

## Chapter 1

### GUT MICROBIOTA IN ANXIETY AND DEPRESSION

**Kriti Kumari Lal<sup>1\*</sup>, Rupa Verma<sup>2\*</sup>**

1. M.Sc. Biotechnology, University Department of Botany, Ranchi University, Ranchi

2. Assistant Professor at M.Sc. Biotechnology, University Department of Botany, Ranchi University, Ranchi, Jharkhand, India

\*Corresponding author: [sonamsahu1909@gmail.com](mailto:sonamsahu1909@gmail.com), [drupav@gmail.com](mailto:drupav@gmail.com)

(Orcid ID: <https://orcid.org/0000-0001-9363-0623>)

#### ABSTRACT

Major Depressive Disorder or MDD is a mood disorder associated with persistently low mood, lack of energy, lack of energy, appetite changes, and insomnia, among other things. According to the WHO, Major depressive disorder is one of the leading contributors to the global burden of disease. So, many studies have looked into the cause of the condition. It believes that depression is caused by a combination of many different factors. They mostly attribute depression to abnormalities in neurotransmitters such as serotonin and dysregulation of neural circuits. They also believe there are environmental components to depression. So, high levels of stress in childhood or serious trauma can lead to the development of depression later on. Researchers have recently tried to understand the association between gut microbiota and mood disorders.

#### **Keywords:** -

Microbiota; MDD; depression; serotonin; mood; indoles; stress; bacteria; 5-HT; gut