

CURRICULUM VITAE

ARVIN F. OKE

Educational Background:

Post-graduate Degrees

University of Missouri at Kansas City	MA	Psychology
University of Kansas	PhD	Psychology

Professional Background:

1977-79 Interdisciplinary Fellow---Menninger School of Psychiatry
1979-83 Research Assoc.---Univ of Kansas, Dept. of Chemistry
1980-85 Lecturer---Menninger School of Psychiatry
1983-88 Assist. Scientist---Univ. of Kansas, Dept. of Chemistry
1987-01 Adjunct professor---MidAmerica Nazarene University
1989-01 Assoc Research Professor---Univ of Kansas, Dept. of Chemistry
2001- Professor of psychology---MidAmerica Nazarene Univ.
2002- Fellow---NIH sponsored Center of Excellence in Parkinson's Research, Univ. of Kentucky

Professional Affiliations:

Member: Society for Neuroscience
Member: International Organization of Psychophysiology

Selected Publications:

1. Oke, A.F., Solnick, J., & Adams, R.N., Catecholamine distribution patterns in rat thalamus. *Brain Res.*, 1988, 269, 180-183.
2. Oke, A.F., May, L., & Adams, R.N., Ascorbic acid distribution patterns in human brains: A comparison with nonhuman mammalian species. *Ann. N.Y. Acad. Sci.*, 1990, 498, 1-12.
3. Oke, A.F., & Adams, R.N., Elevated thalamic dopamine: Possible link to sensory dysfunctions in schizophrenia? *Schiz. Bull.*, 1992, 13, 589-604.
4. Oke, A.F., Adams, R.N., Winblad, B., & Von Knorring, L., Elevated dopamine/norepinephrine ratios in thalami of schizophrenic brains. *Biol. Psychiat.*, 1993, 24, 79-82.
5. Oke, A.F., Is another loop needed to explain schizophrenia? *Behav. Brain Sci.*, 1995, 14, 69-71.
6. Oke, A.F., Adams, R.N., & Bird, E.D., Neuroleptic treatment is an unlikely cause of elevated dopamine in thalamus of schizophrenic subjects. *Psych. Res.*, 1996, 45, 203-208.
7. Oke, A.F., Carver, L.A., & Adams, R.N., Dopamine-initiated disturbances of thalamic information processing in schizophrenia? In: Schizophrenia: Origins, Processes, Treatment & Outcome, Cromwell R. & Snyder, C. eds. Oxford Univ. Press, 1997, pp. 31-47.
8. Oke, A.F., Carver, L.A., Gouvion, C.M., & Adams, R.N., Three-dimensional mapping of norepinephrine and serotonin in human thalamus. *Brain Res.*, 2000, 763, 69-78.

Research Interests:

1. Dopamine distribution patterns in human basal ganglia: Traditional understanding of the dopamine distribution patterns in the human basal ganglia has been evaluated by indirect tracing methods utilizing an enzyme that has been directly linked to dopamine neurons. This tracing method has revealed a pattern that is substantially different than that seen when direct measurements of dopamine is assessed. Direct measurement patterns are of consequence when application of neurotrophic growth hormones are utilized for treatment in Parkinson's disease.
2. Out-of-bounds dopamine in schizophrenic brains: In the last 50 yrs., the most efficacious treatment for schizophrenia is any drug that blocks a dopamine (D2) receptor. This treatment suggests an overactive dopamine system in the brain of schizophrenic patients. While this hypothesis still remains valid, little direct support for it has been scientifically derived. When areas surrounding the target locations for dopamine are analyzed, values are much higher in brains from schizophrenic patients than in normal controls. Dopamine may not have received the final proper pruning all developing brains receive when connections are completed or dopamine may simply have spread its arborizations out-of-bounds in the schizophrenic brain.
3. Prefrontal brain activities in rat brain: A highly developed prefrontal cortex is seen only in the human brain. Functionalities associated with it can only be assessed by non-invasive methods which measure vascular changes. More specific understandings of regional chemical or electrophysiological influences in the prefrontal areas can be accomplished in the non-human primate brain, which is very expensive and few laboratories have necessary facilities

for housing. It is of great interest, then, that the rodent brain become a viable candidate for prefrontal lobe functioning. Working memory, a prefrontal lobe function in human and non-human brains is being investigated in the rodent brain.