

# TAAR1:

Trace Amine-Associated Receptor 1



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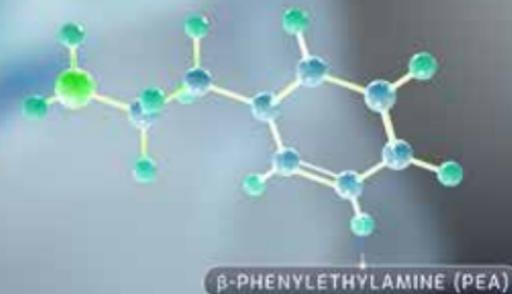
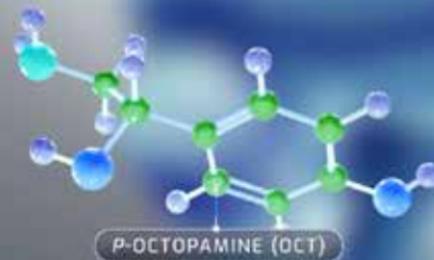
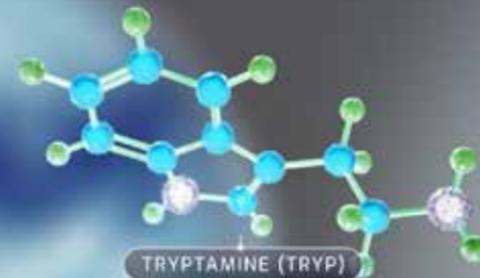


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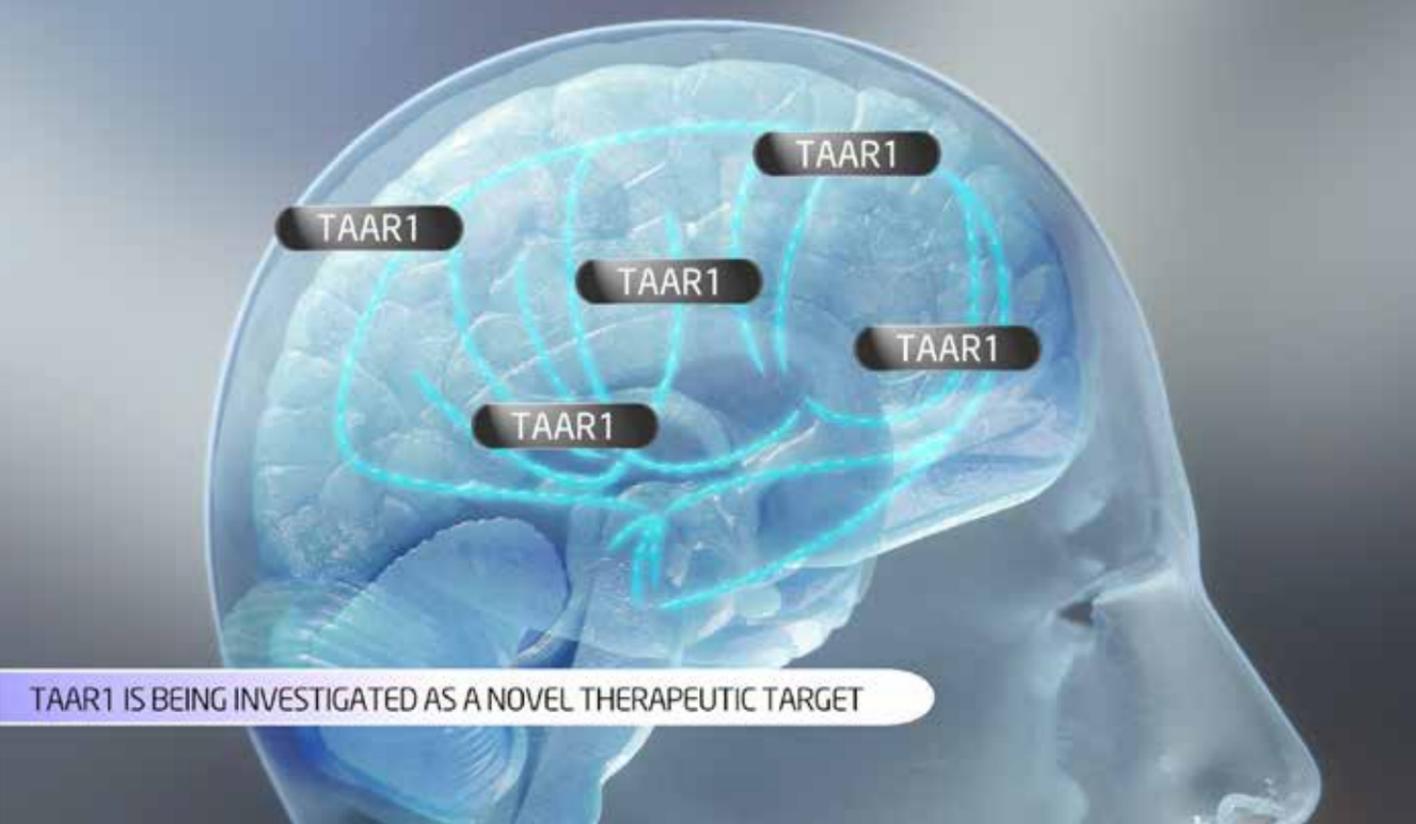
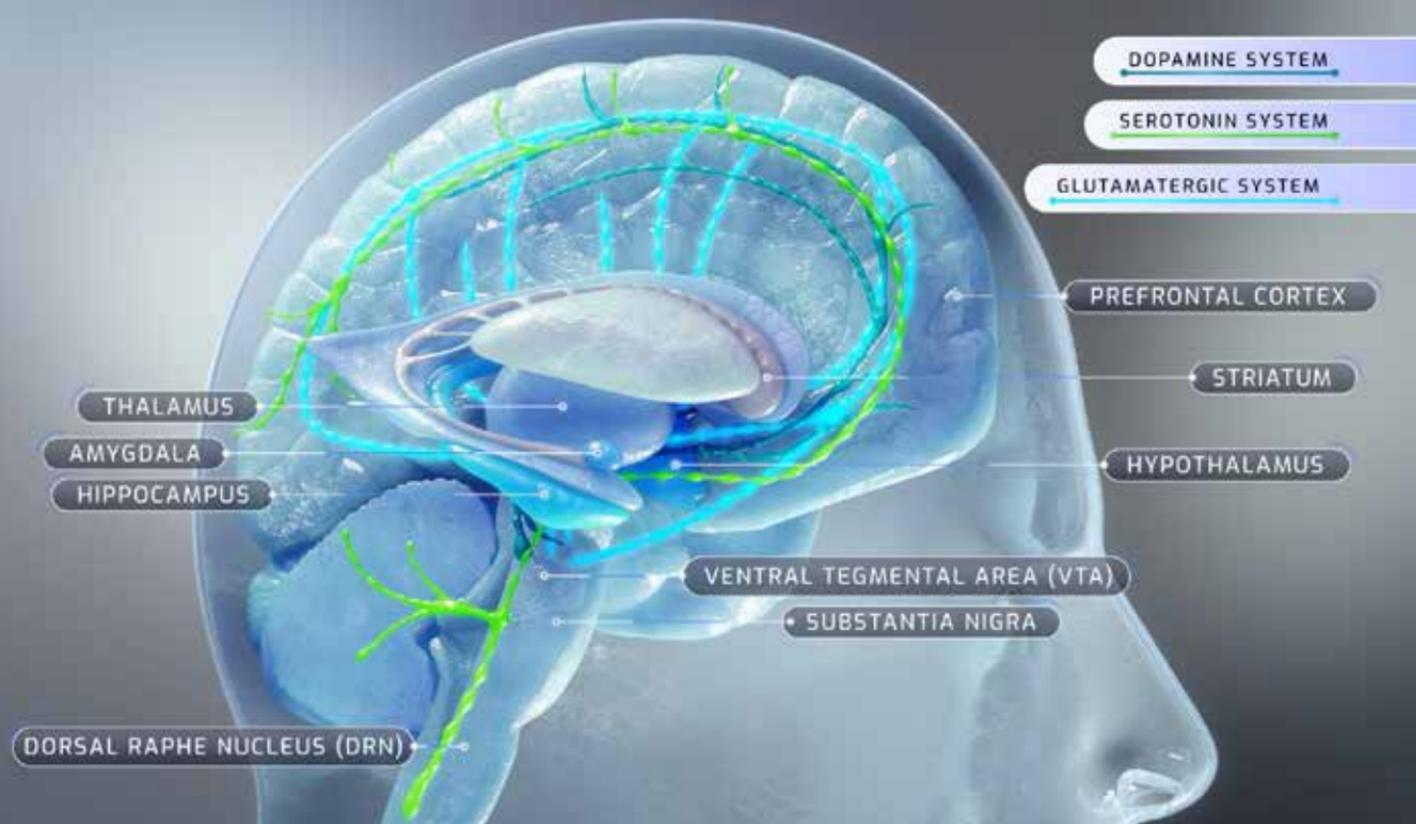
# THE BURDENS OF MENTAL ILLNESS

