

# 5<sup>th</sup> World Congress on **Biotechnology**

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## The association of homozygote T allele of Rs2943641 polymorphism near of insulin receptor substrate 1 gene in the susceptibility to autism

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**A**utism disorder is a neuro-developmental disorder. It is heterogeneous with multiple genes defects that can lead to autism. The incidence has increased from 1980 to 1990, 5/10,000 to 37/10,000 respectively. The increase in the frequency has led to huge studies being carried out in this field. The main causes and the pathway of the disease is as yet unclear. However, several reports have been documented that indicate that CNVs and single genes disorders that are involved in multiple pathways have a role in the development of autism. The main genes that are associated with ASD are involved in mTOR/PI3K pathway. MTOR/PI3K pathway is responsible for the growth rate and pruning of cellular-synapse. Therefore, increase the activity of this pathway due to mutations in the upstream or downstream of the pathway it may cause ASD to develop. The aim of this presentation is to present a new aspect by indicating the association of homozygote T allele of rs2943641 polymorphism in IRS1 that is involved in the PI3K pathway and increase the susceptibility to ASD. The effect of homozygote T allele of rs2943641 has been previously reported as increasing the expression of IRS1. Increase in the expression leads to an increase in the phosphorylation of PI3K that may hyper-activate the pathway.

**Methods:** An allelic discrimination assay was suggested to determine the most common allelic variation of rs2943641 in autistic patients in Saudi Arabia.

**Results and conclusion:** If the result indicates an association between the T allele of rs2943641 and ASD, a new aspect in the genetic causes for autism will be added.

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## Biofuel production from whole sorghum (*Sorghum bicolor*)

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**A**n investigation into the production of biofuel from whole sorghum (*Sorghum bicolor*) an underutilized crop under laboratory condition was carried out. The techniques used during the production method were both the fermentation and gasification methods. The volume of production for both methods were obtained, analyzed and compared. The Fermentation method of sorghum yielded more biofuel in the form of bioethanol. A known volume of fermentation liquor was distilled and the temperature in the column was maintained at a certain temperature. The fermentation rate, gasification rate, the temperature and the pH values were assessed. 500g of the malted sorghum produced 5% of bioethanol while the same weight of sorghum for the gasification method produced 3% biofuel. Microbial examinations were carried out and the various microorganisms involved in the entire process were isolated and identified. The findings of this investigation in relation to the generation of alternative source of energy which is environmentally friendly without the emission of carbon compounds which causes pollution in Nigeria are discussed.

### Biography

Ijeoma Adaku Nwaukwu (MSc, BSc) is a Lecturer at the Department of Plant Science and Technology, Faculty of Natural Sciences, University of Jos, Plateau state, Nigeria. She is a Scientist with high interest in research and new scientific discoveries. She has to her credit about 10 Academic publications in reputable Journals. She has participated in academic conferences where she presented her scientific findings to the delight of those in attendance. She also has keen interest in human development. This is seen in her flair to help less privileged women and children.

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