Researchers at the University of South Florida have identified several compounds that may provide treatment for major depression, post-traumatic stress disorder (PTSD), anxiety disorders, and Alzheimer’s disease (AD).

Neurotransmitters are protein-based chemical messengers in the brain that are the means by which nerve cells communicate with each other. Some of these neurotransmitter proteins are involved in mood regulation. In mood disorders such as depression, anxiety, or PTSD, the expression of these proteins is often altered. The altered levels of these proteins is believed to be a contributing factor to the onset of these disorders. Specifically, elevated levels of the one protein, designated FKBP51, is associated with the aforementioned mood disorders. Furthermore, FKBP51 levels increase with age, and the levels are even more elevated in the brains of AD patients. These findings have prompted efforts to identify therapeutics that can inhibit this protein.

With the aid of high-throughput screening, USF researchers have identified several compounds with strong inhibitory activity against FKBP51. These compounds are all FDA approved drugs, and most are already in widespread use to treat other diseases. Therefore, the compounds may be implemented immediately into clinics to treat specific patient populations with high levels of FKBP51. Individuals suffering from depression, anxiety, PTSD and related mood disorders may immediately benefit from treatment with these drugs. The compounds also may be implemented into therapeutic regimens to treat patients with Alzheimer’s disease.

ADVANTAGES:
- Treats a variety of mood disorders
- Compounds are all FDA approved
- Treatment may be immediately implemented

Tech ID # 15A031
Patent #s: 9,399,039 / 9,962,379