ISSN 2349-7203
IJPPR
INTERNATIONAL JOURNAL OF PHARMACY & PHARMACEUTICAL RESEARCH
An official Publication of Human Journals
HUMAN

RECENT TRENDS IN PHARMACEUTICAL INDUSTRY

Vaibhav Desai, Aniket Ombase, Sutar Komal Bhagvan

Anandi Pharmacy College Kalmbe Tarf Kale, Kolhapur

ABSTRACT

The pharmaceutical packaging market is steadily progressing and has experienced at least five percent growth annually in the last few years. Now the market is worth $ 5 billion a year. As with other packaged goods, pharmaceuticals require reliable and quick packaging solutions that combine product safety, quality, tamper-proof, patient comfort and safety requirements. Continuous innovations in pharmaceuticals themselves, such as blow fill seal (BFS) couplings, anti-counterfeiting solutions, plasma impulse chemical vapor deposition (PICVD) coating technology, snap of ampoules, unit dose wires, two-in-prefilled vial design, prefilled syringes, and Child-resistant packs have a direct effect on packaging. The review details the recent pharmaceutical packaging trends affecting the packaging industry and offers some forecasts for the future.

Keywords*:* - Pharmaceutical packaging, packaging materials, recent trends, future

INTRODUCTION

Today the pharmaceutical business can be described as a highly innovative industry with deeply rooted roots that, in today's measures, was no less logical when considering returning to the ancient Egyptians. In the recent three decades, the Indian pharmaceutical industry has transformed into a world leader in the generation of top-notch medicines.[1-2]

Indian pharmaceutical industry is valued at the US $12 billion, a growth rate of 9% a year. The pharmaceutical industry's most effective technique of putting heavy wagers down on two particles, pushing them forward and converting them into a long blockbuster, though its R&D advantage is now developing pigeons and earth. PwC acknowledges that seven significant patterns are shifting business focus and examples of endless failures, effectively setting more significant weight on expanded human services plans Health care approach manufacturers and payers are ordering that specialists recommend a growing number of human service payers. Financial implementation of a specific solution. The widespread use of electronic drug records will inform them of the demand for evaluation based on results.

There has been an increase in the area around organizations in Latin America, Africa, Russia, the Middle East, and Southeast Asia. These locales are the mainstay of creating some organizations, with large, thriving populations and increasing personal wealth. Advertising, collecting or linking goods together for authentication is a method that many remote entities have entered into the developing market, allowing a passageway without the bulk of budgetary speculation. Joining forces with nearby organizations can provide honor by administering administrative precedents and legal practices; And by reaching the current client system, it helps to get into the business by informing the social parts of the customer base. These organizations can also provide insight into the deeper issues of success in that particular business area. Companies entering the developing market need to evaluate their potential profitability as well as the location of the people they offer. Their pricing structure is more consistent with these businesses than in developing markets, with different budgets for creating a developing economy such as wages, drug constraints and social insurance for workers.[1-2]

TRENDS OF PHARMACEUTICAL INDUSTRIES[1-2]

1. COVERT (HIDDEN) FEATURES

The secret feature is to enable a brand owner to identify a fake product. The general public does not know or have the means to verify its presence. It is not easy to find or copy a secret without specialist knowledge, and their details must be controlled on a "must-know" basis. If compromised or promoted, most secret features will lose some if not all of their security value.

2. RFID

Radio Frequency Identification (RFID) is a new concept. For some, RFID is already a mainstream technology - used daily to pay tolls, gain access to a secure building, catch thieves in shops, etc. It allows the identification of objects through wireless communications in fixed frequency bands. There are three essential components to any RFID system: tags, readers, and software. A tag is an integrated circuit that has a unique tracking identifier, called an electronic production code (EPC), which is transmitted across the radio spectrum through EM waves. The reader captures the broadcast signal and provides network connectivity between the tag data and system software. The software can be tailored for anti-fake purposes. For their track and trace use, RFID tags are used.

a) Passive tag: RFID tag is in the reader's inquiry area (i.e., the interrogator) equipment; enough power is removed from the interrogator to power the tag or circuit or especially reflecting material. It then responds by sending the data back to the Inquisitor.

b) Active Tags: Such tags include a battery to increase the data to collect data, tag to tag and so on. But these are very expensive.

c) Semi-active tags In these tags use batteries to back up memory and data, but not to boost range. With some active RFID tags, batteries are only used for inquiry or when sending homing pulses at fixed distances to reduce costs and size.

