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Zim Laboratories: On the growth path

Zim Laboratories' oral disintegrating strips is the latest offering of this Nagpur based company's NDDS portfolio by **Usha Sharma**

Nagpur-based pharmaceutical company Zim Laboratories sensed the need to develop novel drug delivery systems (NDDS) at a time when India is seeing a significant rise in its number of children as well as geriatrics.

According to a report released by the Ministry of Statistics in April 2016, the number of citizens in India above the age of 60, saw a rise of 35.5 per cent from 7.6 crore in 2001 to 10.3 crore in 2011 while children make up 39 per cent of the total population of the country, 29 per cent constituting of children in the age between 0-5 years.

Both figures indicate that India requires drug delivery methods which are patient friendly to these age groups. Commenting on the research work and years invested behind developing oral thin films as an NDDS, Anwar Daud, MD, Zim Laboratories says, "We have been working in NDDS since the beginning and started working on oral thin films in 2009. The idea was to

combat the issue of swallowing associated with the most prescribed dosage form i.e. tablet. We have received support (for this work) from the Department of Scientific and Industrial Research (DSIR), Government of India through its Technology Development and Demonstration Programme (TDDP) scheme."

This independent research and development section recognised by DSIR serves as the originator of several process technology platforms responsible for a huge library of existing and pipelined products. The company's technical team consists of research scientists using state-of-the-art equipment.

OBJECTIVES OF ZIM LABORATORIES

- ▶ Developing innovative process technology platforms which lend themselves to the development of useful dosage forms that make existing molecules more effective and useful
- ▶ Developing cost-effective techniques for the production of high technology content Pre-Formulation Intermediates (PFI) and finished products.
- ▶ Developing eco-friendly materials and processes for the production of medicines

Incorporated in 1989, the company has established itself as one of the preferred healthcare solution providers in the field of new drug delivery systems. Zim Laboratories is engaged in research and development, manufacturing, distribution and marketing of pharmaceuticals. Besides orally disintegrating strips, the range of products encompass dosage forms like tablets, capsules, pellets, multi-unit particulate systems, dry syrups, directly compressible granules, taste masked powders, and granules.

Daud elaborates, "We work on the development of multiparticulates, controlled and delayed release systems, nanotechnol-

ogy-based solid dosage forms, oral/sublingual thin films etc. Almost 70 per cent of our R&D expenses are on the development of NDDS. We invest almost 4-6 per cent of our total turnover on R&D."

Daud informs, "We also take part in several developmental projects in collaboration with other academic/research institutes, working on novel process technologies offering new solutions for making unique drug delivery systems more efficiently than ever before. This ensures that our customers perpetually derive the benefits of innovative, cost effective and quality products, which in turn provide them with an unbeatable edge in the

competitive market place.”

In December 2016, the company bagged the IPA – ACG Seitech Innovation Award for innovative dosage form ‘Oral Thin Films.’

Technology drives the need

The strip formation technology requires comprehensive understanding of pharma components and processes as well as basic understanding of strip forming processes used in other industries. In case of low dose drugs, it will be the nature of polymers chosen that will decide the properties of strips but for high dose drugs, the formula and process would need critical studies in order to form strips with predetermined specifications.

Moreover, despite the known use of rapidly dissolving edible strips and their benefits over predecessor technologies for oral ingestion and documented benefits of herbs and pharma active ingredients, these are highly hygroscopic. As a result they stick to each other during storage and they also pose a problem while accurately placing in the mouth. At the same time, these strips do not pose a problem of being rejected / discarded / spit out by non-compliant patients, such as children, after delivery of the strip in their oral cavity.

The company identified the need of an oral rapidly dissolving strip that would not stick to the inner surface of the mouth as soon as it is placed inside, giving sufficient time to manoeuvre inside the oral cavity and to place it at a desired location. But once it is placed in the desired location, the strip needs to stick there so that the patient cannot spit it out.

to sophisticated process technologies and products, give value for money, and offer our customer innovative and exclusively quality products that differentiate them from their competitors and significantly impact

their bottom-line. That’s why, every day we continue to put our zeal for excellence and spirit of innovation into all our actions.”

He further elaborates, “We are an EU-GMP, WHO-GMP certified and ISO 9001:2008 ac-

credited company supported by an excellent team of professionals and sufficient capacity to meet large requirements for different market segments. We are uniquely positioned to provide expertise novel drug delivery

systems. We support our own and customers’ objectives with specialised formulations to reach the market faster and easier than ever.”

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Lubrizol

Big Efficiency Comes

The company is present in around 30 countries, which has helped it understand healthcare needs across countries. Clients are from across the SAARC countries, the Middle East, African continent, South East Asia, Latin America, CIS etc.

Explaining the passion behind developing NDDS for both the markets, Daud says, "We are committed toward providing our national and international clients an easy and timely access

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