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INDUSTRIAL INTELLECTUAL PROPERTY AWARDS 2018

Top 11 IP Driven Companies

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FOREWORD



Mr Chandrajit Banerjee
Director General, CII

Confederation of Indian Industry (CII) is committed to propagate and promote the role of IPR in leveraging competitive advantage by the Indian industries. In this context, CII, has been working closely with the Government of India for framing and implementation of IPR policies apart from helping industry, institutions and communities in protecting and leveraging IPR for economic and social development.

The CII Industrial Intellectual Property Award is the recognition and celebration of Indian Enterprises which have embraced IP generation and protection to fuel their economic growth and contribute towards the country's economic progress. The purpose of this award is to encourage organizations to foster a culture of overall Intellectual property management by identifying their patents, trademark and design portfolios and how these are being utilized for building a Competitive business model. Different categories of industry namely, large, small, medium and start-ups have been encouraged to participate in the competition and the entries were evaluated by a jury having IP experts.

This current publication (compendium) is an effort to capture the dynamics of top 11 IP driven organizations that had participated in the 2018 edition of the award series competition, and this compendium is a good reference document for the industry to learn and understand about IP best practices.

I hope this compendium will prove beneficial for the industry to be even more innovative and competitive.

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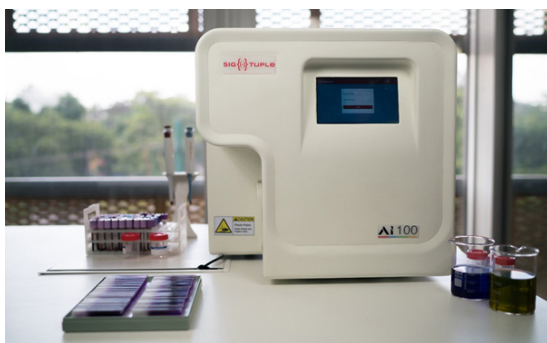
SigTuple Technologies Pvt. Ltd.

About Company



SigTuple is revolutionizing global healthcare with smart diagnostic solutions powered by robotics and artificial intelligence (AI) to provide medical reports with accuracy and precision. SigTuple's products focus on primary screening tests: Complete Blood Count (CBC), urine sediment analysis, semen analysis (morphology & motility) and retinal scan (fundus and OCT) analysis. SigTuple has come up with a first of its kind device, AI100, which empowers the analysis of blood, urine and semen samples. Manthana, a cloud based platform developed by SigTuple, performs comprehensive analysis of different imaging modalities using AI to generate medical reports backed by visual evidence. Manthana also facilitates tele-diagnosis using which quality healthcare can be catered to the masses. In the process of developing the solutions, SigTuple has so far filed 14 complete patent specifications encompassing all the products.

About Products



AI100 for Blood facilitates automated analysis of peripheral blood smears and has so far been deployed at 10 hospitals and laboratories across Karnataka. It can compute accurate white blood cells (WBCs), red blood cells (RBCs) and platelet total counts along with the detailed morphological analyses of all three cell families. It automates the 5-part differential for WBCs and reports nucleated RBCs, immature granulocytes, blasts and atypical lymphocytes.

Every finding in the final interactive report is supported by visual evidence from the captured slide images. With these features, the solution empowers pathologists by eliminating manual microscopy, thereby enabling the laboratories to reduce their cost and turn-around-time while improving the quality of reports.

AI100 for Urine detects abnormal objects such as crystals, casts, epithelial cells, RBCs, WBCs, bacteria and yeast from urine sediments, apart from calculating the related volumetric parameters. AI100 for Semen automates infertility investigations of ejaculated human spermatozoa by computing data for pivotal parameters such as progressive motility, concentration and morphological characteristics.

IP Portfolio

- **IP Policy**

SigTuple's IP policy constitutes of filing patent and trademark applications in appropriate jurisdictions to protect its products and services. SigTuple also takes critical care to minimize the risks for its products and services from the patent portfolio of its competitors.

- **R&D Structure**

R&D initiatives at SigTuple are invested into the product design and development activities of the technology department, which consists of three verticals- data science, robotics, and platform engineering. The data science team has around 20 members who create the AI models for analysing images and videos of visual medical data. The robotics team comprises of around 20 members who work on the devices that enable the scanning of images and videos from biological samples (blood, urine and semen). The platform engineering team has around 10 members who work on the product agnostic intelligence-driven software platform that generates the medical reports to the end user.



Roadgods Autogear Pvt. Ltd.

About Company



"Gods" which means "Gear of Daring Spirit", is the registered brand for many innovative products in categories of outdoor, travel, adventure and professional gear. They hold multiple IP grants in India, European Union (EU), have also filed in USA for a number of innovations in the products created.

About Products

The Ghost Backpack :



Traditional backpacks have a huge vulnerabilities with which we travel everyday. For a thief, stealing from a backpack is much easier than picking pockets. It is because a pocket is still very much in direct body contact whereas a backpack has several layers of stuff which do not let a person feel a hint of theft behind their back. Traditional backpacks can be easily accessed by razor cutting or through their unprotected zippers.

What's more, some people simply FORGET to close their zippers, making the job of thieves way easier!

Ghost has a patented the revolutionary design whereby its inner sanctum can only be accessed from its back, making it not just aesthetically unique in design, but also secure from unauthorized access by anyone around, protecting against thefts and pickpocketing. The Reinforced Fibre inner frame of GHOST serves a dual purpose of enhancing aesthetics and safety and it is designed such that a user just cannot FORGET to close the zippers before putting it on back! Ghost has IP/patents granted in India , European Union and filed in USA. "Ghost" is also a registered legal trademark of RoadGods AutoGear Private Limited. Ghost has sold over 50,000 units since its launch and it has been loved by its users with over 6000+ user reviews and 4.8+ avg. star ratings out of 5. It is the Bestseller on online portals such as Amazon, Flipkart etc.

The Xator Backpack :

The Xator has an Extraterrestrial Design, a design not like any other. The Sharp, Gothic, Falcon front design with streaks of leather protruding forward to create this extraordinary design. is the product is Tough, Agile and Extremely capable and possesses the ability to adapt and fuse with the user's lifestyle.



