

**Media Release: European College of Neuropsychopharmacology (ECNP)**

*“For the science and treatment of disorders of the brain”*

**[How can we prevent suicide? Major study shows suicide risk factors associated with depression](#)**

**Embargo until: 00.05 Central European Summer Time (Amsterdam) Sunday 30th August 2015**

A major multi-national study of suicides has identified the behaviour patterns which precede many suicide attempts. This may lead to changes in clinical practice in the care of patients affected with depression, as it shows the clinical factors which confer major risk of suicide attempts.

The statistics for suicide are frightening. According to the WHO, more than 800,000 people commit suicide every year, with perhaps 20 times that number attempting suicide. Suicide is one of the leading causes of death in the young (in the UK for example, it is the leading cause of death in men under 35) <sup>see notes, below</sup>. Effective measures of suicide prevention are urgently needed.

The BRIDGE-II-MIX study is a major international study looking at depression and suicide. The researchers evaluated 2811 patients suffering from depression, of whom 628 had already attempted suicide. Each patient was interviewed by a psychiatrist as if it were a standard evaluation of a mentally-ill patient. The parameters studied included previous suicide attempts, family history, current and previous treatment, patients' clinical presentation, how they scored on the standard *Global Assessment of Functioning* scale, and other parameters. The study looked especially at the characteristics and behaviours of those who had attempted suicide, and compared these to depressed patients who had not attempted suicide. They found that certain patterns recur before suicide attempts.

According to author Dr. Dina Popovic (Barcelona):

*‘We found that “depressive mixed states” often preceded suicide attempts. A depressive mixed state is where a patient is depressed, but also has symptoms of “excitation”, or mania. We found this significantly more in patients who had previously attempted suicide, than those who had not. In fact 40% of all the depressed patients who attempted suicide had a “mixed episode” rather than just depression. All the patients who suffer from mixed depression are at much higher risk of suicide.*

*We also found that the standard DSM criteria identified 12% of patients at showing mixed states, whereas our methods showed 40% of at-risk patients. This means that the standard methods are missing a lot of patients at risk of suicide”.*

In a second analysis of the figures, they found that if a depressed patient presents any of the following symptoms:

- risky behaviour (e.g. reckless driving, promiscuous behaviour)
- psychomotor agitation (pacing around a room, wringing one's hands, pulling off clothing and putting it back on and other similar actions)
- impulsivity (acting on a whim, displaying behaviour characterized by little or no forethought, reflection, or consideration of the consequences),

then their risk of attempting suicide is at least 50% higher.

Dr Popovic continued:

*“In our opinion, assessing these symptoms in every depressed patient we see is extremely important, and has immense therapeutical implications. Most of these symptoms will not be spontaneously referred by the patient, the clinician needs to inquire directly, and many clinicians may not be aware of the importance of looking at these symptoms before deciding to treat depressed patients.*

*This is an important message for all clinicians, from the GPs who see depressed patients and may not pay enough attention to these symptoms, which are not always reported spontaneously by the patients, through to secondary and tertiary level clinicians. In highly specialized tertiary centres, clinicians working with bipolar patients are usually more aware of this, but that practice needs to extent to all levels.*

*The strength of this study is that it’s not a clinical trial, with ideal patients – it’s a big study, from the real world”.*

Commenting ECNP President, Professor Guy Goodwin (Oxford) said:

*The recognition of increased activation in the context of a severe depression is an important practical challenge. While many psychiatrists recognize that this constitutes an additional risk for suicide, and would welcome better scales for its identification, the question of treatment remains challenging. We need more research to guide us on best practice.*

**ENDS**

#### **Notes for Editors**

**[Please mention the ECNP conference in any story from this press release.](#)**

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#### **The ECNP**

The ECNP is an independent scientific association dedicated to the science and treatment of disorders of the brain. It is the largest non-institutional supporter of applied and translational neuroscience research and education in Europe.

ECNP organises a wide range of scientific and educational activities, programmes and events across Europe, promoting the exchange of high-quality experimental and clinical research and fostering young scientists and clinicians.

The 28<sup>th</sup> ECNP Congress takes place in Amsterdam from 29 August-1 September. It is Europe's premier scientific meeting for disease-oriented brain research, annually attracting between 5,000 and 7,000 neuroscientists, psychiatrists, neurologists and psychologists from around the world. Website: [www.ecnp.eu](http://www.ecnp.eu)

## Background

- The World Health Organisation reports that globally "Over 800 000 people die due to suicide every year and it is the second leading cause of death in 15-29-year-olds. There are indications that for each adult who died of suicide there may have been more than 20 others attempting suicide". [http://www.who.int/mental\\_health/suicide-prevention/exe\\_summary\\_english.pdf?ua=1](http://www.who.int/mental_health/suicide-prevention/exe_summary_english.pdf?ua=1) page 4
- See European Suicide map, <http://ec.europa.eu/eurostat/tgm/mapToolClosed.do?tab=map&init=1&plugin=1&language=en&pcode=tsdph240&toolbox=types>
- Eurostat causes of death-28 [http://ec.europa.eu/eurostat/statistics-explained/index.php/File:Causes\\_of\\_death\\_%E2%80%94\\_standardised\\_death\\_rate,\\_2012\\_\(per\\_100\\_000\\_inhabitants\)\\_YB15.png](http://ec.europa.eu/eurostat/statistics-explained/index.php/File:Causes_of_death_%E2%80%94_standardised_death_rate,_2012_(per_100_000_inhabitants)_YB15.png)
- Suicide is the UK's the leading cause of death of men under 35 <http://www.mentalhealth.org.uk/help-information/mental-health-statistics/suicide/>

