

Contract research and bioinformatics – a global perspective

TCG Lifesciences Limited is a provider of contract research services and informatics with a focus on preclinical outsourcing and drug discovery operations in India, the USA, Europe, Japan and Australia. In an exclusive interview, Swapan Bhattacharya, the company's managing director, gives his perspective on international trends in outsourcing of R&D in the life sciences sector.

TCG Lifesciences (TCGLS) started operations in Kolkata, India in 2001 and has since grown to a size where it has a global footprint. Starting as a chemistry outsourced services company, it evolved into an integrated drug discovery services company and now partners in discovery programmes with global pharma and biotech companies. It is part of the New York, USA-based global investment conglomerate The Chatterjee Group (TCG), founded by Dr Purnendu Chatterjee, a leading global investor.

"TCG Lifesciences originated in line with the chemistry outsourcing model that developed in the 1990s to tackle productivity issues and the high cost of drug discovery and development," says Swapan Bhattacharya, the company's managing director. "Realising India's potential to assist the global pharma industry in addressing the discovery and development challenges being faced by them, TCGLS was structured in a manner to connect India's extensive scientific talent with the scientific leadership and management

expertise of the West."

TCGLS' discovery research facilities include high-end chemistry and biology facilities including animal facilities, a modern electrophysiology lab, BSL 2 and 3 labs, and cGMP facilities at its R&D centres in Kolkata and Pune, India. In addition, its subsidiary Clininvent is located in Mumbai, India and its Labvantage business is headquartered in New Jersey, USA. Labvantage is now the world's second-largest laboratory information management system (LIMS) company.

New paradigm for drug discovery and development

"TCGLS offers a new paradigm for drug discovery and development with seamless integration 'from bench to bedside and back', meaning it has the capability to assist in translational research projects by combining the skill sets of its three divisions," says Bhattacharya. "From the business strategy point of view, by recognising the future needs of the pharma industry, TCGLS has

developed an integrated research platform that will connect chemistry, biology, clinical research and bioinformatics to pursue research, together leading to cost containment by reducing failure rates and speeding up the discovery and development process."

New capabilities, new deals

Recently, TCGLS entered into a strategic agreement with JSW Lifesciences, an EU-based CRO, to strengthen its R&D offerings in the area of central nervous system diseases. "This collaboration will add a new dimension to TCGLS' present offerings in the integrated drug discovery domain" says Bhattacharya.

This year, TCGLS, its clinical partner Prince Aly Khan Hospital, Mumbai, and academic partner Indian Institute of Chemical Biology, Kolkata, have been funded by the Government of India (CSIR) to discover and validate new biomarkers for head and neck cancer in India.

TCGLS has also signed a three-year contract with Chemical Abstracts Service (CAS) to provide its scientists and researchers with unlimited access to CAS's SciFinder to help the company grow its position as a CRO in drug discovery and development. "Our scientists now have on-demand access to the largest collection of small molecules and related information, including references to millions of peer-reviewed research papers and patents. SciFinder gives our researchers the insight they need to produce the flagship laboratory data for which we are known," says Bhattacharya.

Another development at the company was a strategic alliance with Japanese company Carna Biosciences Inc to collaborate and provide jointly high-end drug discovery services focusing on kinase targets to the global pharma and biotech sector. "CarnaBio and TCGLS possess complementary capabilities and, by virtue of this alliance, we expect to jointly address the research and development needs of existing and future



A researcher in one of the chemistry labs at TCG Lifesciences.

customers by offering seamless services through the entire drug discovery and development value chain in selected therapeutic areas that target on kinases. Kinase-based targets are in high demand today, particularly for the discovery of novel therapeutics for cancer," says Bhattacharya.

Recent global collaborations in discovery research include: a collaboration with Pfizer to develop a portfolio of preclinical candidate molecules in a series of discovery target programmes; and a

collaboration with Endo Pharmaceuticals to discover novel small-molecule drug candidates for the treatment of pain. TXGLS has also collaborated with a US pharmaceutical company in which it has developed process and analytical methods to

support supply of 50 kg/month of an active ingredient manufactured under cGMP.

In clinical research, the company has an alliance with Cancer Trials Australia (CTA) designed to exploit complementary capabilities in selected areas of clinical development and to offer services spanning Phase 1 to 4 clinical trials.