Innovative laptop compartment - Xator has 4 points stretchable mechanism which provides a snug fit to all laptops up to 15.6 inches display. It also reduces clutter with an advanced organizer inside.

Security - Its inner sanctum can only be accessed from its back, making it not just aesthetically unique in design, but also secure from thefts and pickpocketing. Its Outer shell is reinforced with unbreakable fiber for anti-theft and pick-pocketing protection.

Quick-Access Pockets: Xator has two quick access pockets which provide two times Quicker, Easier and Secure access of on-the-go stuff (Wallets, keys, chargers etc), than regular backpacks.

Xator opens 180 degrees like a suitcase which enables the user to organize stuff with ease. It also has an Impact-Secure sunglass compartment to protect sunglasses from external impact.

Xator has patents granted in European Union (EU) , filed in India , USA.

"Xator" is also a registered trademark of RoadGods AutoGear Private Limited.

IP Portfolio

• IP Policy

RoadGods is committed towards product innovations and this is defined in their vision which states: "To create a Global brand known for its disruptive products, which through innovations,solve problems, create unique experiences and bring user delight."

Guided by their vision the company has created multiple product innovations and it holds numerous IP on the same. The company continue to strive towards creating innovation because they believe that it is through innovation that they can solve the problems of the users.

The products of this company have received lots of love from the users and are bestsellers for the same reason that they solve customers problems. The company is very actively focused on filing IP for their innovations and in a short span of 3 years they have an extensive IP portfolio which corroborates their vision.

Total Patents/Designs filed: 15 applications (Including applications in India, EU and USA)

The company have patents and trademarks filed/granted in: India , USA and European Union (a consortium of 38 countries)

• R&D Structure

RoadGods has an internal research and development studio. They have a team of design and technology professionals who are actively working on creating the next level of innovations.

They also have an internal prototyping unit with tools, machinery, personnel, and equipment to create the product innovations. They also have connected community of travellers, riders and outdoor enthusiasts who test the products before they are launched.

Even after the launch of products the company stay in touch with their users to listen to their feedback about the product and then continue the research and development on the product, based on the feedback, and add more features to evolve the product consistently over a period of time.



Prantae Solutions Pvt. Ltd.

About Company



Prantae is a technology based startup founded by a woman entrepreneur focusing on early prognostics for pregnancy disorders like Preeclampsia. The Startup is recognised under Startup India

and Startup Odisha . Prantae has received grants from Tata-trust Harvard-SAI-IIT-D, MSME, DST-NIDHI-PRAYAS and DBT-BIRAC-BIG and BPCL 'Ankur' for their innovative and inventive technologies.

About Products



EyeRa® Sense is an innovative product with a capability to detect every single molecule and an ideal diagnostic device for sparse bio-analytes that remain undetectable with the conventional techniques. This product is a combination of plasmonic nanoparticles, energy acceptor, plasmon resonance and optical geometry. This has been tested for sensitivity of Femtomolar concentration and can be applied for the detection of various bio-analytes including micro-RNA, RNA, DNA, protein etc. The change in the input light intensity and output light intensity corresponds to the amount

of the specific bioanalytes present in the test. The product has already been covered with trademark, product and process patent while the PCT and software copyright is under draft. The project has been supported by Tata Trust-Harvard SAI, DBT -BIRAC SIIP and DBT-BIRAC BIG.



ProFloU® is an innovative product for quantitative determination of urine micro-albumin, a vital marker for chronic disorders like Chronic-Kidney-disorder, Cardiovascular-disease, Hypertension, Diabetic-nephropathy, Pregnancy-disorder like Preeclampsia etc. The product is based upon a noble biochemistry between the dye and the human-serum-albumin (HSA). This interaction can be visualized as a function of change or shift in

the spectrum of light (absorbance and emission wavelength) while the HSA amount can be quantified by measuring the intensity of the light. This inventive biochemistry has been coupled with an inventive optical design to enable simple, affordable and sensitive detection. The conversion of the intensity of light to HSA as milligram-per-Litre has been carried out with a designed algorithm based on the standard curve created. The product has already been covered with trademark, product and process patent while the software copyright is under draft. The project has been supported by MSME and BPCL 'Ankur' Grant

IP PORTFOLIO

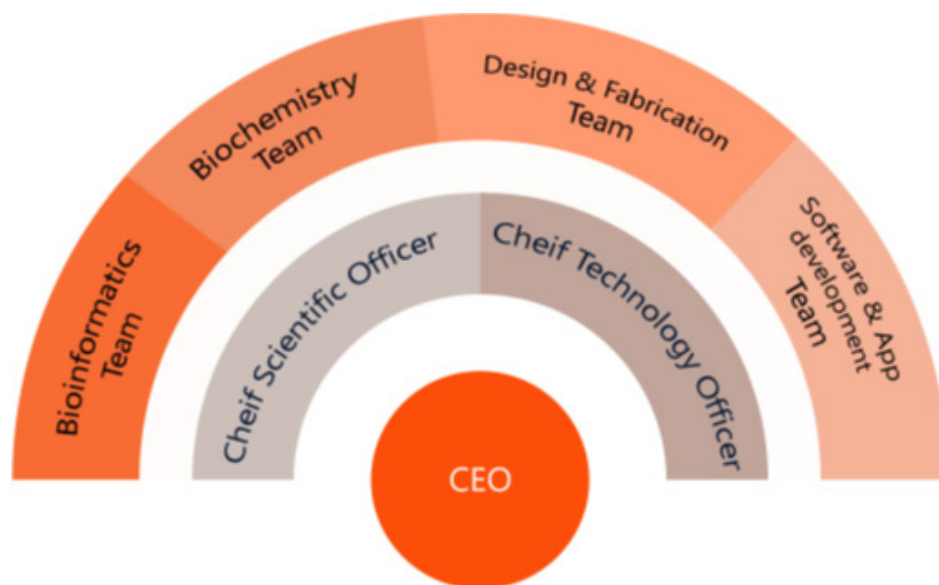
• IP Policy

Prantae presently has

- 9 trademarks from Indian trademark Office
- 1 trademark is applied under Indian trademark Office.
- 2 patents applied under Indian Patent Office.
- Prantae is preparing draft for:
 - 1 PCT filling under process.
 - 2 Design Patents
 - 2 Software Patents

