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## Inquiry into Study on Bats and Bat-Hunters

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### Why in News

- The government has ordered an inquiry into a study conducted in **Nagaland** by researchers from **China, US, and India** on **bats** and **humans** carrying **antibodies to deadly viruses like Ebola**.
- The study is investigated for how the scientists were allowed **to access live samples of bats and bat hunters (humans) without due permission**.
- The inquiry comes at a time when people worldwide are grappling with the spread of **novel coronavirus (nCoV)** from China.

### Key Points

- **Bats** are **harvested** in an **annual ritual** by a **Naga Tribe** in **Nagaland**. The study conducted research on **individuals who participated in the ritual**.
- The Nagaland **study** suggests bats in **South Asia** act as a **reservoir host** of a diverse range of **filoviruses**, and **filovirus spillover** occurs through **human exposure to these bats**.

**Spillover effect** means the virus seems to have moved from bats to humans in one event and after this moved from one human to another.

### Filovirus

- Filoviruses belong to a virus family called **Filoviridae**.
- Filovirus is a **filamentous RNA virus** of a genus which causes **severe hemorrhagic fever in humans and nonhuman primates**.
- 3 genera of this virus family have been identified: **Cuevavirus, Marburgvirus and Ebolavirus**.

- **Northeast India is** a region with **no historical record of Ebola virus**. But, this study has **found the presence of filovirus** (ex. **ebolavirus, marburg virus**) reactive **antibodies** in **both human** (ex. **bat hunters**) and **bat populations** implying **zoonotic spread**
- However, the potential **virus** present in bats may **not** be an exact copy of the virus responsible for various outbreaks.

## Diseases Linked to Bats

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- All bats can carry viruses. Many high-profile **epidemics** have been traced to **bats**.
  - **Severe Acute Respiratory Syndrome (SARS)** antibodies were found in insectivorous bats.
  - **Ebola** antibodies were found in Hammer-headed fruit bat.
  - **Indian Flying Fox**, hosts over 50 viruses.
  - **Rabies**
- With around 1,200 species, bats comprise 20% of the earth's mammalian diversity.
- Long periods of flying raises the **temperatures of bats, boosting their immune responses** and helps them survive the microbes' pathogenic effects.

## Way Forward

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Given the widespread challenges from the newly discovered viruses, it must be ensured that all medical studies in the country adhere to strict norms.

**Source: TH**