

AN, IL6R, IL6ST, IL1B, IL2RB and TGFB1 differentiate two type of AN: the restrictive type of AN and binge-eating type of AN. IL1B differentiates the restrictive type of AN and the reference group and TGFB1, IL6ST and IL1B differentiate the binge-eating type of AN and the reference group.

**Conclusion:** Orexigenic and anorexigenic peptides are responsible for eating behavior but not for food intake.

## P0312

Animal models: Possible avenue to understanding schizophrenia

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Schizophrenia is one of the most devastating neuropsychiatric disorders. One of the most consistent findings in schizophrenia is a decrease in cell number and volume of the medial dorsal nucleus (MD) of the thalamus which has reciprocal connections to the prefrontal cortex, another region affected in schizophrenia. During development, the MD aides in the differentiation and maturation of pyramidal cells in the prefrontal cortex. To better understand the role of the MD in schizophrenia we lesioned the MD of postnatal day 4 rats and examined their prefrontal cortex as adults. In rats, the MD projects to dorsolateral anterior (human area 9), medial pre- limbic (human area 32) and Cg-1 (human area 24). We hypothesized that a lesion of the MD would lead to morphological changes in all three regions similar to that observed in humans. Using a Golgi stain we counted the number of primary and secondary dendrites and determined spine density in the three regions. Analysis of layers III and V pyramidal cells showed a significant reduction in primary dendrites III/V (Cg-1 25%/23%, pre- limbic 25%/25% and dorsolateral 24%/15%) and secondary dendrites (Cg-1 40%/34%, pre- limbic 40%/32% and dorsolateral 41%/30%). Using two different counting methods we observed that spines on primary and secondary dendrites were significantly reduced for both laminae for all three regions. These current data suggest that a lesion of the MD early in development affects dendritic morphology in the prefrontal cortex similar to that observed in schizophrenia making this model a good candidate for better understanding of schizophrenia.

## P0313

Neurobiological model of unitary psychosis

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**Background:** In psychiatry there exist, parallel trends of splitting and clumping of disorders. Former represents dichotomous Kraepelinian trend and latter stands for integrated approach of unitary psychosis. Advancement of biochemical studies and genetics have provided some evidences in favor of unitary psychosis.

**Method:** Authors made an internet search at various databases websites including pub med, and Blackwell synergy using, early psychosis, prodrom, neuroprotection, apoptosis as key words. It

was followed by manual and internet study of authentic psychiatric journals.

**Results:** Anatomical, functional and neurochemical studies of brain reveal structural changes in early psychosis.

In schizophrenia, pathological process is progressive. Brain volume loss continues even after onset of overt symptoms.

Study of subjects in prodromal phase shows 15-point drop in GAD. Significant proportion also met criterion of anxiety 86% depression 76% low energy 62% and, social withdrawal 71%.

**Discussion:** Unitary psychosis symbolizes concept of unity in diversity. Neurodevelopmental apoptotic process has its own direction that manifests in form of affective symptoms, anxiety symptoms, obsessive symptoms cognitive deficits, positive psychotic symptoms and ends with negative symptoms. It is assumed that neurodevelopmental process move from lower to higher centers of brain. Neuroprotection during emerging phase of psychotic disorder can delay the onset. Neurochemical studies shows that SSRIs atypical anti-psychotic, anticonvulsants, and lithium has antiapoptotic properties which modulate the progression This suggests that apoptotic process is the thread that connects apparently different disorder is unitary psychosis.

**Conclusion:** Neurobiological model can account for unitary psychosis.

## P0314

Empathy and the mirror system: Findings from a novel affective startle study

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**Background:** The Mirror System (MS) may facilitate emotional processing, including the experience of empathy. We explored MS involvement in emotional processing using a novel affective startle paradigm and examined whether results were associated with empathy levels in a group of healthy participants.

**Methods:** Participants (n=69) viewed pictures that were divided into emotionally positive, neutral and negative categories. Pictures were preceded by emotionally congruent primes: half the primes consisted of a videoclip showing hand-object interaction designed to recruit the MS and half consisted of a control sequence showing static images of the interaction. Acoustic startle probes were presented during picture viewing and startle eyeblink responses were recorded. Participants were divided into high and low empathy groups based on their responses for the empathy subscale of the I7 questionnaire.

**Results:** Startle amplitude was inhibited during positive picture viewing and potentiated during negative picture viewing when pictures were primed with moving videoclips compared to static controls. The biggest difference between amplitude associated with moving and static primes was found in the positive condition (p=0.009). The high empathy group exhibited a greater difference in startle amplitude between the moving and static conditions than the low empathy group for positive pictures (p=0.04).

**Conclusions:** Our results suggest that the MS modulates emotional processing, as reflected by enhanced startle reactivity when pictures were primed with moving videoclips designed to recruit the MS. This effect was more marked in the high empathy group, suggesting