• R&D Structure

Prantae presently has the following R&D structure





SVP Laser Technologies Pvt. Ltd

About Company

SERVICE
VALUE
PRECISION

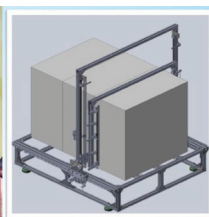


SVP LASER is a design and manufacturing company established in Chennai by Alumni of IITM in 2009. SVP is involved in design and manufacturing of advanced material processing CNC machines using a wide spectrum of technologies like LASER, Plasma, rapid-prototyping, Router, Wire cutting etc. We also undertake industrial projects and innovative new product development in

the field of robotics, Industrial automation, machine vision, CAD/CAM software, CNC controllers, Industrial IOT machines etc. SVP Laser has developed low-cost CNC machines with indigenously developed technology products like the MULTICNC.IN (Multi-purpose Subtractive prototyping machine and software), AutoCAM2D.com (CAM software), RoboCNC.in (Vision guided educational robot), ECNCshop.com (Online Machine shop) etc. SVP Laser Technologies was selected as the "Best Start up in Manufacturing" in CII Startuppreneurs 2015 and has conducted several skill development training programs in partnership with local Educational institutes.

- Established in year – 2009, Location – Chennai, Founder & MD: Viswesh Srinivasan, BTech (IITM), MS(USA).
- 15 Indian patents, 7 PCT applications, 1 US patent application, 7 Trademarks filed.
- Technology development in collaboration with IITM as academic partner, 1.5 crore DST funded projects under the AMT and UAY schemes.
- 100+ Clients ranging from corporates like TATA, St.Gobain, Elite institutes like IITs & IISC and all the way to cottage industries like jewellery, PCB, packing etc.
- Recognition by CII as BEST STARTUP IN MANUFACTURING, PAN INDIA
- Potential for creating IMPACT in national missions like MAKE-IN-INDIA, SKILL-INDIA, DIGITAL-INDIA, WOMEN-EMPLOYMENT etc.

About Products



MultiCNCTM abrasive wire cutting machine for cutting industrial insulation products like pipe-sections, saddles etc. In various materials like PU, PIR foam, rockwool etc. MultiCNCTM hot-wire cutting machine for EPS/EPE foam cutting for various

Industrial applications like packing, Construction, Insulation, Pattern making etc. We have added several innovative patent-pending features like block piercing system, closed loop feedrate control for higher productivity, 4-axis RotoScoop for packing, Intelligent block moulding system for wastage reduction etc. Foam is a 100 Billion USD market worldwide (bigger than India's jewellery market!)



MultiCNC router/milling machine, customised for various Industrial applications like Jewellery cutting, PCB making, Sculpting, Control panel switch board cutting, packaging, prototyping etc. Indigenously developed CNC controllers, CAM software, mechatronic system enables us

to address the needs of even bottom of pyramid cottage Industries, thus improving quality & quantity of their production, ultimately resulting in higher profits for the artisans.

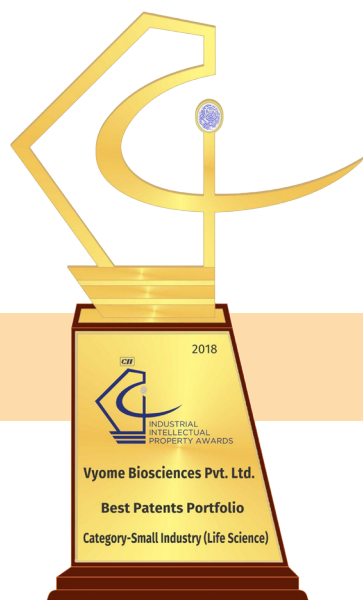
IP Portfolio

• IP Policy

SVP Laser Technology always ensure for every new idea, file at least a provisional patent, before commercialising or discussing with clients. The company we respect 3rd party IP and abstain from any sort of infringement. The company frequently have internal meetings studying the latest patent filings in thier domain and each employee presents a case study use case, explaining the innovation to other team members. The office of SVP Laser technology is in close proximity to IITM, which has a strong IP cell and conducts frequent seminar on IP rights. SVP founder Mr.Viswesh is an Alumni of IIT Madras and has a strong business association with IITM both professionally and as an Alumni. Employees frequently attend the IP rights seminar at IITM.

• R&D Structure

SVP follow systematic and Industry standard procedures in their R&D and New Product Development (NPD). Extensive industry survey with customer feedbacks is recorded and any new development is taken up, only for Industry-defined problems. They are associated with IITM in two DST funded projects, under the AMT and UAY schemes, with funding of 1.6 crores.



Vyome Biosciences Pvt. Ltd.

About Company



Vyome Biosciences is an innovation-driven clinical and commercial stage company with a deep pipeline of novel technologies and products for the treatment of antibiotic resistant

acne and other opportunistic skin pathogens. Vyome's lead drug development program, a topical product for antibiotic resistant acne is under initiation of phase 2B clinical trials in USA. Vyome has a deep preclinical pipeline of New Chemical Entities based on Dual Action Rational Therapeutics (DARTs) technology to treat indications caused by opportunistic skin pathogens to overcome resistance development. Vyome has developed clinically proven antifungal products based on patented Molecular Replacement Therapeutics (MRT™) technology and commercialized them. Currently, Vyome has >110 patent applications filed globally including in India, 12 granted patents and significant number of trademarks and design applications in India. Vyome has assembled a world-class team of scientific and business experts who have a track record of developing breakthrough products and building sustainable businesses.

About Products



Vyome has a breakthrough, novel patented technology platform for enhancing the efficacy of anti-fungal molecules - Molecular Replacement Therapeutics (MRT™). Vyome has developed and clinically tested VB-001 (an antidandruff lotion) and VB-3222 (an antidandruff shampoo) for treating refractory Seborrheic Dermatitis or Dandruff using this technology platform. This technology revolves

around the idea of substituting essential biomolecules in the tissue micro-environment, where an infecting microbe is thriving, with agents that are deleterious to the growth of the pathogen. Vyome has an exclusive product supply arrangement with a large global specialty pharma company for commercialization of these anti-fungal products. We have more than 3 patent series and more than 30 patent applications filed globally for this technology.

