Box 1

The neurobiology of schizophrenia

Genetic studies
Heritability of 80%. Risk conferred by common genes of small effect (identified through genome-wide association studies) and rare genes of large effect (e.g. copy number variants such as DiGeorge syndrome, 12q11 deletion)

Structural imaging
Reduced volume of temporal and prefrontal lobes, loss of volume in the latter being associated with transition from at-risk state to psychosis

Functional imaging
Abnormalities of limbic system activation on exposure to emotional stimuli and in the dorsolateral prefrontal cortex during executive tasks

Neurotransmitters
Abnormalities in dopamine signalling, but other neurotransmitters such as glutamate and GABA seem important too

Immunology
Increased cytokines and other evidence of immune system activation. Oxidative stress may be elevated