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2009 : December 2009 - Fast Breaking Papers : Oliver D. Howes Sheds New Light on Neurochemical Abnormalities

**FAST BREAKING PAPERS - 2009**

December 2009



**Oliver D. Howes talks with *ScienceWatch.com* and answers a few questions about this month's Fast Breaking Paper in the field of Psychiatry/Psychology.**



P.E.T Scan Positron Emission Tomography (PET) machine.

[\[+\] enlarge](#)

**Article Title: Elevated Striatal Dopamine Function Linked to Prodromal Signs of Schizophrenia**

Authors: Howes, OD;Montgomery, AJ;Asselin, MC;Murray, RM;Valli, I; Tabraham, P;Bramon-Bosch, E;Valmaggia, L;Johns, L;Broome, M; McGuire, PK;Grasby, PM

Journal: ARCH GEN PSYCHIAT, Volume: 66, Issue: 1, Page: 13-20, Year: JAN 2009

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\* Hammersmith Hosp, Hammersmith Imanet, London, England.

**SW: Why do you think your paper is highly cited?**

The cause of **schizophrenia** is unknown, but this paper sheds new light on the neurochemical abnormalities that underlie the illness with important implications for the development of new treatments and prognostication.

**SW: Does it describe a new discovery, methodology, or synthesis of knowledge?**

This paper describes a new discovery—it is the first study to show that dopamine function is abnormally elevated in people showing very early signs of developing schizophrenia, prior to the onset of the full illness.

**SW: Would you summarize the significance of your paper in layman' terms?**

This paper shows, for the first time, that levels of the chemical messenger, dopamine, are elevated in the brains of people showing very early signs of schizophrenia, suggesting that abnormalities in dopamine can cause schizophrenia.

**SW: How did you become involved in this research, and were there any problems along the way?**

My research interests center on the causes of psychosis, and the effects of drug treatments on neurotransmitters and the endocrine system in psychosis. My recent work has focused on characterizing the dopaminergic system in the early phase of

*"Schizophrenia and other psychotic illnesses are associated with considerable stigma and prejudice."*

psychotic illness and investigating neuroendocrine function, including the effects of antipsychotic drugs on the endocrine system.

The question of what causes schizophrenia has been a major interest of mine and researchers around the world for many years, but addressing it has been far from easy. Many difficulties had to be overcome to complete this study—not the least of which was the need to transport volunteers across the city of London during bomb scares!

**SW: Where do you see your research leading in the future?**

The next stage is determining if it is possible to reverse these abnormalities in brain dopamine—this would be a significant advance for the treatment of schizophrenia as this could be a way to prevent the development of the illness.

**SW: Do you foresee any social or political implications for your research?**

Schizophrenia and other psychotic illnesses are associated with considerable stigma and prejudice. This research contributes to reducing this stigma by showing that there is an understandable basis to these illnesses.

**Oliver D. Howes, B.M., B.Ch., M.A., M.R.C.Psych., D.M.**

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KEYWORDS: POSITRON-EMISSION-TOMOGRAPHY; DECARBOXYLASE ACTIVITY; VERBAL FLUENCY; BASAL GANGLIA; HUMAN BRAIN; PSYCHOSIS; PET; RISK; RECEPTORS; NAÏVE.

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