In the enterprise informatics field, the company is working with a European public health care authority on the digitisation of pathology labs in Northern Europe. These are the largest such installations in the world, with an overall data growth rate of 300 terabytes per year. The company is also working with a US-headquartered global contract research organisation on biobanking solutions to support that company's research and development.

Flexible approach

Bhattacharya says that TCGLS has always pursued a flexible approach in engaging with customers, with models ranging from fee-for-service FTE (full time equivalent) agreements through to risk-sharing in different formats. The company has relationships with more than 200 customers spread across global pharmaceutical and biotech companies, academia and research laboratories. Currently, it has ongoing relationships with 14 of the top 20 pharmaceutical majors.

Serving industry globally

"Our discovery research customers are spread around the world and include companies and

organisations in the USA, Europe, Japan and Australia. We communicate with our customers on a regular basis through video conferencing, by telephone, and through emails and chats. In addition, our strong IT platform enables us to electronically manage all lab notebooks, inventories and orders, and making real-time communication possible," Bhattacharya says.

"We see integrated drug discovery collaboration emerging as the preferred

model for global sourcing of research by the pharmaceutical sector. In the process, marginal players that offer non-specialised or 'generic' services and those that haven't achieved sufficient scale will find it difficult to survive. Pharma majors will rely more

on biotechnology and CRO players to support their pipeline needs given that many such players lack the R&D strength, post-restructuring, to develop candidates internally. In this likely scenario, TCG Lifesciences is well positioned as an experienced CRO with deep and broad scientific expertise and optimal scale. In order to maintain this leadership position, we will continue to add new capabilities and technology platforms that can be utilised by our partners. We will also continue to recruit and train our medicinal chemists to support drug discovery programmes running at our customer sites.

"Keeping the future prospects in mind, TCGLS has added significant capacity for parallel chemistry and ADME assays due to increased demand. Similarly, we have added multiple LCMS and other cutting-edge instruments for chemistry use and we are in the process of adding chemistry lab space. We have added about 30 per cent additional space at our biological and in-vivo lab facilities and have received regulatory approval of the BSL-3 lab. We are now in the process of establishing a strategic alliance that will expand our capacity for large-scale chemistry synthesis, which will enable us to more efficiently utilise our cGMP capabilities.

"In addition to integrated sourcing, the pharma industry along with non-pharma crop science, nutraceutical, cosmeceutical and speciality chemical players will continue to require functional sourcing of chemistry and biology services. We intend to continue diversifying our range of service and product

Meet Swapan Bhattacharya of TCG Lifesciences Limited



Swapan Bhattacharya is the managing director of TCG Lifesciences Limited (formerly Chembiotek Research International), a life sciences research services and informatics company based in India and part of The Chatterjee Group (TCG), a global investment conglomerate headquartered in the USA. He joined TCG in 1995 and in 2001 assumed responsibility for the development and expansion of TCG's life sciences business.

In 2007, Bhattacharya led the acquisition by TCG Lifesciences of Clininvent Research Pvt Ltd, a 'clinical trials' company, and Labvantage Inc, a laboratory information management systems company. He has also established a relationship with the Indian Government to operate and manage The Centre for Genomic Application, India's largest share-service facility in genomics and proteomics, in a public-private partnership.

Prior to joining TCG, Bhattacharya worked for PaineWebber Inc (now UBS PaineWebber) from 1987 to 1995. From 1980 to 1987, he was Advisor to the US Nuclear Regulatory Commission, where he was responsible for developing strategies in the disposal of nuclear materials and waste.

Bhattacharya received a BTech from the Indian Institute of Technology, Kharagpur, an MS from Virginia Polytechnic Institute and State University, and an MBA from the Kellogg School of Management, Northwestern University. He received the Lester Cunningham Award for academic excellence at Northwestern.

offerings in order to increase business from our existing customers and acquire new customers on a global basis," he concludes.

Further information

Swapan Bhattacharya
TCG Lifesciences Ltd
Block BN, Sector V, Salt Lake City
Kolkata 700 091
India

Tel: 91 33 2367 3151
Fax: 91 33 2367 3058

Internet links

Email: info@tcgls.com
Web: www.tcgls.com