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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

- 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

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