

4FY 4QFDJGJD %JGGFSFODFT JO ("#" BOE (MAY
\$JHBSFUUF 4NPLF

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Abstract

Cigarette smoking act differently in men and women. Nicotine is the main psychoactive substance of tobacco. Although, dopaminergic involvement of glutamate in turn mediates nAChRs activation in females [5]. Chronic smoking in turn mediates nAChRs activation in males [11,12]. Although, dopaminergic involvement of glutamate in turn mediates nAChRs activation in females [5]. Chronic smoking in turn mediates nAChRs activation in males [11,12].

Elisa reader from Biotek (Winooski, VT) following manufacturer's instructions. This study aims to determine the levels of glutamate in men and women of African American (AA) descent. GABA receptors present on the brain act as neurotransmitter in alertness and respectively [14].

Materials and Methods

Sample collection

Blood samples were collected in sterile condition from 58 African American men and women volunteers as per the institutional guidelines and grouped on the basis of smoking behaviour. Plasma were separated from these samples by centrifugation for 10 min and stored at -20°C in aliquots until further use. Enzyme Linked Immuno-Sorbant Assay (ELISA) kits were purchased from Alpco, Salem (NH).

Plasma concentrations of GABA and Glutamate

Plasma levels of GABA and Glutamate were measured by ELISA according to manufacturers' instructions. Plates were read in EPOCH

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6. 'XänRYi 0 6LP\$QNRYi . +LOO 0 9HOtNRYi 0 .XEiWR
cigarette smoking alters circulating sex hormones and neuroactive steroids in
SUHPHQRSDXVDO ZRPHQ 3K\VLRO 5HV
7. 9DOHUD 6 %DOOLYHW 0 %HUWUDQG ' 3URJH
nicotinic acetylcholine receptor. Proc Natl Acad Sci U S A 89: 9949-9953.
8. Chen Y, Cui Y, Lin JW, Xiang QL, Liu WF, et al. (2009) Modulatory role of
estradiol in nicotinic antinociception in adult female rats. Life Sci 85: 91-96.
9. 'DPDM 0, ,QÀXHQFH RI JHQGHU DQG VH[KR U
pharmacological effects in mice. J Pharmacol Exp Ther 296: 132-140.
10. .DOLYDV 3: 9RONRZ 1' 7KH QHXUDO EDVLV R
motivation and choice. Am J Psychiatry 162: 1403-1413.
11. 3HDUO 3/ *LEVRQ .0 &OLQLFDO DVSHFWV R
metabolism in children. Curr Opin Neurol 17: 107-113.
12. 6DQDFRUD * 5RWKPDQ '/ 0DVRQ * .U\ VWDO - +
implementing glutamate neurotransmission in mood disorders. Ann NY Acad
Sci 1003: 292-308.
13. 6KDPHHP 0 3DWHO \$% *OXWDPDWHUJLF DQG
mouse brain under chronic nicotine exposure: implications for addiction. PLoS
One 7: e41824.
14. 0LVKUD 6 0DQGDO \$ 0DQGDO 3. 6PRNLQJ
Neurotransmitters in African Americans. J Bioproc Biotechniq 1: e106.
15. (VWHUOLV , 0F.HH 6\$.LUN . /HH ' %RLV) HW DO
LQ *\$%\$ \$ EHQ]RGLD]HSLQH UHFHSWRU DYDLODE
to pain and tobacco smoking craving. Addict Biol.
16. (SSHUVRQ &1 2 0DOOH\ 6 &]DUNRZVNL . \$ *XHRUJ
6H[*\$%\$ DQG QLFRWLQH WKH LPSDFW RI VP
across the menstrual cycle as measured with proton magnetic resonance
spectroscopy. Biol Psychiatry 57: 44-48.
17. *DODQRSRXORX \$6 6H[XDOO\ GLPRUSKLF H[SU
IXQFWLRQ (SLOHSV\ 5HV
18. 0DQVYHOGHU + ' 0F*HKHH '6 /RQJ WHUP SRW
inputs to brain reward areas by nicotine. Neuron 27: 349-357.
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