3. PACKAGING DESIGNS: MATERIAL /SUBSTRATES AND OTHER DESIGN OPTION[3-4]

a) Substrates: There are various layers used in the design of packages to provide clear features of ongoing texture and tampering on substrates polystyrene, destroyer vinyl, acetate film synthetic paper. Coatings, etc. There are several ways to include secret secrets in the substrate, such as visible or ultraviolet fluorescing carton boards or chemical reagents in the paper. Watermarks can be embedded in leaflet paper or possibly incorporated with woven metal threads embedded in the base material, along with an optical variable device (OVD) feature. This requires a dedicated supply source and mass production, which, if affordable, becomes an effective option. The micro-encapsulated specific odors can be applied as inks or coatings to provide novel latent or semi-overlapping features, creating a special opportunity in sound chip design[3-4].

b) Packaging Designs: Packaging designs such as sealed cartons, aerosol containers have inherent strength against counterfeiting.

c) Sealing systems: Exterior tamper-evident machinery or special caps such as foil seals are commonly used for pharmaceutical products. The sealing options are a liver-lined tin, secure packaging tape, lined compartment, and a fade tape/band.

4. SECURITY LABELS[3-4]

Security labels play a key role in giving consumers a bit of comfort versus fake and security labels. The substrate in self passive labels acts like a pressure-sensitive adhesive and pressure-sensitive adhesive of most substrates. While passive security labels are widely used, today a greater application of functional labels such as print and anti-theft can be found. Some of the label options are:

a) Paper labels with security cuts: The substrates used for these labels are ordinary coated / uncoated paper. Security features are built into the conversion stage by the label printer. With the help of a special cutting die, the material on the face material is cut from different angles so that if anyone tries to remove these labels, the paper will burst.

b) Destructive labels: It requires a special substrate designed for the purpose. Most high-end applications use specially formulated cellulose acetate film. The film is intricately designed so that it has enough power to convert into label shares.

5. CODING, PRINTING, AND GRAPHICS[3-4]

a) Coding and marking: Long-time coding and marking regulatory compliance has driven the need for coding and marking on packaged products that begin well before the date. However, with increasing awareness and a large number of printing and marking options such as inkjet coding, laser coding and electrolytic etching for metal marking, their use can be determined to develop an overall counterfeit feature. It offers online coding opportunities with flexibility, programmable options, time savings, and lower running costs. Depending on the exact requirements such as touch dry coding, noncontact coding or permanent laser coding, the searchable and fabricated solutions can be improved using variable data on the label, i.e. Digital printing costs for production of demanded short pack products, to create specific markings of packages and production of demand short pack products.

b) Security graphics: It includes a range of overt and covert design elements such as fine line color printing, note printing, glitches, line modulation, and line emboss. They can be used as backgrounds in separate zones, such as overprint areas, or full pack graphics, and can be printed for enhanced security through ordinary offset lithography or intaglio printing. The subtle use of pastel "spot" color makes the design more difficult to scan and reproduce, and increased security by including a range of hidden design elements such as micro-text and dormant imagery.

CONCLUSION

In the age of globalization, this is going to be a challenge for the packaging industry, as the inauguration of global channels can be noted over the next few years, and to meet international standards and quality, the packaging industry will need to improve research further. Packaging has a holistic approach that goes beyond the functional aspect of packaging. Very few pharmaceuticals currently spend time and money on R&D in packaging. The conventional packages available do not serve to protect against counterfeit and quality, and the industry seems to be lazy in accepting technological advances in packaging, probably due to cost-prohibitive costs.

REFERENCES

1. Bhambere D, Shirivastava B, Sharma P, Gide P (2014) Effect of Polymer and Formulation Variables on Properties of Self-Assembled Polymeric Micellar Nanoparticles. J Nanomedine Biotherapeutic Discov 4:129.
2. Kincaid BB, Muzyk AJ, Kanter RJ, Preudhomme XA (2015) Manifestations of Anxiety? Explaining Tachycardia and Hypertension in a Patient with POTS. Fam Med Med Sci Res 4:153.
3. Genel S, Lucia SM, Daniel S, Emanuela F (2015) Cystic Fibrosis: Correlations between Genotype and Phenotype. J Clin Cell Immunol 6:301.
4. Gaba M, Mohan C (2015) Design, Synthesis and Biological Evaluation of Novel 1, 2, 5- Substituted Benzimidazole Derivatives as Gastroprotective Antiinflammatory and Analgesic Agents. Med Chem 5:058-063.