trial of patient flow and treatment assignment at emergency room discharge over 1-month, we implemented a consensual diagnostic and treatment decision manual. Then, an educational program aimed to improve the understanding of the reliability of treatment decision among the psychiatric staff of the emergency room. In short, a substantial proportion of psychiatric patients with suicide attempt did not receive adequate treatment assignment at discharge and the presence of a clinical diagnosis of borderline personality disorder was a factor of even more unpredictable treatment choice. This is an issue of great need and potential impact since medical decisions often appeared to favour either treatment that are more expensive or treatments that are at increased risk of completed suicide. Further steps of the data analyses aimed to clarify the impact of better quality assurance on the reliability of treatment decision are under scrutiny and will be discussed.

## S29.02

Crisis hospitalisation outcome among borderline patients. A 1-year follow-up

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We evaluated the impact of short-term crisis treatment at the general hospital among borderline patients with emotional crisis severe enough to require emergency hospitalisation in a 500.000 inhabitants urban catchment area. Those patients with concurrent bipolar disorder I and severe substance dependence were excluded from the study. Repeated assessment were conducted at intake, 3-month and 1-year follow-up in order to tape adherence to treatment, service utilization and treatment failure over one year. Presence of borderline personality disorder was assessed within acute in-patient treatment with the International Personality Disorder Interview (IPDE). The results indicate that residential treatment is no more a cogent issue of rational treatment plans for acute borderline patients. Among these subjects, psychodynamically informed crisis intervention at the general hospital may be a valuable alternative to classic psychiatric hospitalisation.

## S29.03

Time-limited psychodynamic psychotherapy and venlaxafine among acutely suicidal bordeline patients

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To further investigate time-limited psychoanalytic psychotherapy among acutely suicidal borderline patients we investigated 30 subject aged 18-60 who had been referred to the emergency room of a community hospital with IPDE (International Personality Disorders Examination) borderline personality disorder. Additional inclusion criteria were a diagnosis of major depression, current suicidal attempt, requiring in-patient treatment at medical emergency room discharge and the accptance to give informed consent. Psychotic symptoms, bipolar disorder and severe substance dependence were exclusion criteria. At hospital discharge these patients were assignet to 3-month ambulatory treatment with a combination

Of Venlaxafine and time-limited psychoanalytic psychotherapy. We also studied the 3-months outcome of a comparison group of 30 IPDE borderline patients meeting the same inclusion/exclusion criteria who had been assigned, at acute hospitalisation discharge to treatment as usual. The results indicated that assignment to ambulatory combination treatment with Venlaxafine and psychoanalitic psychotherapy in associated with good compliance, fair 3-month outcome and low-relapse/repetition rates. Ambulatory combination treatment may be a cost-effective alternative to residential treatment among borderline patients with suicidal crises.

# S30. Symposium: NATURE AND NURTURE IN SUICIDAL BEHAVIOUR (Organised by the AEP section on Suicidology)

## S30.01

Nature and nurture in suicidal behaviour; the role of genetics: Some novel findings

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Suicide affects about one million people each year, a phenomenon characterized by heterogeneous and complex causes. Often environmental factors such as negative life events may act as a significant contributor to suicidal behavior. However, in many cases the exposure to the same environmental stress does not result in increased suicidality. It is now well established that there is also a substantial genetic contribution to suicidal behavior. Our novel findings which need replication will be presented. We found that genetic variation in the noradrenergic tyrosine hydroxylase gene was associated with the angry/hostility personality trait and vulnerability to stress. Similarly, we recently discovered that genetic variation in the transcription factor T-box 19, an upstream regulator of the stress-related hypothalamic pituitary adrenocortical axis, showed significant linkage to a personality characterised by high anger/hostility in suicidal offspring. Further results from our studies have revealed that genetic variation in genes with roles in basal mechanisms of neural conduction, voltage-gated sodium channel type VIII alpha and vesicle-associated membrane 4 protein, showed association and linkage among suicide attempters. Additionally, we have results which give support to the findings of others, implicating the serotonin transporter and serotonin receptor 1A in suicidal behavior. Our future studies aim at identifying and resolving complex patterns and mechanisms of neurobiological gene-environment interactions, which may contribute to suicide.