Product-2:

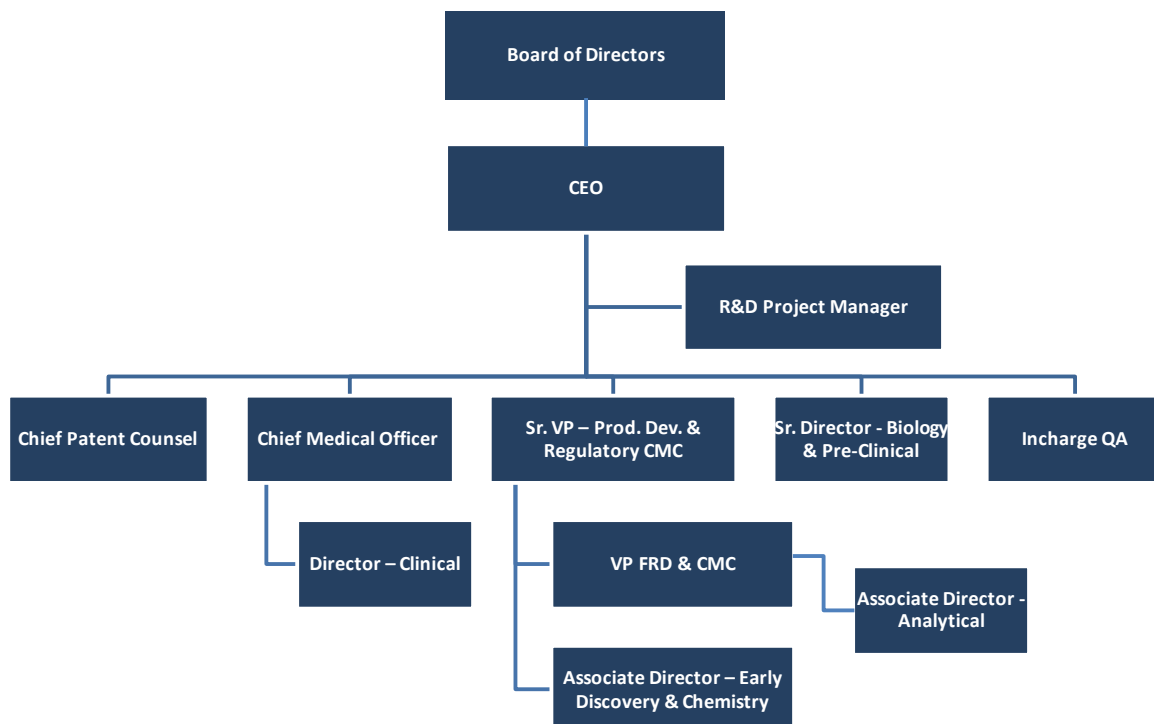
Vyome's lead program VB1953, a topical gel that has a next generation antibiotic cum anti-inflammatory active agent with a patented microgel technology system that ensures the drug is retained at the site of infection and minimizes systemic exposure. VB1953 targets a big unmet need of antibiotic resistance in the treatment of Acne. It has completed IND filing in USA, Phase 1 in USA and Proof of Concept human efficacy studies (12 weeks of drug application) by successfully meeting the study endpoints. It is currently under Phase 2B clinical trial initiation in USA. We have more than 15 patent applications filed globally for this technology and product.

IP Portfolio

• IP Policy

Vyome Biosciences has a comprehensive intellectual property (IP) policy that provides a framework for IP management by guiding all aspects related to IP generation and protection within the Company. It defines IP as all forms of legally recognized intellectual property, including patents, trademarks, copyrights, trade secrets, and know-how. This policy governs, among other things, filing of patent applications, maintenance of patents, licensing of IP and technology transfer. The policy also provides procedures for employees to follow for management of IP generated by the Company.

• R&D Structure





Ittiam Systems Pvt. Ltd

About Company



Ittiam Systems is focused on Advanced Video Processing and Visual Analytics, which are at the intersection of digital signal processing, computer vision and machine learning. Ittiam's solutions form the core engine of hundred million lifestyle products in mobility, content creation and consumption. Ittiam is a recipient of NASSCOM IT Innovation Award and has been recognized by Government of India DSIR for its R&D capabilities

About Products



High Efficiency Video Coding (HEVC) Decoder. Ittiam's High Efficiency Video Coding (HEVC) product is a state-of-the-art Video Decoder conforming to MPEG's H265 specification. It comprises advanced toolsets, support for innovative tools via advanced algorithms, delivering pristine video quality. Ittiam's HEVC enables significant compression gains for Online Video, compared to previous generation's widely deployed H.264 format. Ittiam's solution delivers cutting edge performance, with efficient battery usage, for resolutions all the way from 720p (entry level HD) to 1080p (prevailing HD) to 4K (emerging

UHD). Ittiam's Decoder is integrated into Google's Android framework, deployed at scale in Billions of consumer devices worldwide (starting 2014, and continuing innovation-led updates since), and the complementary Encoder is a part of the Content Creation Media Workflow in public Cloud-encoding service viz. Microsoft Azure. Ittiam empowers video streaming community to create high quality video workflows in the cloud, while substantially reducing storage and delivery (CDN) costs. This innovation enables streaming high-quality videos, efficiently.

IttiamInsite

IttiamInsite is the future of customer analytics for businesses with physical retail space, integrating multiple sources of visual and statistical data into one comprehensive, easy-to-use service. The IttiamInsite service innovates via Real-time processing of video, with image extraction and recognition [Computer Vision technology] in the Retail Store via state-of-the-art sensors. With production deployment of Machine Learning (ML) and Deep Learning (DL), both in the "training" and "inference" modes [Artificial Intelligence application], the service helps Offline Retailers (Physical Stores) bridge the data

acquisition and analytics gaps vis-à-vis the advanced analytics state that Online Retailers (e-commerce innovators) have been able to establish through their detailed website analytics of visiting consumers. Ittiam's advanced algorithms mine relationships in the data collected, thereby offering retailers valuable and actionable insights. Leveraging the Media processing expertise of 16+ years, Ittiam's Data Processing Engine efficiently balances the algorithm's computing and complexity, both on "Edge" and "Cloud" [Edge-Cloud Architecture].

