Schizophrenia is a very distressing condition both for the person with the illness and their family. But there have been major advances in managing the condition in recent years.

Bifeprunox, developed by Solvay Pharmaceuticals and in Phase III clinical trials, is one such ray of hope on the horizon.

First, a correction of a popular misunderstanding. Schizophrenia does not mean a ‘split personality’. It actually refers to the splitting or fragmentation of an individual’s thinking and feeling processes. Schizophrenia is described as a psychosis, which means that a person can't distinguish their own thoughts, ideas, perceptions and imaginings from the shared perceptions, ideas and values that other people in that culture consider as reality. Schizophrenia is commoner than is imagined. About one in every hundred people is diagnosed with schizophrenia, usually as a young adult between 20 and 30 years old. It affects roughly the same number of men as women, and there are no significant regional or racial variations.

What are the symptoms?

The symptoms of schizophrenia can be divided into ‘positive’ symptoms and ‘negative’ symptoms. Positive symptoms include disorganized speech (incoherence, the inability to follow a logical sequence of thought, and conversation difficulties), hallucinations (hearing voices or sounds that other people don’t hear) and delusions (beliefs or experiences that other people don’t share). Other symptoms are less obvious and are therefore called negative symptoms. They include being withdrawn, apathetic, and unable to concentrate.

What causes schizophrenia? If only we definitely knew! It’s probably caused by a combination of factors, such as:

- Inheritance – To date, a ‘schizophrenia gene’ has not been found, but it is thought that combinations of certain genes might make some people more vulnerable.
- Dopamine – This chemical carries messages between brain cells and is the target for certain anti-schizophrenia drugs, although its precise role is not certain.
- Stress – Studies suggest that schizophrenia may be triggered by highly stressful events such as losing your job, the death of a loved one, or being abused.
- Drug abuse – Studies have shown that certain drugs make the condition worse.

Other possible causes include injuries to the brain, viral infections, hormones, diet and allergies.

Schizophrenia is the topic of considerable research and new discoveries are being announced regularly. Recently (August 2006), scientists at the University of Cambridge (England) discovered the first biomarker for schizophrenia. A biomarker is a specific physical trait that can be used to measure the effects or progress of a disorder. The researchers found that schizophrenia patients have higher levels of glucose in their brain and spinal fluid compared to healthy individuals. These differences in sugar metabolism could be used to predict individuals at high risk of developing schizophrenia, and this discovery is thus an important breakthrough.

Therapy and support

Psychotherapy and other forms of talk therapy may be helpful to people suffering from schizophrenia as they can help increase their self-esteem, social functioning, and concentration. Support services may also be useful, such as drop-in centers and visits from community health workers. In recent years the importance of patient-led support groups has grown substantially.
Physicians currently have more treatment options than ever before to treat people with schizophrenia. Neuroleptic drugs (also known as antipsychotic drugs or major tranquillizers) are prescribed to control the positive symptoms. They have a sedative action, but in high doses can have unpleasant side-effects such as trembling hands, muscle stiffness, blurred vision, rapid heart beat, constipation and dizziness.

Current guidelines suggest that, whenever possible, schizophrenics should be prescribed the newer ‘atypical’ neuroleptics, which have fewer side-effects. They are thus safer, and may also improve the negative symptoms, which are much more difficult to treat and control.

The Solvay Pharmaceuticals solution

The investigational compound bifeprunox can be considered the next generation in the atypical drug class. Bifeprunox is currently being studied in Phase III clinical trials as a first-line therapy for acute management and long-term maintenance of both positive and negative symptoms of schizophrenia.

Bifeprunox is a novel antipsychotic compound, discovered by Solvay Pharmaceuticals and co-developed with H. Lundbeck A/S and Wyeth Pharmaceuticals. Solvay and Wyeth will co-commercialize bifeprunox in the US and Canada. Wyeth territories are Mexico and Japan. Lundbeck will market bifeprunox in Europe and the rest of the world.

It is to be hoped that bifeprunox will make a significant contribution to helping people with schizophrenia live balanced and fulfilled lives, and form lasting relationships.

Bifeprunox: continuing Solvay’s commitment to neuroscience

Bifeprunox has a novel mode of action in the new class of partial dopamine agonists, which gives the product an advantageous profile, several unique selling points, and the opportunity of capturing a large market share in the antipsychotic market. In the treatment of schizophrenia its profile is the basis for equal efficacy (compared to competitive drugs) against positive symptoms, and possibly improved efficacy on negative symptoms. The benefits are likely to be enhanced social and vocational functioning. The profile also creates the possibility to treat other psychotic disorders, such as bipolar disorder, disruptive behavior and psychotic symptoms in adolescents or the elderly and psychotic disorders of children, where it could lead to mood stabilization and long-term functional improvement. Bifeprunox’ pharmacological profile also leads to a beneficial side-effect profile and compares favorably with other antipsychotics available today. Bifeprunox will be developed in a tablet formulation. The possibility of developing a rapid dissolving tablet and a long-acting intramuscular depot formulation is currently being explored. The development of bifeprunox is just one area where Solvay Pharmaceuticals is active in the field of neuroscience. Solvay’s psychiatric research has contributed substantially to the current knowledge of the role of serotonin in a wide variety of psychiatric disorders. The anti-depressant LUVOX® – developed by Solvay Pharmaceuticals – was the first SSRI to reach the market (1983). The recent acquisition of the Parkinson’s medication DUODOPA® will be Solvay’s first commercial contribution to patients suffering from late stage Parkinson’s disease.