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Enveric Biosciences Inc - Chemical Library Catalogue Brochure:
Non-selective Serotonin Reuptake Inhibitor (NSRI) Compound Series

Enveric's NSRI Series:
Compounds in this series are Non-selective Serotonin Reuptake Inhibitors (NSRIs) that demonstrate the functional SERT inhibition of Selective Serotonin Reuptake Inhibitors (SSRIs) with additional binding to various serotonin and dopamine family receptors.

Background:
SSRIs are commonly prescribed to treat moderate to severe depression and anxiety disorders. These drugs inhibit reuptake of serotonin by the SERT transporter, thus promoting elevated levels of extracellular serotonin and enhancing positive neurotransmission.
SSRIs such as Fluoxetine (sold by others as Prozac®) and Paroxetine (Paxil®) only block serotonin reuptake. However, non-selective SRIs are emerging on the market that can also target other key CNS receptors. Vortioxetine (sold as Trintellix®), marketed to treat Major Depressive Disorder (MDD), increases serotonin levels by inhibiting SERT and activating serotonergic receptors 5-HT1A and 5-HT1B.

Key Features of Enveric NSRIs:
- All demonstrate strong binding to SERT
- NSRI-04 and NSRI-06 bind with high affinity to 5-HT1A, conferring on them the same SERT and 5-HT1A binding profile as Vortioxetine
- NSRI-03 and -05 shows the same binding profile as NSRI-04 and -06, with the addition of binding to 5-HT2A; literature indicates activation of 5-HT2A is linked to hallucination in humans, as well as induction of neuroplasticity
- NSRI-01 and -02 show the same binding profile as NSRI-03 and -05, with the addition of binding to the dopamine family receptors D2L and D3, targets activated by the atypical antipsychotic Aripiprazole

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Summary of Binding Data:

	Specific Target Receptor Binding				
Compound ID	SERT	5-HT1A	5-HT2A	D2L	D3
NSRI-01	✓✓✓	✓✓✓	✓✓✓	✓✓	✓✓✓
NSRI-02	✓✓✓	✓✓✓	✓✓✓	✓✓	✓✓✓
NSRI-03	✓✓✓	✓✓✓	✓✓✓		
NSRI-04	✓✓✓	✓✓✓			
NSRI-05	✓✓✓	✓✓✓	✓✓✓		
NSRI-06	✓✓✓	✓✓✓			