## Abstract

P.2.d.003 **Suicidal behaviour in major depressive episode: evidence from the BRIDGE-II-MIX study** D. Popovic<sup>1</sup>, E. Vieta<sup>1</sup>, J. Azorin<sup>2</sup>, J. Angst<sup>3</sup>, C.L. Bowden<sup>4</sup>, S. Mosolov<sup>5</sup>, A.H. Young<sup>6</sup>, G. Perugi<sup>7</sup> <sup>1</sup>Hospital Clinic De Barcelona, Psychiatry, Barcelona, Spain; <sup>2</sup>Hopital Sainte- Marguerite, Psychiatry, Marseille, France; <sup>3</sup>Psychiatrische Universit'atsklinik, Psychiatry, Zurich, Switzerland; <sup>4</sup>University of Texas Health Center, Psychiatry, San Antonio, USA; <sup>5</sup>Moscow Research Institute of Psychiatry, Psychiatry, Moscow, Russia; <sup>6</sup>Imperial College, Psychiatry, London, United Kingdom; <sup>7</sup>University of Pisa – Santa Chiara Hospital, Psychiatry, Pisa, Italy

**Purpose of the study:** BRIDGE-II-MIX study aimed to estimate the frequency of mixed states in patients with major depressive episode (MDE) according to different definitions and to compare their clinical validity looking into specific features, such as suicidality (1). This analysis aimed to compare characteristics of MDE patients with and without a history of suicide attempts (SA).

**Methods:** 2811 subjects were enrolled in this multinational, cross-sectional study. Psychiatric symptoms, socio-demographic and clinical risk factors for bipolar disorder (BD) were collected. Chi-square test and Student's t-test were used for comparison between groups. Multiple comparisons analysis was performed using a Bonferroni-corrected threshold for statistical significance. A stepwise-backward logistic regression model was then used to identify the predictive value of the current (hypo)manic symptoms and comorbid pathologies on the presence of past history of SAs. Odds ratios with 95% confidence intervals were calculated.

**Results:** History of SAs was registered in 628 patients (22.34%). In the MDE-SA group, women (72.5%,  $p = 0.028$ ), first degree familiarity for BD (20.5%,  $p < 0.0001$ ), psychotic (15.1%,  $p < 0.0001$ ) and atypical features (9.2%,  $p = 0.009$ ) were more frequent than in the MDE-NSA group. MDE-SA patients' past response to treatment with antidepressants included more (hypo)manic switches (OR 1.97 (1.58–2.44),  $p < 0.0001$ ), treatment resistance (OR 2.07 (1.72–2.49),  $p < 0.0001$ ), mood lability (OR 1.98 (1.65–2.39),  $p < 0.0001$ ) and irritability (OR 1.80 (1.48– 2.17),  $p < 0.0001$ ) (TABLE 1). The (hypo)manic symptoms mostly associated with SAs were risky behaviour (OR 2.11 (1.51–2.97), Wald 18.714,  $p = 0.000$ ), psychomotor agitation (OR 1.452 (1.14– 1.86), Wald 8.780  $p = 0.003$ ) and impulsivity (OR 1.267 (.97– 1.66), Wald 2.891,  $p = 0.089$ ). Borderline Personality Disorder and Substance Abuse Disorders were the comorbid diagnosis most frequently associated with SAs. In the MDE-SA group, 75 patients (11.9%) fulfilled DSM-5 criteria for MDE with Mixed Features and 250 patients (39.8%) fulfilled research-based diagnostic criteria (RBDC) for a mixed depressive episode.

**Conclusions:** The results of this study highlight important differences between patients with previous history of suicide attempts and those without, including distinct clinical features, history of pharmacological treatment and previous response to antidepressant monotherapy (more (hypo)manic switches, higher rates of treatment resistance, more frequent mood lability and irritability following treatment with antidepressants). Mixed depressive features are associated with hallmarks of bipolarity (2). The prevalence of the diagnosis of mixed states in this large sample varies largely based on the diagnostic criteria utilized, ranging from approximately 12% when DSM-5 criteria were considered to nearly 40% according to RBDC

criteria, meaning that a large portion of patients may remain misdiagnosed and, perhaps, inadequately treated. Noteworthy, many of the identified (hypo)manic symptoms (including irritable mood, mood lability, psychomotor agitation) were excluded from DSM-5 “mixed features specifier”. Early identification of symptoms such as risky behavior, psychomotor agitation and impulsivity in MDE patients and timely treatment of mixed depressive states could represent a major step in suicide prevention.

**References** [1] Perugi, G., Angst, J., Azorin, J.M., Bowden, C., Mosolov, S., Reis, J., Vieta, E., Young, A.H. for the bridge-II-mix study group., in press. Mixed Features in Patients with a Major Depressive Episode: the BRIDGE-II-MIX Study. *J Clin Psychiatry*. [2] Zaninotto, L., Souery, D., Calati, R., Scudellari, P., Janiri, L., Montgomery, S., Kasper, S., Zohar, J., Mendlewicz, J., Serretti, A., 2014. Mixed, melancholic, and anxious features in depression: A cross-sectional study of sociodemographic and clinical correlates. *Ann Clin Psychiatry* 26, 243–253. **Disclosure statement:** The sponsor of this study (Sanofi-Aventis) was involved in the study design, conduct, monitoring, and preparation of the final data base, but not in the content of this report.