behavior? Another important question is what are the molecular mechanisms that are involved in this process? Dr. Turecki will address these questions during his presentation. He will present data focusing on the role of DNA methylation on specific gene systems in the hippocampus and other brain regions. In addition, he will present data from a recent genome-wide methylation analysis and characterize differential methylation associated with childhood adversity. The findings to be presented are consistent with results from animal studies, which have recently given us important insight into some of the epigenetic processes that modify behavior and result from early social environmental experiences. These results will be discussed in terms of a general conceptual framework for the understanding of how early-life adversity may influence suicide risk.

Su-L-05

The baby and the self

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Brain and behavioral development of fetuses and newborn infants are a rich source of information regarding what might constitute minimal self-awareness. Research indicates that newborns have feeling (subjective) experience. Unlike automatons, they do not just sense and respond to proximal stimulations. In light of the explosive brain growth that takes place inside and outside of the womb, first signs of feeling as opposed to sensing experience are discussed. Feeling experience (as opposed to just sensing) is considered as the necessary condition for having minimal self-awareness. Both would co-emerge in development. However, minimal self-awareness is rapidly supplemented with an awareness that is not just perceptual, but also conceptual and ethical, primarily defined in relation to and by others. I will illustrate this point based on some empirical observations and will discuss this development as defining of what it means to be human (i.e., to be part of a uniquely self-conscious species).

Su-L-06

Neuropsychological and imaging endophenotypes of attention-deficit/hyperactivity disorder

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Attention-deficit/Hyperactivity Disorder (ADHD) is a common early-onset clinically and genetically heterogeneous neuropsychiatric disorder with executive functions (EF) and neurobiological deficits. This will review the neurocognitive endophenotypes for ADHD and summarize the endophenotype approach to validate ADHD based on studies in Taiwan. Our previous studies have demonstrated EFs measured by the CANTAB, visual memory measured by the Delayed Matching to Sample, tau (τ), of ex-Gaussian distribution of reaction time, time discrimination and time reproduction dual tasks as cognitive endophenotypes of ADHD; and DAT1 gene associated with ADHD inattentive type, inattention symptoms and executive functions (e.g., spatial working memory). The association of ADHD with neurobiological deficits in the frontostriatal and frontoparietal networks has been demonstrated from our morphometric, functional imaging and diffusion tensor imaging studies. For example, we found disturbed frontostriatal and cingulum microstructure integrity in ADHD that were correlated with impaired EF, attention controls, and ex-Gaussian parameters of reaction time.

Mo-L-07

Interactive synchrony: A biobehavioral model of mutual influences in the formation of affiliative bonds in healthy and pathological development

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The talk will present our conceptual model of bio-behavioral synchrony—the coordination of physiological and behavioral responses between attachment partners during social contact—as a theoretical and empirical framework for the study of affiliative bonds and the origins of social reciprocity. I will describe how micro-level social behaviors in the gaze, vocal, affective, and touch modalities are integrated online with physiological processes and hormonal response to create dyadic-specific attachments and support children’s capacity for social collaboration. Studies across multiple attachments throughout life and following children from infancy to adolescence are presented to show that the extended oxytocin (OT) system provides the neurohormonal substrate for the development of affiliative bonds, is linked with distinct patterns of brain activations and genetic markers, and that mechanisms of cross-generation transmission relate to coordinated social behavior. Longitudinal studies in conditions associated with risk for social development, such as prematurity, maternal post-partum depression, or war-related trauma detail specific alterations to social behavior and neurohormonal systems and highlight specific targets for intervention. The findings suggest that human affiliation and social reciprocity develop within the matrix of biological attunement and close behavioral synchrony. Results have conceptual implications for the study of inter-subjectivity and the formulation of a brain-based epistemology as well as translational implications for the integration of OT and behavioral interventions for the treatment of social disorders originating in early childhood.

Mo-L-08

Child psychiatrists. How are we seen? What do others think we know?

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The picture of child psychiatrists has evolved in some dramatic ways over the past half century, but curiously enough, no matter the changes some significant attributes remain the same. Child psychiatrists have long viewed themselves as having the skills to provide a comprehensive evaluation of child mental disorders and providing the appropriate treatment. In the early days this was strongly influenced by psychoanalysis. In the current era it is influence strongly by psychopharmacology and presumptive genetic influences. Throughout child psychiatrists continue to be viewed by many as ideologically bound, self-interested and often only to be sought after for those who are “crazy”. Why is this? What can be done to alter these disturbing images and counter-productive images? The inter-disciplinary setting of a IACAPAP congress is an important setting for these issues to be examined.

Mo-L-09

Genes and activity in development and brain disorders

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To construct the brain, a program is needed or at least an organised sequence of events. Yet, as in all biological reactions a feedback control to check that the