



## Fake Drugs and Block Chain technology

### Why in news?

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Recently the drug regulator of Rajasthan found certain medicines to be fake which is a part of the counterfeit drugs industry in the country.

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### What are the problems that arise due to Fake drugs?

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- According to the World Health Organization (WHO), around 35 % of the fake drugs sold globally come from India.

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- In low and middle income countries like India, one in 10 medical products (pills, vaccines, injectables) in circulation are either substandard or fake.

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- The substandard or fake drugs promote **anti-microbial resistance** in people.

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- Spurious drugs make pharma companies incur **huge revenue losses**.

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- According to industry body Assocham, in 2015, the value of the counterfeit drug industry in India was pegged at around Rs 150 billion

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- It was almost 25 % of the total worth of the global pharma industry.

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### What are the ways to check the fake drugs?

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- So far the efforts to combat the proliferation of fake drugs have been

through traditional means — via tip-offs and surprise raids.

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- The current methods of weeding out counterfeit drugs are quite archaic.
- Still the method of sampling is only used to verify the genuineness of drugs.

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## What is the latest development?

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- Niti Aayog, in collaboration with Oracle Technologies and Apollo Hospitals, is working on a technology.
- The technology will leverage blockchain technology to overcome the counterfeit drug problem.
- Oracle is developing the app through which the consumer will be able to scan the bar code of a medicine
- By scanning we will know about its manufacturer, the date of production, its path of transport and the date it reached the retailer.
- Hence, the consumer can check if the medicine is genuine or not before buying it.
- The technology will work all long the entire supply chain so as to ensure that no fake drugs enter the system.

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## How does it work?

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- The **tracing and tracking of pharmaceutical products** is done with the help of new age technologies like blockchain and Internet of Things (IoT).
- Fake drugs enter into the supply chain as Pharma sector is heavily dependent on logistics.
- Consignments of drugs will be tracked remotely through the use of IoT to check the entry of fake drugs.

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- The data captured through IoT will be sent to the cloud server that will then be entered into the block chain ledger.
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- The block chain digital ledger system records the transactions and tracking of consignments.
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- It becomes easy for all stakeholders -drug manufacturers, controllers and hospitals to monitor the ledger.
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- This eliminates the possibility of mixing fake drugs with original drugs.
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- In addition block chain process is hack proof because it does not use a centralized system to store data.
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- Any revision on the chain requires retrograde action on all associated blocks.
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- This process allows users to see transactions in real time.
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- The real time monitoring of data across the pharmaceutical supply chain will act as a third eye on fake drug dealers.
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### **What are the other initiatives in this regard?**

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- Gujarat has implemented an online drug **SMS alert system** for retailers for 'unsafe' drugs.
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- The state drug control authority worked with National Informatics Centre to develop the software.
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- Abbott has introduced an **SMS authentication** scheme for customers.
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- **QR codes** are also used to store product information on packs which will do away with the need to print leaflets.
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- These QR codes can be an effective tracking mechanism.
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- It allows the manufacturer to keep tabs on the drug's circulation in the market.
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- Companies are also planning to print a **hologram** on the packaging and **mirco-emboss the product name** on cartons.

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### What is the way forward?

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- As block chain technology evolves, India's efforts to root out counterfeit drugs will definitely make headway.

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- It will surely lead to a much safer public health system in the country.

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**Source: Business standard**

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