

## 7. Short news

### 1. Booker Prize 2025

Hungarian-British author David Szalay won the 2025 Booker Prize for his novel *Flesh*, becoming the first Hungarian-British writer to receive the award.

#### About the 2025 Winner

David Szalay, born to a Hungarian father and British mother, is known for his precise, minimalist prose and explorations of masculinity and alienation. His Contribution – *Flesh* portrays a man's journey from a Hungarian housing estate to London's elite circles, delving into class, migration, and power through introspective storytelling.

#### About the Booker Prize

**Introduction** – The Booker Prize is one of the world's most prestigious awards for English-language fiction, celebrating outstanding literary merit since 1969.

**Origin** – It was established by publishers Tom Maschler and Graham C. Greene with funding from the Booker McConnell Company, which had shifted from colonial trade to literary patronage.

**Eligibility & Selection** – Open to novels published in English in the UK or Ireland, judged annually by a multicultural panel of writers and critics.

#### Indian Winners –

1. *In a Free State* (1971) – V.S. Naipaul
2. *Midnight's Children* (1981) – Salman Rushdie
3. *The God of Small Things* (1997) – Arundhati Roy
4. *The Inheritance of Loss* (2006) – Kiran Desai
5. *The White Tiger* (2008) – Aravind Adiga

#### About the International Booker Prize

**Introduction** – The International Booker Prize, launched in 2005, honours fiction translated into English and published in the UK.

**Evolution** – Initially biennial, it became an annual award in 2015, promoting global literary exchange and recognizing both authors and translators.

**2025 International Booker Prize** – It was awarded to “Heart Lamp” by Banu Mushtaq, translated from Kannada by Deepa Bhashi.

### 2. Odd Radio Circle (OrC)

**Context** – In November 2025, citizen scientists from India's RAD@home Astronomy Network discovered a rare double Odd Radio Circle (ORC) using LOFAR telescope data.

#### Key Findings

The discovery marks only the second known instance of twin ORCs globally, expanding understanding of deep-space radio structures. Researchers used archival data from LOFAR and GMRT to confirm the phenomenon, strengthening India's contribution to low-frequency radio astronomy.

#### About Odd Radio Circles (ORCs)

**Definition** – ORCs are large, faint circular radio sources surrounding distant galaxies, visible only in radio wavelengths and first noted in 2019.

**Possible Origin** – Scientists suggest they may result from powerful shockwaves generated during galaxy collisions or supermassive black hole mergers, forming plasma rings expanding over billions of years.

**Significance** – ORCs challenge existing models of galaxy evolution and radio jet activity, offering clues to energetic intergalactic events.

#### About LOFAR and GMRT

**LOFAR (Low-Frequency Array)** – Europe-based interferometric radio telescope headquartered in the Netherlands, specializing in deep-space low-frequency observations.

**GMRT (Giant Metrewave Radio Telescope)** – Located near Pune, India, it is one of the world's largest low-frequency radio observatories, operated by National Centre for Radio Astrophysics – Tata Institute

of Fundamental Research.

**RAD@home Initiative (2013)** – Launched by Prof. Ananda Hota, this citizen-science platform engages about 4,700 members via Facebook. With basic training, participants help identify rare astronomical objects like radio galaxies and Odd Radio Circles (ORCs), advancing collaborative space research in India.

### 3. Biochemical Markers to Detect Diabetic Kidney

Indian researchers have identified early blood-based biochemical markers to detect diabetic kidney complications, paving the way for more personalised and preventive diabetes management in India.

#### About the New Markers

**Discovery and Method** – The study, led by IIT Bombay in collaboration with Osmania Medical College and Clarity Bio Systems, analysed whole blood samples using advanced metabolomics to identify hidden biochemical changes. Metabolomics is the comprehensive study of small molecules (metabolites) within cells, tissues, or biofluids to understand biochemical processes and disease states.