IP Portfolio

• IP Policy

Ittiam has a very clear policy for handling of intellectual property. Ittiam strives to avoid willful infringement of patents, copyrights, and trademarks in its products and services. Ittiam develops clean-room algorithms and implementations which are then licensed to its customers. Use of third party and open software, if any, in Ittiam's licensed software are explicitly called out in its licensing agreements. Ittiam also periodically runs open-source contamination checks through software such as third party licensed software Black Duck, to protect its proprietary ideas, Ittiam files for patents, typically with Indian Patent Office and the United States Patent Office. These patents form the foundation of solutions licensed to customers through implementations in licensed software, and, many a time customers are indemnified, implying a high confidence on non-infringement of other IP. Whenever Ittiam's IP is built on top of a standard specification, customers are informed to make separate arrangements to license the essential patents behind the standards through an appropriate licensing authority. When Ittiam creates any document, that contains information of a classified nature, it ensures that it is marked as "Ittiam Confidential" or "Ittiam Proprietary" as appropriate. These documents cannot be taken out of the office premises.

Countries where Ittiam Patents are filed:

- United States of America
- India

• R&D Structure

Key research activities undertaken by Ittiam include,

- Media compression technology for adoption in ITU-T/ISO standards
- Machine learning based media coding technologies
- Computer vision and machine learning based visual analytics solutions for retail market
- Security frameworks for smartphone software related to multimedia applications
- Virtual/augmented reality
- Internet-of-things with cloud based management
- Visual analytics for surveillance

In all, about 25% of Ittiam's engineering resources are engaged in research activities. Research activities are planned and managed by Technologists and Senior Principal Engineers. As one illustration of Ittiam's emphasis on R&D investments, the R&D cost incurred during 2017-18 was INR. 12.14 Crores. To highlight another important facet of encouraging R&D culture in the company, technologists are recognized through a stringent, peer-review-election process at different levels of technical excellence as below, which is similar to the practice followed by globally acclaimed technology companies:

- Member of Technical Staff (MTS)
- Senior Member of Technical Staff (SMTS)
- Distinguished Member of Technical Staff (DMTS)
- Ittiam Fellow



Optimus Drugs Pvt. Ltd.

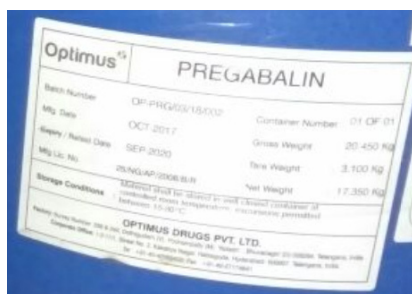
About Company

Optimus

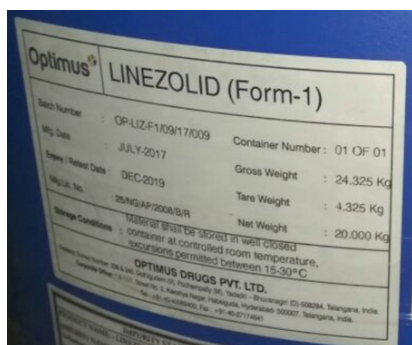
Optimus established in 2004 by a team of scientists who had a passion towards chemistry and to ensure a better healthcare to everyone. In our journey of more than a decade we have developed

many niche molecules and have emerged as one of the reputed manufacturing company in the industry. Our determination has driven us from a development lab to a commercial scale intermediates /APIs/finished dosages manufacturing company. Our strength lies in our strong novel/polymorph chemistry, process engineering and focus on R&D which enabled us to meet the global Pharma requirements. We believe our human resource is our best competency who are dedicated and determined for the betterment of the organization. As a rapidly growing company, we ensure, respect and strictly implement "EHS" policy.

About Products



Pregabalin is described chemically as (S)-3-(Aminomethyl)-5-methylhexanoic acid. Pregabalin is indicated for neuropathic pain associated with diabetic peripheral neuropathy (DPN), postherpetic neuralgia (PHN), adjunctive therapy for the treatment of partial onset seizures in patients 4 years of age and older, fibromyalgia, neuropathic pain associated with spinal cord injury. Pregabalin was marketed under the trade name LYRICA® and it is available as capsule for oral use, containing 25, 50, 75, 100, 150, 200 and 300 mg of free Pregabalin.



Pregabalin (IN283092): The present invention, describes an improved process for the preparation of enantiomerically pure pregabalin which comprises resolving (RS)-Pregabalin with S-(+)-mandelic acid in the presence of water (absence of organic solvent) to get S-(+)-3-aminomethyl-5-methylhexanoic acid (S)-mandelic acid salt, which is treated with caustic lye solution to get enantiomerically pure pregabalin. The present invention uses only water as a solvent in the resolution process of

Pregabalin with high purity and good yield on cost effective, eco-friendly, commercially

scale suitable for large scale industrial production. An invention is a new solution to a technical problem protected through intellectual property (IP) rights. IP plays an important role in facilitating the process of taking innovative technology to the market place.

Linezolid is described chemically as (S)-N-[[3-[3-Fluoro-4-(4-morpholinyl)phenyl]-2-oxo-5-oxazolidinyl]methyl]-acetamide. Linezolid is an oxazolidinone-class antibacterial indicated in adults and children for the treatment of the following infections caused by susceptible gram-positive bacteria: nosocomial pneumonia; community-acquired pneumonia; complicated skin and skin structure infections, including diabetic foot infections, without concomitant osteomyelitis; uncomplicated skin and skin structure infections; vancomycin-resistant enterococcus faecium infections. Linezolid was marketed under the trade name ZYVOX® and it is available as tablet for oral use, containing 600 mg of free Linezolid.

Linezolid (IN 281489): The present invention, describes an improved process for the preparation of Linezolid which comprises reacting methyl (3-fluoro-4-morpholinophenyl) carbamate with 2-[(2S)-oxiran-2-ylmethyl]-1H-isoindole-1,3 (2H)-dione in presence of inorganic base such as metal hydrides or alkali metal iodides, the reaction is completed within 2 to 3 hours at 50°C, followed by subsequently conversion to Linezolid. Moreover, the entire reaction is carried out in less span of time with suitable temperature and thereby producing good quantity of yield and high purity of Linezolid with the cost-effective and commercially feasible process. An invention is a new solution to a technical problem protected through intellectual property (IP) rights. IP plays an important role in facilitating the process of taking innovative technology to the market place.

