campus, Asarwa, Ahmedabad - 380016

Telephone: +91-79-22688000

Foundation for Research in Genetics and Endocrinology (FRIGE's)
Genetics Centre - Institute of Human Genetics, FRIGE House, Jodhpur Village Road, Satellite, Ahmedabad - 380015 Telephone: +91-79-26921414

Department of Pathology

Sterling Addlife India Limited Sterling Hospital Road, Memnagar, Ahmedabad - 380052 Telephone: +91-79-40011111

SN Gene Lab

2nd Floor, President Plaza, Tower A, Nr. R.T.O Circle, Nanpura (Ring Road), Surat - 395001

Telephone: +91-261-2471515

Gene Care - Genetic Diagnosis Lab 3rd Floor, Umeshwar Building,

Opposite Rushabh Tower, Rander Road, Surat - 395005

Telephone: +91-261-2772021

Supratech Micropath Laboratory and Research Institute

Kedar Building, Ellisbridge, Opposite Krupa Petrol Pump, Parimal Garden, Surendra Mangaldas Rd,

Ellisbridge, Ahmedabad - 380006 Telephone: +91-79-40408181

Gujarat Genetic Diagnostic Centre (GenDiCe)

Department of Zoology, University School of Sciences, Gujarat University, Ahmedabad – 380009 Telephone: +91-79-26302362

Sankalp Square II, Nr, Old Sharda Mandir Cross Roads, B/s. Jalaram Mandir Railway Crossing, Ellisbridge, Ahmedabad – 380006 Telephone: +91-7940372720

HARYANA

Quest Diagnostics India Private Limited

A-17 Info City, Sector 34 Gurgaon -122001

Telephone: +91-12-44608888

MedGenome Labs Pvt Ltd.

Unit No. 353, 3rd Floor, Building No. B-2, Spaze 1-Tech Park, Sohna Road, Sector - 49

Gurgaon - 122018

Telephone: +91-12-44366759

Molq Lab

Plot No. 28-29, Electronic City, Sector - 18,

Gurgaon - 122001

Telephone: +91-124-4278595

Forensic Science Laboratory

Haryana Madhuban Karnal,

Karnal - 132001

Telephone: +91-184-2380104

SRL Limited

Gp-26, Maruti Industrial Estate, Udyog Vihar, Sector – 18, Gurgaon - 122015

Telephone: +91-124-3001243

Diagno Labs India

138 Pace City -1, Sector-37,

Gurgaon - 122001

Telephone: +91-124-4734100

Dr Lal PathLabs Pvt Ltd.

12th floor, Tower B, SAS Tower, Medicity, Sector – 38,

Gurgaon - 122001

Telephone: +91-11-39885050

JAMMU AND KASHMIR

Government Medical College (Jammu)

Bakshi Nagar,

Jammu - 180001

Telephone: +91-191-2584247

Department of Immunology and Molecular Medicine

Sher-i- Kashmir Institute of Medical Sciences,

Soura, Srinagar - 190011

Telephone: +91-194-2401013

KARNATAKA

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Biotech Park, Electronic City phase I,

Bangalore - 560100

Telephone: +91-80-28521832

Kasturba Medical College - Manipal University

State Highway 65, Madhav Nagar,

Manipal - 576104

Telephone: +91-820-2922367

NeoGen Labs Pvt. Ltd.

UCF Center, 2nd Floor,

84/3 Oil Mill Road (On Hennur Main Road),

Lingarajapuram - 560084

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Department of Genetics

St. John's Medical College Hospital,

Sarjapur Road, Bangalore - 560034

Telephone: +91-80-22065000

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Anand Diagnostic Laboratory

No 54, Bowring Tower,

Bowring Hospital Raod,

Shivaji Nagar,

Bangalore - 560001

Strand Life Sciences

5th Floor, Kirloskar Business Park,

Bellary Road, Hebbal, Bangalore - 560024

Telephone: +91-80-40787263

Department of Human Genetics,

National Institute of Mental Health and Neurosciences

(NIMHANS).

Hosur Road, Bangalore - 560029 Telephone: +91-80-26995121

Center for Molecular and Cellular Biology,

Science Center,

Manipal Academy of Higher Education (MAHE),

Madhavnagar, Manipal - 576104

Telephone: +91- 9243777733

Eastern Innovative Technologies and Life

Sciences Pvt. Ltd.

No.999/6, 5th A Cross, 1st Block,

HRBR Layout, Ring Road,

Banaswadi, Bangalore – 560043 Telephone: +91- 80-41672660

Manipal Hospital

No. 98, Oppsite Leela Palace Road,

Kodihalli, Bengaluru – 560017 Telephone: 1800-3001-4000

Dhiti Omics Technologies Pvt. Ltd.

