Identification of Protein May Lead to Future Blood Test for Effective Depression Treatment

Researchers are reporting what could become the first reliable method to predict whether an antidepressant agent will work on a depressed patient.

According to research presented at the annual meeting of the Society of Biological Psychiatry and the annual Illinois Brain, Behavior and Immunity Meeting, the method would involve a blood test for a protein called vascular endothelial growth factor (VEGF).

A Loyola University Medical Center study found that among depressed patients who had higher than normal blood levels of VEGF, more than 85% experienced partial or complete relief from depression after taking escitalopram (Lexapro®). By comparison, fewer than 10% of depressed patients who had low levels of VEGF responded to the drug. The study involved 35 patients who took escitalopram, a selective serotonin reuptake inhibitor (SSRI), for major depressive disorder.

The study supports the theory of neurogenesis—that SSRIs help regenerate brain cells in specific parts of the brain that have atrophied in depressed patients. It appears that escitalopram jump-starts brain cells that have become inactive, and this regeneration is fueled by VEGF. In the brain, VEGF stimulates the growth of blood vessels and works in other ways to keep brain cells healthy and active.

It appears that in patients with higher levels of VEGF, there was more regeneration, helping reduce depression. Conversely, in patients with lower VEGF levels, there was less regeneration of brain cells and less relief from depression.

If the finding is confirmed by further studies, it could lead to a blood test that would help physicians tailor treatment.

De Novo Genetic Mutations Increase Risk of Early-Onset Bipolar Disorder

An international team of scientists has reported that abnormal sequences of DNA known as rare copy number variants (CNVs) appear to play a significant role in the risk for early-onset bipolar disorder. The findings were published in Neuron.

Researchers have known that spontaneously occurring (de novo) CNVs—genetic mutations not inherited from parents—significantly increase the risk for some neuropsychiatric conditions, such as schizophrenia or autism spectrum disorders, but until now their role was unclear in bipolar disorder.

New Version of National Survey on Drug Use and Health Available

The latest version of the National Survey on Drug Use and Health (NSDUH)—the primary source of information on the use of illicit drugs, alcohol, and tobacco in the civilian, noninstitutionalized population of the United States ages 12 and older—has been released. The public-use data and documentation files are now available for download, online analysis, and Quick Tables through the Substance Abuse and Mental Health Services Administration (SAMHSA) Data Archive website (http://www.samhsa.gov/data/NSDUH/2k10Results/Web/PDFW/2k10Results.pdf). The survey is also a source of national estimates on mental health measures such as serious mental illness, other mental illness, depression, and treatment.

“Results From the 2010 National Survey on Drug Use and Health: Summary of National Findings” provides highlights of the 2010 NSDUH. Topics of the report include illicit drug, alcohol, and tobacco use, and initiation of substance use; youth prevention-related measures; substance dependence, abuse, and treatment; and trends in substance use among youth and young adults.


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The research team found that de novo CNVs contribute significant genetic risk in approximately 5% of early-onset bipolar disorder. In other words, having a de novo mutation increases the chances of having an earlier onset of disease.

While the findings do not conclusively pinpoint a specific gene or genomic region, the new findings show evidence that rare copy number mutations strongly contribute to the development of early-onset bipolar disor-

‘Homeless Hub’ Offers Peer Assistance in Philadelphia

Individuals who have been homeless are staffing a “homeless hub” launched by two nonprofit agencies (along with other health care and social service providers) with the support of the Philadelphia Department of Behavioral Health and Intellectual Disability Services (DBHIDS). The Hub of Hope, in a Suburban Station concourse storefront, serves homeless individuals who have been reluctant to make use of services.

The Mental Health Association of Southeastern Pennsylvania (MHASP) worked with Project H.O.M.E. to create and staff the storefront office, which was launched in January and will be open until April.

MHASP interviewed some 20 formerly homeless individuals and “one of the things that came out in these focus groups was people who were formerly homeless talking about how helpful it was to receive help from people who had had similar experiences,” said Michael Brody, MHASP’s director of service operations.

The majority of MHASP staff members are in recovery from serious mental health conditions, including some staffers who have been homeless. That includes three recovery coaches who are certified peer specialists—individuals in recovery who have been trained to help others work toward recovery—to do outreach to and follow up with people who make use of the Hub of Hope. The recovery coaches are working with the Student-Run Emergency Housing Unit of Philadelphia and with the Project H.O.M.E. housing coordinator and play a major role in ensuring that people who come to the Hub are welcomed.

“People are coming in on a daily basis and really making use of this added service,” noted MHASP outreach advocate Johnathan Evans, himself formerly homeless, who supervises the recovery coaches. “The certified peer specialist team has been welcoming people into the Hub and reaching out to them in the concourse. They are introducing them to representatives of the Behavioral Health Special Initiative [which provides assessments, referrals and funding support for persons who are uninsured or underinsured with substance abuse problems] and walking them over to Mary Howard Health Center.”

The Hub is open from 7 a.m. to 9 a.m. and from 7 p.m. to 10 p.m., Monday through Friday. “People we encounter in the evening will be given an appointment to come in the morning to link with a recovery coach,” Brody continued. “The recovery coach will be doing outreach to find those folks to bring them back to get them linked with services.” MHASP will also offer psychiatric services one evening per week.

Lifestyle Adjustments Help Children with ADHD

An article in *Focus on Alternative and Complementary Therapies* is the first to study what parents who seek natural remedies for their child’s attention-deficit/hyperactivity disorder (ADHD) are actually using or interested in learning about from an integrative pediatrician. The growing field of integrative pediatrics covers not only complementary therapies but also focuses on health promotion, disease prevention, lifestyle coaching, and coordinated team care.

In the study, researchers reviewed intake forms, physician reports, and laboratory studies for 75 new patients seen in an integrative pediatric clinic over 1.5 years. Most of the patients (87%) were referred by their primary care physicians and the rest were referred by specialists. Among the patients, 31% of the families had concerns about ADHD, but only 13% of the children were taking medicine for the condition.

The data suggest that these children often have several chronic health conditions; receive care from multiple, diverse specialists as well as primary care clinicians; and take a variety of medications and supplements while avoiding ADHD medications.

The researchers showed that most families with ADHD children were interested in information about diet, exercise, stress management, and sleep. Physician recommendations focused on health promotion information; dietary supplements, such as multivitamins/minerals and omega-3 fatty acids; and referrals to specialists.

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Lower Levels of ‘Good’ Cholesterol Found in Children with Autism

In a study examining the ties between nutrition and autism, researchers looked at blood levels of lipids and fatty acids in two groups of South Korean children—one group of typically developing boys and another group of boys with an autism diagnosis. These fatty acids, particularly omega-3 and omega-6, are needed for normal development of the nervous system, including the brain.

Although there were no major differences in what these children ate, those with autism had a lower omega-3-to-omega-6 fatty acid ratio and lower levels of high density lipoprotein (HDL).

Although the findings are preliminary, the researchers believe there is some kind of lipid metabolism disorder in children with autism, that low blood levels of HDL and omega-3 fatty acids observed in autistic children at an early age may be an indicator of impaired fatty acid metabolism. The study suggests following these children until they become older and then see whether their lower amounts of “good” cholesterol result in any health problems, such as a higher risk of cardiovascular disease.

There is nothing, yet, to suggest that increasing blood levels of HDL or omega-3 fatty acids will reduce the symptoms of autism. In fact, the study doesn’t reveal what causes what—if autism causes a lipid metabolism disorder or if the disorder causes autism.


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