IP Portfolio

• IP Policy

Optimus Intellectual Property (IP) is a crucial portion of a company's assets. A strong patent portfolio provides confidence and relative freedom to operate (FTO). Optimus management of intellectual property has increasingly been recognized as a powerful instrument of corporate strategy and a main source of competitive advantage. Patents have become ever more important for firms in order to protect technologies from imitation, achieve a stronger position in global markets, strengthen the firm's technological leadership, and enable the trading of intellectual assets. Optimus is committed to a high level of legal and ethical standards in the conduct of our business. It is the policy of the company to compete fairly in the marketplace. This commitment to fairness includes respecting the intellectual property rights of our suppliers, customers, business partners, competitors, and other independent service organizations. The Company is committed to protecting its own intellectual property, such as information, processes, and technology, from infringement by others.

• R&D Structure

The R&D is well equipped with the infrastructure that supports advanced research and innovation, our team comprises of 75 lead scientists and many others working under them. The team continuously thrives for the development of NCEs and process innovation with the approach of knowledge driven research. Optimus, believe that R&D is the foundation for a harmonious growth of any organization and they also value research more than any other activity. They are well aware that in the arena of competitive Pharmaceutical industry, having R&D Infrastructure and competent scientists is not enough; having the right strategy and staying a step ahead of others is crucial. They are proud of there research accomplishments and the company look forward to many more R&Ds/IP challenges in the future, with a great level of confidence and enthusiasm.



Tata Consultancy Services Ltd.

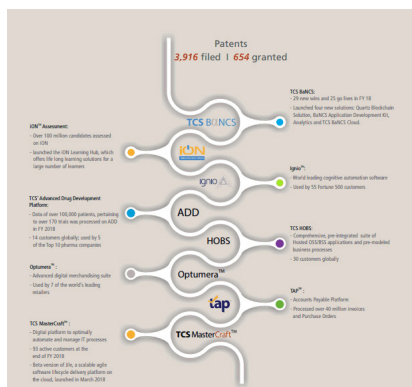
About Company



TATA CONSULTANCY SERVICES

2018. Innovation is in the DNA of TCS that has resulted in filing of more than 3000 patents in the last 6 years at a steady pace. The adoption of scalable, sustainable and quality assured IP management has enabled TCS to gain mindshare in the global IP ecosystem. This has translated in several awards that TCS has received in recognition of its IP culture and consistent throughput. Creation, Protection and Assetization of IP and aligning it to customers' current and unmet needs, is the key tenets of TCS innovation culture.

About Products



TCS has successfully navigated through multiple technology cycles over the last five decades, pivoting and adapting each time to build relevant new capabilities and helping its clients realize the benefits of that new technology. TCS leverages deep contextual knowledge from multiple engagements to discover the market needs and build innovative and transformative solutions. This is aided by TCS' investments in a robust research and innovation program, IP portfolio of accelerators, products and platforms, and partnerships and alliances with leading and emerging technology providers.

The following is a select list of TCS products and platforms. TCS website provides the full list along with associated details.

- **BaNCS™:** An universal financial solution that is designed to help financial services institutions enhance end customer experience, enabling them to embrace open and innovative technologies that embody true digital customer engagement.
- **iON™:** A cloud based solution that is modular, scalable and configurable and thereby gives businesses and educational institutions the benefits of increased efficiencies, faster go-to-market, and better business results.
- **ignio™:** A cognitive automation solution that can learn, resolve and prevent operational issues autonomously, manifesting itself as intelligent virtual experts

that augment humans and empowers them to do more.

- Advanced Drug Development (ADD): A platform to create a comprehensive, readily accessible data source that fosters accelerated study setup and execution, integrating key features of our intellectual property assets with commercial-off-the-shelf offerings.
- HOBST[™]: A cloud based, catalog centric platform that provides Communication Service Providers (CSP) and other subscription based digital businesses an end-to-end, interoperable, intelligent modular solution to streamline operations, improve business agility, enhance customer experience and leverage ecosystem play.
- Optumera[™]: A digital merchandising product for cross-channel shopping experience.
- TAP[™]: A cloud based solution for Procure to Pay (P2P) functions, brings digital levers with cloud, mobility, self-service, intelligent automation and embedded analytics.
- TCS MasterCraft[™]: An Intelligent Application Delivery platform comprising multi-mode lifecycle management, intelligent application modernisation, low code development, data quality and privacy assurance, and data governance.
- Jile[™]: A comprehensive cloud based platform that transforms software application development and delivery in enterprises, and drive the agile culture and mindshare across the business.

Number in the image is as on 30th March 2018.

IP Portfolio

• IP Policy

TCS' IP policy has detailed communication note on IP governance and IP processes, that talks about creation, protection, right-access and right-use of intellectual property and focuses on asset development that are 'Safe to Create', 'Safe to Protect' and 'Safe to Use'. These principles are core to organization's culture. Institutional awareness, training, processes and systems are the key enablers towards the adoption of stated principles.

• R&D Structure

Tata Consultancy Services as an organization believes in innovation led development and leveraging vast pool of IPs for effective utilization of TCS' intellect. Over the period, TCS has built a portfolio of patents which is strategically aligned to organization's 40+ Business Aligned Cluster (BAC). TCS believes in BAC based portfolio approach that supports its service business and asset business. TCS has nearly 4000 patent applications across 33 jurisdictions, as of 30th June 2018. R&D in TCS has a network of research areas and innovation programs that focuses on domains and technologies, and enables agile development and scaling of asset development activity. It has also established TCS' Co-innovation Network (COIN) partner program to develop technology and models in certain areas of market interest.



Hero Motocorp Ltd.

