Tecott et al (p 995) describe applications of molecular genetic technologies in the mouse that provide powerful strategies for investigating genetic influences on central nervous system pathways, behavioral regulation, and the actions of psychoactive drugs. Rapid progress in this area promises to provide substantial insights into the etiology of psychiatric disorders and novel approaches to treatment.

Kendler (p 1005) examines selected recent developments in twin studies of adult psychiatric disorders including the generalizability of heritability estimates, the impact of sex on patterns of familial transmission, gene-environment interaction, twin studies of anxiety and eating disorders, the family environment, and special issues in twin studies of drug use and abuse. The heritability of many behavioral traits may be greater in permissive than in restrictive environments. For psychiatric and drug abuse disorders, genes may work both through traditional “within-the-skin” physiological pathways and “outside-the-skin” behavioral pathways.

Case-control association studies use genetic markers as etiological risk factors. Sullivan et al (p 1015) describe the promise and pitfalls of these studies in a review of the processes that can bias outcomes away from a true representation of the relationship between a genetic marker and a neuropsychiatric disorder.

McMahon et al (p 1025) investigated the clinical features that characterize families whose bipolar disorder is genetically linked to chromosome 18q. They found that families containing 2 or more siblings with bipolar II disorder produced significantly stronger and more localized evidence of linkage to chromosome 18q than did the total family sample, accounting for essentially all the linkage evidence previously observed in this sample.

Buka et al (p 1032) accessed prenatal blood samples collected 40 years ago from the mothers of adults with schizophrenia and other psychotic illnesses and a set of matched comparison subjects. Maternal levels of IgG and IgM were significantly elevated among the affected sample, as were maternal antibodies directed at herpes simplex virus type 2. Ongoing work with such cohorts may indicate potential prenatal interventions for the prevention of schizophrenia and related psychotic illness in later life.

Pedersen and Mortensen (p 1039) found evidence of a dose-response relationship between urbanicity during upbringing and schizophrenia risk, and that this effect explains the effect of place of birth reported in other studies. They conclude that continuous or repeated exposures during upbringing are likely to be responsible for the association. Candidate risk factors would include infections, pollutants, or other factors occurring more frequently in urban areas.

Shamir et al (p 1049) report that melatonin was significantly better than placebo in reducing severity of tardive dyskinesia in patients with schizophrenia. The study is the first to report the possible use of melatonin for treating tardive dyskinesia.

Using functional magnetic resonance imaging, Thomas et al (p 1057) report heightened amygdala responses to fearful facial expressions in children with anxiety relative to healthy children, whereas depressed children showed a blunted amygdala response. These findings suggest that amygdala dysfunction is present early in the development of these disorders.

Data from 4 community surveys presented by Kessler et al (p 1065) show that the majority of people with substance disorders eventually seek treatment. The time between first onset of symptoms and initial help-seeking, however, typically averages more than a decade. Evidence for a secular increase in the rate of treatment-seeking over time exists in all 4 surveys, presumably due to the expansion of treatment options, growth of health insurance for substance treatment, and changes in attitudes.

Rosenheck and Dennis (p 1073) studied postdischarge outcomes associated with time-limited provision of ACT to homeless people with severe mental illness. Among clients who left the program, no deterioration was observed in mental health, substance abuse, or housing status, and employment improved. Homeless clients with severe mental illness can be selectively discharged or transferred from ACT without subsequent loss of gains.