- People with serious mental illness, such as major depressive disorder, bipolar disorder, or schizophrenia, are burdened with worse clinical outcomes and increased healthcare costs compared with people without these conditions.<sup>1</sup>
- Some evidence shows that people with serious mental illnesses have high relapse and psychiatric hospitalization rates despite treatment with antipsychotics.<sup>1,2</sup>
- When serious mental illness is present in people hospitalized for other physical conditions, they are more likely to be readmitted within 30 days.<sup>2</sup>

## TRACE AMINES



- As unmet needs in schizophrenia persist, therapies with novel mechanisms of action are needed. One novel therapeutic target under investigation is TAAR1.<sup>3</sup>
- TAAR1, or trace amine-associated receptor 1, is the most studied member of the TAAR family.<sup>4,5</sup> TAARs are receptors for trace amines, a type of chemical messenger found in low levels in the brain as well as in peripheral tissues.<sup>6,7</sup>
- Trace amines are structurally and metabolically related to the classical monoamine neurotransmitters, dopamine, serotonin, and norepinephrine.<sup>8</sup>



- TAAR1 is widely distributed throughout the brain, including in dopamine and serotonin rich areas that are important to the pathophysiology of various serious mental illnesses.<sup>7,8</sup>

- When activated, TAAR1 has been shown to regulate key neurotransmitters up or down to account for their state of imbalance.<sup>6</sup> TAAR1's ability to regulate neurotransmitter circuits important for mood, psychosis, cognition, and reward processing, makes it a potential therapeutic target for several serious mental illnesses.<sup>8</sup>

# FIRST AND SECOND GENERATION ANTIPSYCHOTICS

DOPAMINE RECEPTOR BLOCKING THERAPIES

MAINSTAY OF PHARMACOLOGIC TREATMENT FOR THE LAST 70 YEARS

NEW THERAPIES NEEDED

- First and second-generation antipsychotics, which work mainly by blocking dopamine receptors, have been the mainstay of pharmacologic therapy for schizophrenia for the last 70 years.
- Though effective, current therapies do not adequately treat all symptoms of schizophrenia and can be associated with side effects such as movement disorders and increased cardiometabolic risk.<sup>9,10,11</sup> Novel treatment modalities that provide symptom improvement without the side effect profile of the current class are therefore needed.<sup>5,8,11</sup>

## References:

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