About Company



Hero MotoCorp Ltd. was established in the year 1984 and is located at New Delhi. Hero MotoCorp Limited is the No.1 two-wheeler manufacturer across world for last 17 consecutive years, with 85+ million cumulative sales. It has a Global presence in 37 countries

and is having total of 7 world class manufacturing plants; 5 in India, 1 in Colombia and 1 in Bangladesh. The company got separated from its erstwhile JV partner in 2011 and started its own in house R&D, Centre of Innovation and Technology at Jaipur, Rajasthan with around 700 employees which houses all aspect of research and development under same roof which has world-class & state-of-art facilities. The Company have Intellectual Property protection in over 90 countries and considers its IP as most valuable assets and extension of business. The Company provides and govern itself with its robust process driven IP policy for protection and diligently guarding its large IP portfolio across the globe as per its business strategies.

About Products

"Super Splendor 125"

"Super Splendor 125" is most powerful Splendor variant on offer having 125cc BS-IV compliant semi-vertical engine and equipped with Idle Stop Start system (Patent Applied). Idle stop-start system helps in saving fuel by stopping the engine when the vehicle is



not intended to run, for example, when the vehicle is standing at an intersection or a traffic signal. The engine so stopped by "Idle Stop Start system" can be re-started by simply actuating the clutch lever, leading to customer delight. i3S developed by Hero Motocorp, has a cost effective solution, without using any additional sensor unlike the other known systems which include sensors such as throttle position sensor, vehicle speed sensor etc. The Super Splendor 125 is elegantly designed for universal appeal. Its aesthetic features include a new seat with a sportier

design, new side panels and a new LED tail lamp, Auto headlamp on (AHO), side-stand indicator and a wider tyre.

"Maestro Edge"

Built on a completely new engine and chassis platform, 'Maestro Edge' demonstrates passion for technology and innovation at Hero, further reaffirming the company's strong focus on developing new products that cater to a global audience. The all-new 110cc Maestro Edge is a premium product making a bold statement with its dynamic design and



features. This Scooter boasts of several new features like twin parking lamp, remote fuel lid & seat opening and digi-analogue dashboard. It features multiple safety and convenience features including the side stand indicator, dimmer cum pass switch, boot light, LED Tail Lamp and throttle position sensor (TPS). Integrated Braking System (patent applied), Telescopic Front Suspension and bigger 12-inch front wheel offer riding comfort and improved stability. Providing integrated braking system in two-wheelers is known but most of the systems available in the market are costly.

Hero MotoCorp has always aimed at providing the best technology at economic prices.

IP Portfolio

• IP POLICY:

Company has robust policy in place with clear guidance for protection and enforcement of its large IP portfolio across the globe in alignment with short term & long term business strategies.

IP policy is based on the following elements:

- Creation of business strategy for product & brand guidelines evaluating risks and budget.
- Protection of IP portfolio by finalizing process for filing the proposed IP (trademark, patent, design etc.), renewals, refusals, oppositions, registrations, licensing/ assignment, reporting unauthorized use / infringement etc.
- Management of IP assets by dedicated IP Team(s) with support of relevant stakeholders and data administration including timely review of IP Portfolio along with proposed/ new IP and related strategies, all changes in ownership and renewals, monitoring potential infringements, handling IP litigation and enforcement of IP rights.
- Regular Auditing of the Portfolio to assess their value in light of the costs involved in growing and maintaining the rights that they contain. This further helps in identifying the IPs not being used; as well as gaps in protection to avoid probable threat against its protection.
- Regular IP Training Sessions to keep the relevant stakeholders updated about the importance of IP, existing IP laws and updates, risks, enforcement and protection of IP.

• R&D Structure

The state of the art & one-of-its-kind Hero MotoCorp R&D facility, the Centre of Innovation & Technology (CIT) is a reinforcement of Hero MotoCorp's commitment to innovate sustainable mobility solutions, for the world, in India. CIT houses all aspects of research and development under one roof including self-sufficient facilities for new product design, prototype manufacturing, testing and validation. Our in-house testing tracks span a total length of ~16 kms and have 14 different tracks facilitating a wide array of vehicle testing activities. CIT has been granted Platinum rating of 91 points by Indian Green Building Council (IGBC), making it the highest rated facility among the manufacturing sector in India. CIT is home to around 700 automotive R&D experts with global & regional expertise, strengthening our in-house R&D capabilities under the leadership of the Chief Technology Officer, Dr Markus Braunsperger. He comes to Hero from BMW, Germany, where he worked for past 25 years in several senior level roles in R&D, Production, Strategy including heading the entire R&D function for BMW motorcycles for several years and brings with him a wealth of experience and domain knowledge. CIT has emerged as a melting pot of world class infrastructure and the top R&D talent pool to 'Innovate in India', not just for the country but for the world. CIT is a game changer towards achieving the vision of "Energizing Smart Mobility Technology".



Sun Pharmaceutical Industries Ltd.

About Company



From humble beginnings in 1983, Sun Pharma has grown to become the fifth largest generic pharmaceutical company in the world. We provide high-quality medicines trusted by customers and patients in over 150 countries across the world. Our global presence is supported by over 40 manufacturing facilities spread across six continents, R&D centres across the globe and a multi-cultural workforce comprising 50 nationalities. India and the US are our predominant markets, accounting for over 60% of our global revenues of US\$ 4 billion. Sun Pharma fosters excellence through innovation supported by strong R&D capabilities comprising about 2,000 scientists and R&D investments of approximately 8% of annual revenues.

About Products



SYNRIAM (INDIA)
SOLIFENACINE (INDIA, CANADA)
VALSARTAN (US)
METFORMIN (US)
CLOPIDOGREL (US)
CEFPODOXIME PROXETIL (US)
ATORVASTATIN (INDIA)
PREGABALIN (NETHERLANDS, INDIA, KAZAKISTAN)
MEROPENEM (INDIA)
DORIPENEM (INDIA)
VORICONAZOLE (INDIA)
FEBUXOSTAT (INDIA)
SIMVASTATIN (NETHERLANDS, SOUTH AFRICA AND MOROCCO) GEMCITABINE (US)

IP Portfolio

- We have around 2000 research scientists working in multiple R&D centres equipped with cutting-edge enabling technologies for research.
- Our scientists have expertise in developing generics, difficult to make technology intensive products, Active Pharmaceutical Ingredients (APIs), Novel Drug Delivery Systems (NDDS) and New Chemical Entities (NCEs).
- R & D Centers – 9
- Sun Pharma spent 8.6% of its sales on R&D during FY18.
- Total Patent application submitted: 1106
- Total Patent application granted: 1065



Biocon Ltd.

