Prelim Bits 01-08-2017

Curcumin to treat cancer

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- Scientists have recently found that nanoparticles loaded with curcumin can target and destroy neuroblastoma tumour cells.
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- Curcumin is the bioactive component of turmeric. A bioactive compound is a compound that has an effect on a living organism, tissue /cell.
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- Researchers have attached curcumin to cerium oxide nanoparticles and tested the nano-curcumin formulation.
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- The formulation induced substantial cell death in neuroblastoma cells while producing no or only minor toxicity in healthy cells.
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Neuroblastoma cancer

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- Neuroblastoma is the most common cancer in children younger than five years old.
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- The cancers start in early nerve cells and commonly form in the tissue of the adrenal glands, near the kidneys.
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- They are also associated with developmental delays, hearing loss, or other disabilities.
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Geo engineering

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- Geo engineering, also known as climate intervention is the deliberate and large-scale intervention in the Earth's climatic system with the aim of affecting adverse global warming.
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- There is a renewed interest in two dominant methods of geo engineering such as stratospheric sulphate aerosol increase and cirrus cloud thinning.
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- These methods aim to reduce global warming and precipitation rates to pre-industrial levels.
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- Injecting sulphate aerosol particles in the stratosphere blocks some of the sun's radiation and potentially cools the planet.
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- Sulphur droplets are good at scattering the sun's light back out into space and it does not heat stratosphere as much as other aerosols.
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- Cirrus clouds, which are at a height of 10 km above the Earth's surface, also trap the heat.
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- Thinning of Cirrus clouds could also cool down the Earth system, since it traps only a fraction of heat.
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- Thus, these two approaches would change both temperature and precipitation at the same rate at which they are being increased by carbon dioxide.
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New Scheme for MSME

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- The Government has launched a new scheme namely Financial Support to MSMEs in ZED Certification Scheme.
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- Zero Defect and Zero Effect (ZED) scheme was launched to develop an Ecosystem for Zero Defect Manufacturing in MSMEs.
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- The objectives of ZED Scheme are \n
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    - Promote adaptation of Quality tools/systems and Energy Efficient manufacturing.
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    - Enable MSMEs for manufacturing of quality products.
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    - Encourage MSMEs to constantly upgrade their quality standards in products and processes.
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    - Drive manufacturing with adoption of Zero Defect production processes and without impacting the environment.
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    - Support Make in India campaign.
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    - Develop professionals in the area of ZED manufacturing and certification.
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- Quality Council of India (QCI) has been appointed as the National Monitoring & Implementing Unit (NMIU) for implementation of ZED.
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National Skill Development Corporation

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- Border Security Force (BSF) has recently signed a MoU with the National Skill Development Corporation (NSDC).
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- The MoU will enable NSDC to provide skill training to retired and retiring BSF personnel, as well as to the population residing in the border areas.
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- NSDC is a one-of-its-kind, Public Private Partnership model in India, under the Ministry of Skill Development & Entrepreneurship.
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- A not-for-profit company set up by the Ministry of Finance, under Section 25 of the Companies Act, it has an equity base of Rs.10 crore, of which the Government of India holds for 49%, while the private sector has the balance 51%.
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- It aims to promote skill development by catalyzing creation of large, quality and for-profit vocational institutions.
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- Its objective is to contribute significantly (40 per cent) to the overall target of skilling/up-skilling 400 million people in India by 2022, mainly by

fostering private sector initiatives in skill development programmes and to provide funding.
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Rajaswa Gyansangam

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- It is a two day conclave of tax officer and it will be inaugurated by Prime Minister on September 1.
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- The focus of the discussion will be on GST as well as on unearthing black money.
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- For the first time, the tax officers of the state governments will also participate for discussion on the Goods and Services Tax (GST) related issues.
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Hydel Power Projects

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- Presently, there are 41 Hydro Electric Projects (above 25 MW), aggregating to 11792.5 MW, are under construction in the country.
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- Central Electricity Authority (CEA) is monitoring the under construction hydro power projects (above 25 MW).
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- Power Project Monitoring Panel (PPMP), set up by the Ministry of Power, independently monitors the progress of the hydro projects.
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- Parbati and Kishanganga are the proposed HEP and expected to be commissioned in 2018.
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- Parbati-II Hydro Electric Project is located in Himachal Pradesh and scheduled to be commissioned in October, 2018.
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- Kishanganga Hydro Electric Project is located on river Kishanganga, a tributary of river Jhelum in Jammu & Kashmir and scheduled to be commissioned in January, 2018.

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