2/10, 5th floor, Prasad Group Complex, 80 feet road, RMV 2nd Stage, Poojari Layout,

Bengaluru - 560094

Telephone: +91-80-40916348

MedGenome Labs Pvt Ltd.

3rd Floor, Narayana Netralaya Building,

Narayana Health City,

258/A, Bommasandra Hosur Road,

Bangalore – 560099 Telephone: +91-80-67154900

Eurofins Clinical Genetics India Pvt. Ltd

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Hoodi, Whitefield, Bangalore - 560048

Telephone: +91-80-30982500

KERALA

Genetics Department

Edappal Hospitals Pvt Ltd, Edappal Post, Malappuram - 679576 Telephone: + 91-494-2660200

CIMAR Cochin

Unit of Edappal Hospitals Pvt Ltd, Off NH - 17, Thykkavu Bus Stop, Cheranalloor, Edappally, Kochi - 682034 Telephone: +91-484-4134444

Department of Foetal Medicine and Genetics

Lifeline Hospital, 14th Mile, Melood P.O, Adoor - 691523

Telephone: +91-4734-223377

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(A Subsidiary of SciGenom Labs Pvt Ltd.) Plot no: 43A, SDF, 3rd floor, A Block, CSEZ, Kakanad, Cochin - 682037 Telephone: +91-484-2413399

Regional Cancer Centre (RCC)

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Department of Pediatrics

Trivandrum Medical College, Medical College Post, Thiruvananthapuram – 695011 Telephone: +91-471-2528386

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Department of Anthropology

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Department of Molecular Medicine

Sri Aurobindo Institute of Medical Sciences, Indore Ujjain State Highway, Near MR 10 Crossing, Indore – 453555 Telephone: +91-731-4231000

MAHARASHTRA

Department of Genetics

Deenanath Mangeshkar Hospital and Research Center, Near Mhatre Bridge, Erandawne, Pune - 411004 Telephone: +91-20-40151395

Surlata Hospital

Sahayog Society, LJ Road, Mahim, Mumbai - 400016 Telephone: +91-22-24308246

SRL Diagnostics

Plot No 1, Prime Square Building, Gaiwadi Industrial Estate, S V Road, Goregaon West, Mumbai – 400062 Telephone: +91-22-45204558

Department of Cancer Cytogenetics

Tata Memorial Hospital, Dr. E Borges Road, Parel, Mumbai - 400012 Telephone: +91-22-24177000

Lilac Insights Pvt. Ltd.

1906 and 1907, 19th floor, Ambience Court, Behind Palm Beach Galleria, Vashi, Sector 19, Navi Mumbai - 400705 Telephone: +91-22-41841438

Department of Assisted Reproduction and Genetics

Jaslok Hospital and Research Centre, 15 - Dr. Deshmukh Marg, Pedder Road, Mumbai - 400026 Telephone: +91-22-66573333

Genetic Diagnostic Center

3rd Floor, C-8 and C-9 Commerce Centre, Opp Petrol Pump, Tardeo Road, Tardeo, Mumbai – 400034 Telephone: +91-22-23510563

Datar Genetics Limited

F8, D- Road, Ambad, Nashik- 422010 Telephone: 18001210700

GenePath Dx

Phadke Hospital, 1260/B, Janli Maharaj Road, Shivajinagar, Pune – 411004 Telephone: +91-20-25534780

PREGEN Preventive Genetics Diagnostic Centre

3rd floor, Daya Chambers, Next to Haldiram's Ajni Square, Wardha Road, Nagpur – 400015

Telephone: +91-9325880818

SDG's Genetic Center 102, Dom Ann Villa, Navinbhai Thakkar Road,

Opp. Rajpuria Hall, Vile Parle (E), Mumbai – 400057 Telephone: +91-22-26126079

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Telephone: +91-22-24138518

Metropolis Healthcare Limited

Kohinoor City Mall, Commercial Bldg-A, 4th Floor, Off LBS Marg, Vidyavihar (West), Mumbai - 400070

Telephone: +91-22-33993939

Vasulata Clinic and Research Center

106, Sion - Panvel Highway, New Panvel East, Navi Mumbai - 410206 Telephone: +91-2143-232905

Navjeevan Hospital

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PreventiNe Life Care

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MILS International India

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Chennai - 600034

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Velachery Main Road, Chennai - 600042

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Mediscan

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PerkinElmer

Chennai - 600032

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TELANGANA

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L V Prasad Marg, Banjara Hills,

Hyderabad - 500034

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Centre for Cellular and Molecular Biology (CCMB)

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