About Company

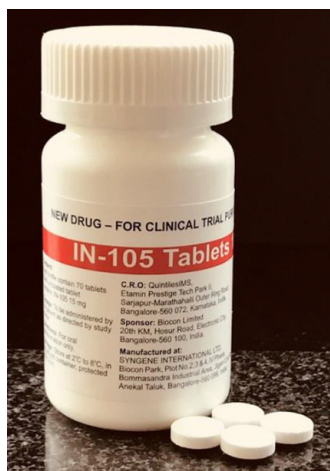


Biocon a Bio-pharmaceutical company having pharmaceutical products including biologics/ biosimilars drugs for patients in India and other emerging markets. They have IP portfolio of over 1400 patent applications and with around 1055 granted patents and 675 registered trademarks globally.

About Products



Itolizumab: 'Itolizumab' (trade name: Alzumab) is a 'first in class' humanized IgG1 monoclonal antibody and is a novel biologic drug that has provided the unique therapy for the treatment of chronic plaque psoriasis (a socially debilitating disease). The unique Mechanism of Action (MOA) claims to offer superior safety and similar efficacy profile compared to other existing therapies, and has a long remission period with very low opportunistic infection rate. Biocon has a strong IP portfolio (patents/applications expiring up



to 2034) including, molecule, method of treatment, formulation, mechanism of action. The product is currently being marketed in India and clinical trials are underway for US, Europe and other jurisdictions.

Tregopil (IN-105): In the field of diabetes, Biocon's lead program is Insulin Tregopil, a first-in-class oral insulin molecule for post-prandial glycaemic control which is protected by more than 300 granted patents in various jurisdictions. As a novel insulin molecule it mimics the physiological benefits of direct delivery into the portal vein and promises to offer better patient compliance. It is among the most advanced programs in the global oral insulin space and promises to transform diabetes management. The endorsement of our approach is evidenced

by the financial and scientific participation of credible organizations like JDRF (U.S.) in the development of Insulin Tregopil for people with Type 1 diabetes. Studies conducted in people with Type 1 diabetes, Type 2 diabetes as well as normal healthy volunteers have demonstrated an excellent safety profile for Tregopil, with evidence of significant post-

prandial glucose excursion control in Type 2 diabetes patients.

IP Portfolio

• IP Policy

Biocon have filed and granted patents in approx. 90 countries, and, filed and granted various trademark(s) in 140 countries. Biocon has 3 registered design in India. Biocon, is driven by the commitment to pursue high science to develop cutting edge, high quality biotherapeutics in order to provide affordable access to patients across the globe. We have thus built differentiated R&D capabilities and acquired expertise across the value chain from cloning, cell line development, CMC to large-scale manufacturing and commercialization. Our structured approach to incorporate advanced science and technology to build a wide portfolio of biologics has brought us the reliability and credibility of an innovation-led organization. We also provide a one-stop service platform to global pharmaceutical and biotechnology companies through various service offerings to increase R&D productivity and reduce time to market, thereby helping them navigate the complex drug development landscape.

Biocon has its own Intellectual property policy that applies to all employees, independent contractors, agents, officers, and directors of the Company, its subsidiaries, business units, partnerships, and joint ventures where the Company has a majority ownership position or exercises management control. The policy is committed to protecting its own intellectual property, such as information, processes, and technology, from infringement by others. Biocon's intellectual property includes confidential company business information, trade secret technology, patented inventions and processes, trademarks and service marks, and copyrighted works. It is the responsibility of every employee to help protect company intellectual property. It is the responsibility of company managers and supervisors to foster and maintain awareness of the importance of protecting the Company's intellectual property.

• R&D Structure

Biocon's Research and Development (R&D) function has built world-class competence and capability on the back of robust infrastructure. The R&D matrix enables consistent excellence in our platform technologies spanning process & product development, analytical & bioanalytical sciences, preclinical & clinical sciences, intellectual property and regulatory sciences. The R&D organization has four essential elements in its strategy: Enable, Business, Talent and Culture.

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Disclaimer: This Compendium has been prepared based on the information provided by top 11 applicants identified/screened during the evaluation process of CII Industrial Intellectual Property Awards 2018. While an attempt has been made to ascertain the authenticity of information submitted by these applicants during the award evaluation process and compilation of case studies for the compendium; CII at no point will be responsible for the accuracy or correctness of such data or any consequential loss arising thereof.



Confederation of Indian Industry

The Confederation of Indian Industry (CII) works to create and sustain an environment conducive to the development of India, partnering industry, Government, and civil society, through advisory and consultative processes.

CII is a non-government, not-for-profit, industry-led and industry-managed organization, playing a proactive role in India's development process. Founded in 1895, India's premier business association has around 9000 members, from the private as well as public sectors, including SMEs and MNCs, and an indirect membership of over 300,000 enterprises from around 265 national and regional sectoral industry bodies.

CII charts change by working closely with Government on policy issues, interfacing with thought leaders, and enhancing efficiency, competitiveness and business opportunities for industry through a range of specialized services and strategic global linkages. It also provides a platform for consensus-building and networking on key issues.

Extending its agenda beyond business, CII assists industry to identify and execute corporate citizenship programmes. Partnerships with civil society organizations carry forward corporate initiatives for integrated and inclusive development across diverse domains including affirmative action, healthcare, education, livelihood, diversity management, skill development, empowerment of women, and water, to name a few.

As a developmental institution working towards India's overall growth with a special focus on India@75 in 2022, the CII theme for 2018-19, India RISE : Responsible. Inclusive. Sustainable. Entrepreneurial emphasizes Industry's role in partnering Government to accelerate India's growth and development. The focus will be on key enablers such as job creation; skill development; financing growth; promoting next gen manufacturing; sustainability; corporate social responsibility and governance and transparency.

With 65 offices, including 9 Centres of Excellence, in India, and 10 overseas offices in Australia, China, Egypt, France, Germany, Singapore, South Africa, UAE, UK, and USA, as well as institutional partnerships with 355 counterpart organizations in 126 countries, CII serves as a reference point for Indian industry and the international business community.

Confederation of Indian Industry

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