#### Analytical Tools Used –

**LC-MS (Liquid Chromatography–Mass Spectrometry)** – Separates and detects small molecules in complex biological samples with high precision.

**GC-MS (Gas Chromatography–Mass Spectrometry)** – Identifies volatile compounds by measuring their molecular mass and structure, enabling detection of key metabolic shifts.

**Key Findings** – Researchers identified 26 significant metabolites, including valerobetaine, ribothymidine, and fructosyl-pyroglutamate, and found seven kidney-related markers such as arabinol, myo-inositol, ribothymidine, and 2PY, which can predict diabetic kidney disease early.

**Significance** – The findings support development of simple, finger-prick-based diagnostic tests for early kidney disease detection and personalised diabetes treatment, addressing India's escalating diabetes burden.

### 4. Angola

Indian President Droupadi Murmu attended Angola's 50th Independence Day celebrations on 11th November, 2025 in Luanda, following an invitation from President João Lourenço. The visit reaffirms India's historical support for Angola's freedom struggle and aims to strengthen bilateral cooperation across trade, energy, and education.

#### About Angola

**Location** – Angola is located on the western coast of Southern Africa with Luanda as its capital and largest city.

**Borders** – Namibia (south), Zambia (east), the Democratic Republic of Congo (northeast) and the Republic of Congo (north), with the Atlantic Ocean to the west.

**Geographical Regions** – Coastal lowlands, interior hills and mountains, and the eastern high plateau known as the Planalto.

**Mountains** – Serra da Leba range, Morro de Moco is Angola's highest peak at 2,620 meters.

**Rivers** – The Kwanza River flows 960 km westward to the Atlantic, providing water and hydroelectric power; the Zambezi River forms part of the eastern border.

**Climate and Vegetation** – Varies from Humid tropical along the coast to cooler and drier conditions in the high plateau

**Vegetation** – Ranges from coastal grasslands to savannahs and dry forests inland.

### 5. Phasing Out Mercury Based Dental Amalgams

In November 2025, countries agreed at a Geneva conference to phase out mercury-based dental amalgams globally by 2034 under the Minamata Convention on Mercury.

#### About Mercury Tooth Filling

Dental amalgam is a material used for filling cavities, created by mixing liquid mercury with a powdered alloy of metals like silver, tin, and copper. It is known for being durable, long-lasting, and cost-

effective. These fillings contain about 50% mercury, which can release toxic vapours harmful to both dental professionals and patients over time.

### Alternatives for Mercury Filling

**Composite Resins** – Tooth-coloured materials made of plastic and glass, offering safe and aesthetic alternatives.

**Glass Ionomer Cements** – Fluoride-releasing, biocompatible materials suitable for small restorations and children's dentistry.

### About Mercury Pollution and Its Impact

The World Health Organization (WHO) identifies mercury as one of the top 10 chemicals of major public health concern. It estimated a tolerable concentration of  $0.2 \mu\text{g}/\text{m}^3$  for long-term inhalation exposure to elemental mercury vapour, and a tolerable intake of total mercury of  $2 \mu\text{g}/\text{kg}$  body weight per day. Mercury pollution contaminates air, water, and soil, threatening ecosystems and human food chains through bioaccumulation in fish. Mercury exposure affects the nervous, digestive, and immune systems, and can harm kidneys and lungs. Minamata disease – It occurs due to severe mercury poisoning, specifically from consuming fish and shellfish contaminated with methylmercury and its symptoms include numbness, muscle weakness, loss of peripheral vision, and damage to hearing and speech

### Minamata Convention on Mercury

The Minamata Convention aims to protect human health and the environment from mercury's adverse effects which was adopted in 2013 and came into force in 2017. India signed the Convention on September 30, 2014, and subsequently ratified it on June 18, 2018. The new 2025 amendment establishes a global phase-out of dental amalgam by 2034, ensuring a time-bound reduction in mercury use. India has agreed to the 2034 global phase-out target and supports developing safe, mercury-free dental technologies aligned with the Minamata goals.