Abstract
Attention-deficit/hyperactivity disorder (ADHD) is a common childhood-onset psychiatric disorder with high heritability. In recent years, numerous molecular genetic studies have been published to investigate susceptibility loci for ADHD. These results brought valuable candidates for further research, but they also presented great challenge for profound understanding of genetic data and general patterns of current molecular genetic studies of ADHD since they are scattered and heterogeneous. In this review, we presented a retrospective review of more than three hundred molecular genetic studies for ADHD from two aspects: 1) the main achievements of various studies were summarized, including linkage studies, candidate-gene association studies, genome-wide association studies and genome-wide copy number variation studies, with a special focus on general patterns of study design and common sample features; 2) candidate genes for ADHD have been systematically evaluated in three ways for better utilization. The thorough summary of the achievements from various studies will provide an overview of the research status of molecular genetics studies for ADHD. Meanwhile, the analysis of general patterns and sample characteristics on the basis of these studies, as well as the integrative review of candidate ADHD genes, will propose new clues and directions for future experiment design.