

2. China Proposes to Treat Alzheimer's with New Drug

Prelims: Medicine and Pharmaceuticals

Mains: GS-III Awareness in the fields of IT, Space, Computers, Robotics, Nano-Technology, Bio-Technology

Why in News?

- The recent announcement of China that a new drug meant to potentially treat Alzheimer's disease, will be available to Chinese patients shortly.
- The drug has been named as GV-971 or "Oligomannate". It is a seaweed-based drug which is administered orally.

About Alzheimer's Disease:

- It is a progressive brain disorder that typically affects people older than 65. When it affects younger individuals, it is considered early onset.
- The disease destroys brain cells and nerves, and disrupts the message-carrying neurotransmitters.
- Eventually, a person with Alzheimer's loses the ability to perform day-to-day activities.

Alzheimer's Versus Dementia:

- Dementia is an umbrella term for a range of conditions that involve a loss of cognitive functioning. Alzheimer's is the most common type of dementia. It involves plaques and tangles forming in the brain. Symptoms start gradually and are most likely to include a decline in cognitive function and language ability.
- Other types of dementia include Huntington's disease, Parkinson's disease, and Creutzfeldt-Jakob disease. People can have more than one type of dementia.
- Symptoms:
 - Reduced ability to take in and remember new information
 - Impairments to reasoning, complex tasking, and exercising judgment
 - Impaired visuospatial abilities that are not, for example, due to eye sight problems.
 - Impaired speaking, reading and writing Changes in personality and behaviour.
- The progression of Alzheimer's can be broken down into three **Main Stages**:
 - ✓ Preclinical, before symptoms appear
 - ✓ Mild cognitive impairment, when symptoms are mild
 - ✓ Dementia

Treatment:

- There is **No Cure** for Alzheimer's, because its exact causes are not known. Most drugs being developed try to slow down or stop the progression of the disease.
- There is a degree of consensus in the scientific community that Alzheimer's involves **two proteins, called beta amyloids and tau**. When levels of either protein reach abnormal levels in the brain, it leads to the formation of plaque, which gets deposited between neurons, damaging and disrupting nerve cells.
- Most existing drugs for Alzheimer's try to target these proteins to manage some of the symptoms of Alzheimer's.

