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A brief summary of the papers appearing in this issue

Beginning with an editorial by the Editors-in-Chief, Dr. Claude Hughes and Dr. Fengyu Zhang, this first issue of the journal published seven papers, which features three areas that the journal aims to focus, including genomic, environmental and social medicine. The first paper is on gastroschisis, a congenital abdominal wall defect that is largely caused by the large environment; through genome-wide association study, the second paper purely investigates the genetic variants associated with multiple neuropsychiatric disorders. Two papers focus on the social aspects of human disorders including cervical survivor and depression in older adults — lastly, two review papers discussed gene-environment risk factors and altered gut microbiome in autism spectrum disorders (ASD).

The increasing prevalence of gastroschisis: associated factors, possible mechanisms, and potential mitigative interventions

The incidence of gastroschisis has increased globally over recent decades, but the cause of this increase is not elucidated and etiology of gastroschisis has not determined. **Hughes and Adibe** conducted a selective review of literature on risk factors of gastroschisis including maternal illnesses, medication use, and substance abuse, environmental exposure or agricultural chemicals. They hypothesized two possible modes-of-action hypotheses: 1) mechanical forces – mechanosensitivity and mechanotransduction signaling, and 2) Ephrin-Eph receptor signaling, which could be highly attractive research and development opportunities, including preventive and mitigative intervention.

Common genetic variants shared among five major psychiatric disorders: a large-scale genome-wide combined analysis

Genetic correlation and pleiotropic effects among psychiatric disorders have been implicated. **Xia et al.** conducted a large genome-wide combined analysis of p-value for about 8 million single nucleotide polymorphisms (SNPs) in samples about 151,672 cases of schizophrenia, bipolar, major depressive disorder, attention deficit-hyperactivity disorder, and autism spectrum disorder and equivalent 284,444 controls of European ancestry based on the data from the latest genome-wide association studies; they found that SNPs mapped to 336 loci were shared by three adult psychiatric disorders (schizophrenia, bipolar and major depressive disorder), 73 loci shared by childhood disorders, and 47 genes by all five disorders at a genome-wide significance. A large number of SNPs were found in the extended major histocompatibility complex (MHC) for three adult disorders, but none of them was shared by two childhood disorders. The SNPs shared by all five disorders were located in the regions that have been identified as containing copy number variation associated with autism and had largely neurodevelopmental functions. In addition, some of those genes have been implicated for Alzheimer's diseases (AD) and Parkinson's

disease (PD). This study provides a valuable list of genes from which to investigate genetic mechanism or gene-gene interaction on the development of neuropsychiatric disorders.

Consequences of cervical cancer treatment on sexual health in cancer survivors: a qualitative study

There has been little information on the attitudes and perceptions of cervical cancer survivors (CCS) toward sexual activity subsequent to a diagnosis of cervical cancer and its treatment. **Ye et al.** conducted a qualitative study of 20 patients after surgical treatment; they found that uncertainty, fear, and worry dominated the attitudes and behaviors of CCS-related to sexual activity. Patient-centered information on the change in sexual life and strategies to cope with the physical and psycho-sexual sequelae of treatment are needed.

An overview of genetic and environmental risk of autism spectrum disorder

It is evident that both genes and environment contribute to the etiology of Autism Spectrum Disorder (ASD). **Ou et al.** provided an overview of the genetic and environmental risk factors that have been associated with ASD. They proposed that genes and environmental factors, as well as their interactions, should be considered in the future study, with the expectation that epigenetic studies will lead to understanding the link between the environment and risk of ASD.

Altered gut microbiome in autism spectrum disorder: potential mechanism and implications for clinical intervention

A large number of individuals with ASD have gastrointestinal problem, and recent studies demonstrate that the endogenous gut microbiota has a close relationship with ASD. **Li et al.** reviewed the reports of microbial dysbiosis in ASD and discussed the recent evidence of biological interactions among microbiota, metabolism, immunity, neurodevelopment, behaviors, and the role of gut microbiome in the link between ASD and environmental risk factors. They suggest adjuvant treatments to consider in attempts to correct autistic behaviors.

Childhood adversity and depression among older adults: results from a longitudinal survey in China

Depressive symptoms in older adults are often mistaken for symptoms of healthy aging and so may have not draw timely attention clinically; and individual with depression may not receive appropriate treatment. Using data from the China Health and Retirement Longitudinal Study (CHARLS), **Li et al.** analyzed to examine the association of childhood adversity and depression among older adults; and found that the likelihood of depression was significantly associated with poor parental mental status, physical abuse, and emotional abuse during childhood. Our study adds to research in the area of adverse childhood events and its effect on adult psychological and physical well-being.