AAPS NDSU Chapter
2023 Symposium Abstract Guidelines

- Abstracts are limited to 250 words excluding the title and authors' information.
- Abstracts should contain:

  - Title
  - Authors & affiliations
  - Purpose
  - Method
  - Results
  - Conclusion

- Abstracts should be submitted electronically as a word file while registration for the symposium. Font type - Times New Roman and font size – 14 for the title, 12 for rest of the body.
- An abstract is attached below for your reference.
- Follow the guidelines to avoid the resubmission of your abstract.
- Abstract submission deadline – August 31, 2023
- Poster dimensions 48"X36".
- Questions – Please contact Ashish Kumar at ashish.kumar@ndsu.edu

Psychotropic Medications and Gut Dysbiosis

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Purpose:
Psychotropic drugs are widely used to treat various psychiatric conditions such as major depression disorder, schizophrenia and bipolar disorder. However, their use is often associated with side effects such as weight gain. Psychotropic-associated weight gain is an important cause of patients' non-compliance with treatment which puts patients at higher risks of mental illness exacerbations and re-hospitalizations. Moreover, weight gain carries significant risks of related co-morbidities and consequences. Little is known regarding how psychotropic drugs contribute to weight gain. Yet, there is an emerging evidence base indicating that the role of gut microbiota may be influential in contributing to weight gain, though the exact mechanism(s) remain unclear.

Methods:
This study will aim to globally characterize changes in the gut microbiome composition associated with psychotropic drug use. This study will involve a combined clinical and murine approach. In the clinical phase, participants will be enrolled who have started either sertraline (group 1) or bupropion (group 2). Additionally, controls with no history of psychiatric disorder will be recruited (group 3). Fecal samples will be collected after 4 weeks. In the murine phase, C57BL/6 mice will be colonized with fecal samples obtained during the clinical phase. Mice will be divided into three groups according to their donors.

Results:
Results from this study will demonstrate whether there is an association between psychotropic use and gut dysbiosis. It will further demonstrate the time-frame in which these changes occur, and if the changes are consistent between different patients.

Conclusion:
Understanding the effect of psychotropic drugs on the gut microbiota may allow us to better manage psychiatric illness with minimal side effects and higher patient compliance through the development of targeted interventions.