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Daily Current Affairs Encyclopedia

25 November 2023

National and International News

Nicar	aguan 🤄	She	ynnis	Palacios
wins	crown	at	Miss	Universe
2023				



Context

- Nicaragua's Sheynnis Palacios was crowned Miss Universe 2023 at the 72nd edition of the pageant, held this year in El Salvador.
- Palacios received the crown and sash from her predecessor,
 R'Bonney Gabriel from the United States.
- Miss India Shweta Sharda had made it to the list of top 20 contestants.

Chimaeras -hosts to multiple genotypes, and maybe human organs

Context

- At present, more than 3 lakh people are waiting for an organ transplant in India alone; the global number is far higher, with no respite in sight.
- There is an alarming disparity in the number of organ donors and the number of recipients
- The successful application of animal insulin and the more recent use of animal heart valves in human surgeries have saved human lives.
- Researchers have also made attempts to grow full human organs inside the bodies of animals using advancements in induced pluripotent stem cells (iPSCs) technology.
- At the same time, controversy continues to beset this field, most of it centered on the use of human iPSCs in animal embryos and the creation of chimeric animals, the results of which we are yet to fully comprehend.

Key points

- A genetic chimaera is a single organism composed of cells of more than one genetic makeup.
- Human-pig chimaeras have been induced in laboratory settings in a bid to develop model systems that could 'produce' human organs of a suitable size, anatomy, and physiology
- In a **study published in Cell**, scientists reported successful generation of a live chimaera in non-human primates species evolutionarily close to humans.
- This is the first time scientists have succeeded in producing a live infant chimeric monkey.

Induced pluripotent stem cells (iPSCs)

 Induced pluripotent stem cells (iPSCs) are adult cells that have been genetically reprogrammed to an embryonic stem cell-like state by being forced to express genes and factors important for maintaining the defining properties of embryonic stem cells.



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	 Although additional research is needed, iPSCs are already useful tools for drug development and modeling of diseases, and scientists hope to use them in transplantation medicine.
A fact check unit that is unconstitutional	·
Space programme turns 60	Article 19(1)(a) of the Constitution. Context
Space programme turns 60	Civity years and the launch of a 745 kg Nike Anache recket act



- Sixty years ago, the launch of a **715-kg Nike Apache rocket** set India on a journey that saw two more milestones before the country became part of an elite international group
- The first was the launch of India's first truly indigenous rocket, on February 22, 1969 — a "pencil-sized" vehicle, in the words of Vasant Gowariker, later Director of the Vikram Sarabhai Space Centre (VSSC), that weighed around 10 kg.
- The second came on July 18, 1980, when its home-grown Satellite Launch Vehicle-3 (SLV-3) rocket, weighing 17 tonnes, placed the 35-kg Rohini satellite in orbit and India in a small group of countries that could launch their satellites into orbit using their own launch vehicles. The only others were the Soviet Union, the U.S., the U.K., and France.

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