

Smoking habits among pharmacy students at Riyadh region Saudi Arabia

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Background: Smoking is a major health problem all over the world, but little information is available about the prevalence of smoking in Saudi Arabia. However, the prevalence rate was in the range of 8%-57. This study examines the prevalence, pattern of smoking, attitudes towards public measures against smoking and teaching the tobacco issues in Pharmacy College. The appraisal of the role of the pharmacist in smoking cessation were also investigated.

Methods: The survey was conducted in February 2004, in college of pharmacy at King Saud University in Riyadh city; students were randomly selected from different college levels. Anonymous self-questionnaire was used for data collection.

Result: The survey revealed that 1304% of the students were current smokers. Religion and hazards to the health were the main reasons for non-smoking, whereas, easing stress and relaxation with friends were given as the main reasons for smoking about 74.5% of the students had unsuccessfully attempted quitting smoking, while mixing with smokers, lack of will power and stress were the main reasons for continuing smoking. In general the students were knowledgeable about risk facing smokers. The students showed positive attitude towards public measures against smoking, and appraised the role of the pharmacists in smoking cessation and inclusion of tobacco issues to the curriculum.

Conclusion: Anti-smoking programs are needed for both university students and primary school levels. In addition, teachers and pharmacists should be role models by not smoking. Legislations are needed to restrict selling of cigarette to the underage and fine those who violate banning of smoking. Pharmacy college should be encouraged to include teaching tobacco issues in their curriculum.

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Targeting receptor heteromers for the treatment of drug addiction

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Animal models of drug addiction have uncovered long-lasting alterations in striatal glutamatergic neurotransmission. Glutamate receptors or other biological molecules that modulate striatal glutamatergic neurotransmission are being considered as pharmacological targets for the treatment of drug addiction. However, these putative therapeutic targets are not only localized in the striatum, but are highly widespread in the brain. Thus, drugs acting on these targets should cause untoward side effects. Even in the striatum we might want to select some excitatory synapses, as there are two subtypes of striatal efferent neurons that, when stimulated, produce opposite functional effects in the output structures of the basal ganglia. This degree of selectivity can be achieved by targeting receptor heteromers. Receptor heteromer is defined as a macromolecular complex composed of at least two receptor units with biochemical properties that are demonstrably different from those of its individual components, which include specific ligand recognition. A proof of concept came with our recently published study on adenosine A_{2A} receptor antagonists that show a different pre- and postsynaptic pharmacological profile. This differential profile depended on the existence of different pre- and post-synaptic A_{2A} receptor heteromers. Postsynaptic A_{2A} receptors form heteromers with dopamine D_2 receptor, while presynaptic A_{2A} receptors localized in cortico-striatal glutamatergic terminals form heteromers with adenosine A_1 receptors. We postulated that a presynaptic A_{2A} receptor antagonist, such as SCH-442416, should attenuate, while a postsynaptic A_{2A} receptor antagonist, such as KW-6002, should potentiate, drug-related behaviors. Preliminary data indicate that SCH-442416 attenuates while KW-6002 potentiates THC-self-administration in squirrel monkeys.

Biography

Sergi Ferré is principal investigator at the National Institute on Drug Abuse, IRP. He is also guest professor from the Department of Biochemistry and Molecular Biology at the Faculty of Biology, University of Barcelona and adjunct associate professor from the Department of Pharmacology and Experimental Therapeutics at the University of Maryland School of Medicine and from the Department of Molecular Neuroscience at George Mason University. His main research interest is the understanding of the functional role of receptor heteromers in the brain as well as their potential use as targets for drug development in neuropsychiatric disorders and drug addiction.

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