

Autism Spectrum Disorder

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In news– Recently, a team of Indian researchers have **developed a compound called “6BIO” that can provide a better method to treat Autism Spectrum Disorder (ASD).**

Key findings–

- This is the **first compound that has been proved in pre-clinical evaluation to have the potential for improving daily activities like** learning and recollecting new tasks in patients with ASD/ Intellectual disability (ID).
- The present work was **led by Vijaya Verma and other authors from Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR)**, an autonomous research institute of the Department of Science & Technology (DST), Govt. of India.
- In their work, researchers have demonstrated the potential of 6BIO, **to treat ASD/Intellectual disability (ID) in a preclinical mouse model called Syngap1+/-.**
- **6BIO restored the neural functions not only when administered during development** (equivalent of baby (1-2 years) and childhood stages (3-6 years)) **but also after mid-childhood** (7-11 years) when most of the brain regions are considered to have formed properly.
- **Previous studies have attributed disruption in optimal brain development, mainly neuronal connections, during the early stage of development** (i.e., babies/childhood) as one of the causes of ASD/ID.
- Data from the **current study indicate that 6BIO can help children with ASD learn and recall, be social, and alleviate other symptoms such as seizures or sleep issues.**

About Autism Spectrum Disorder (ASD)–

- ASD is a developmental disability that is characterized by challenges with social interactions, social skills, /restricted/repetitive behaviors, speech and nonverbal communication.
- Autism is known as a “spectrum” disorder because there is wide variation in the type and severity of symptoms people experience.
- It occurs in all ethnic, racial, and economic groups.
- Although ASD can be a lifelong disorder, treatments and services can improve a person’s symptoms and ability to function.
- There is no appropriate pharmacological or genetic method to treat ASD/ID.
- Current therapeutics to treat ASD aim to alleviate symptoms such as epileptic seizures or sleep issues but not to treat the multiple problems of ASD/ID.
- A major challenge in finding better therapeutics to treat ASD is the potency of the drug to help the patients to perform their daily activities with efficiency close to that of a healthy person.
- Achieving this is particularly difficult after a certain age, especially from the mid-childhood stages.