## S30.02

Risk factors and vulnerability to suicidal behavior

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Aggressive and suicidal behaviours are one of the most common psychiatric emergencies and, as every psychiatric disorder or human behaviour, have a multifactorial origin in which biological, psychological and social factors act togheter. These factors may

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have a protective value or may be risk factors and both concur in determining the individual's vulnerability to suicidal behaviour. With the aim of evaluating impact of some psychopathological dimensions on suicidal behaviour, we conducted a study on a sample of depressed psychiatric patients, comparing those with a history of suicide attempt it with those without suicidal tendencies. 170 adult outpatients consecutively enrolled, were the study subjects (mean age: 40.31±12.27; M:F 72/98). 108 patients had a lifetime suicide attempt in psychiatric history. Among suicide attempters, a significantly higher number of subjects were female sex, not married, unemployed and with a high educational status. Results also showed that patients with a suicide attempt had higher Childhood Trauma Questionnaire (CTQ) scores for emotional abuse, physical abuse and sexual abuse, and Brown Goodwin Life History of Aggression (BGLHA) scores in comparison to the control group and lower scores on the resilience scale. In order to evaluate the indipendent contribution of the selected measures, all risk factors were then entered in a logistic regression model, using the lifetime presence of a suicide attempt as the dependent variable.

## S30.03

The link between the serotonin system and suicidality

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Abnormalities in the serotoninergic system have been associated with suicidality, aggression, and impulsivity. Exactly what role serotonin plays in the initiation, modulation, maintenance, or regulation of such behaviours remains under study. However, recent data suggest that serotonin is involved along the pathway from genetic predisposition and environmental stimulus to expression of psychiatric disorders and suicidal behaviour.

On the other hand, it has been suggested that the seemingly ''robust'' association of low CSF-5HIAA concentration with suicidality and aggression is rather weak, and are likely to represent somewhat premature translations of findings from studies that have flaws in methodology.

Finally, we the review the controversial role of the selective serotonin reuptake inhibitors (SSRI) on suicidality, as they have been suggested: i) to decrease suicide rates in the population, and ii) to increase suicide rates in some individuals in early treatment.

## S30.04

Decision making as an endophenotype in suicidal behaviour

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We recently reported that decision-making impairment may be a neuropsychological trait of vulnerability to suicidal behavior (SB), that may reflect a serotonergic dysfunction in the orbitofrontal cortex.

We used the Iowa Gambling Task to assess decision-making in euthymic suicide attempters and controls with a history of affective disorders but no history of SB, and healthy controls. We explored 1) the link between decision-making deficit and relevant clinical variables; 2) the role of serotonin related polymorphisms relevant to SB in decision-making processes; 3) the link between life events on the last 12 months and decision-making.

1) In a sample of more than 300 psychiatric patients, we found that a decision making impairment was associated with the vulnerability to SB independently of the psychiatric diagnoses. Decision making was negatively correlated with emotional dysregulation, but not with impulsivity. No association was found between decision-making performance for suicidal lethality, intent, ideation, number of suicide attempts, age at first suicide attempt. 2) Suicide attempters carrying the 5HTTLPR-ss or the TPH1-AA genotypes, associated with SB, expressed worse learning abilities during the decision making task. 3) Adult life events and decision-making were correlated in suicide attempters.

We confirm that impaired decision making, possibly due to emotional dysfunction, may be a neuropsychological risk factor for SB independently of psychiatric disorders. In suicide attempters, the influence of genetic factors may partly be achieved through their modulation of the learning processes of decision-making, that may constitute a candidate endophenotype in SB.

## S30.05

Genetic association studies of aggression-related genes

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Suicidal behavior is a major health problem worldwide. The risk of suicide-related behavior is supposed to be determined by a complex interplay of sociocultural factors, traumatic life experiences, psychiatric history, personality traits, and genetic vulnerability. This view is supported by adoption and family studies indicating that suicidal acts have a genetic contribution that is independent of the heritability of Axis I and II psychopathology. Neurobiological studies have shown that serotonergic dysfunction is implicated in suicidal behaviors. Additionally aggression-related traits are mediated by the serotonergic system. Since both, aggression–related traits and serotonergic activity are partially heritable and correlate inversely, variations in genes of the serotonergic system might then, to some extent, account for variations in aggression-related behavior. Thus, we also investigated the relationship between serotonergic genes and anger, as a subtype of aggression-related behavior.

For that reasons we have initiated a large scale case control genetic association study which comprises of 250 suicide attempters and 1900 healthy volunteers and investigated the role of a comprehensive set of serotonergic candidate genes in this behavior. Additionally we conducted a large-scale gene expression analysis using cDNA-microarrays to identify new candidate-genes for suicide. We found several genes to be differentially expressed in the orbitofrontal cortex of suicide completers. Cross-validation experiments using quantitative RT-PCR validated 9 genes so far. These genes were genotyped as well to look for associations with suicide-, anger- and aggression-related behavior and also these results will be presented.

# S31. Symposium: 25 YEARS OF EXPERIENCES WITH VARIOUS TYPES OF ANTIDEPRESSANTS: THE DANISH UNIVERSITY ANTIDEPRESSANT GROUP

## S31.01

SSRIs versus tricyclics

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