

## **MinoGuard - Conquering Schizophrenia with Novel Combination Therapies (Mor)**

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### **Background**

Schizophrenia is a chronic disorder that requires lifelong medication. While most of the available drugs are effective in remitting schizophrenia's "positive symptoms" (hallucinations, delusions, agitation), even the best available drug is only partially effective in remitting several of the most disturbing features of the disease, referred to as "negative symptoms" (apathy, poverty of speech, emotional withdrawal, depression) and severe cognitive impairment. This deficiency results in schizophrenic patients' poor quality of life. In addition, noncompliance results in aggravation in symptoms, which frequently causes lengthy hospitalization periods.

### **Our Innovation**

SAM-101 is based on the unique proprietary combination of minocycline and antipsychotic drugs. SAM-101 overcomes major limitations of currently available treatments for schizophrenia.

Minocycline is a second-generation tetracycline used in humans, which effectively crosses the blood-brain barrier. It is commonly used by humans, because of its beneficial anti-microbial and anti-inflammatory properties. In addition, it has demonstrated neuroprotective qualities in animal models of schizophrenia, cerebral ischemia, traumatic brain injury, Huntington's, ALS, and Parkinson's disease.

Following in-vivo studies demonstrating the efficacy of minocycline treatment in a schizophrenia murine model (Levkovitz Y., Levi U., Braw Y., and Cohen H., (2007) Brain Research, 1154: 154-162), MinoGuard completed a successful phase IIa clinical study aimed to test the therapeutic effects of minocycline in the early development of schizophrenia. Results demonstrate that the combination of atypical antipsychotic drugs and minocycline improves treatment efficacy and attenuates side effects associated with current therapy as compared to antipsychotic treatment alone.

SAM-101 will provide a new first-line treatment option for schizophrenia patients, with clear advantages over current drug treatments:

- i. Successfully addressing positive, negative and cognitive symptoms of the disease
- ii. Decreased side effects, mainly SGA's metabolic syndrome
- iii. Facilitating patient compliance, through re-formulation and co-encapsulation strategy
- iv. Halting disease progression, by providing neuroprotection features


### **The Opportunity**

According to the US National Institute of Mental Health, schizophrenia is the most prevalent mental disease affecting 1% of the population. The global schizophrenia market will continue to grow until 2010 when revenues will reach \$3.8 billion.

### **Patent Status**

PCT titled "Combined therapies of antipsychotic drugs and tetracyclines in the treatment of psychiatric disorders" filed 2007

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