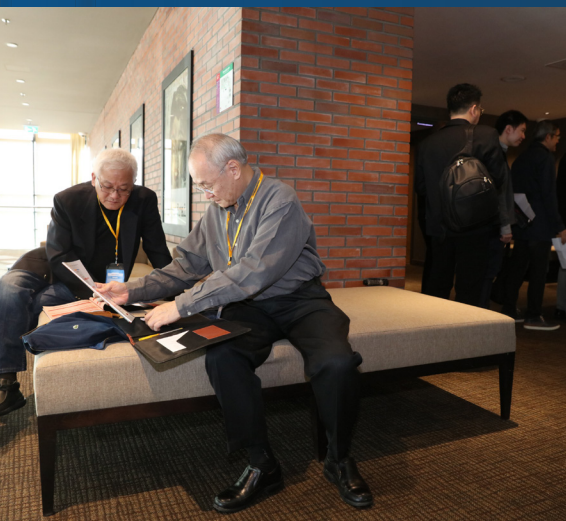


13<sup>th</sup> Annual Conference on

# DEMENTIA AND ALZHEIMER'S DISEASE

December 13-15, 2018 Abu Dhabi, UAE



Posters

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# DEMENTIA AND ALZHEIMER'S DISEASE

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## Driving with dementia: When is it time to stop?

**Keisha Lovence**

Eastern Michigan University, USA

Driving helps older adults stay independent, and the literature notes that the number of older adult drivers has increased. As an older person ages, he or she experiences changes in vision and cognition. Progression of these disease processes causes alteration to safe driving and risk to road safety. Additionally, medications (over the counter and prescribed) used to treat these disease processes also alter older adults' driving ability. The role of the clinician is to assess all these variables properly and determine when it is safe for older adults to drive. This may require a clinician to perform regular eye exams or schedule referrals to an ophthalmologist, assess cognition using the Montreal Cognitive Assessment (MoCA), or refer a patient to a clinical neuropsychologist. In some cases, a patient should be referred to a driver rehabilitation specialist. Requiring patients to follow up is key for the clinician because it ensures refills and compliance with medications and that all appointments to referrals are attended. If a patient fails to render treatment or if a patient is unsafe to drive on the road, then the clinician must be aware of the reporting requirements in his or her jurisdiction.

### Biography

Keisha Lovence has completed her Doctor of Nursing Practice from Wayne State University. She is an assistance professor at Eastern Michigan University and maintains her clinical practice as an acute care nurse practitioner at Henry Ford Hospital.

**Notes:**

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## DEMENTIA AND ALZHEIMER'S DISEASE

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**Alzheimer's disease in Saudi subjects of risk with CLU gene polymorphism and association of APOE****Nouf Al Ghunaim, Amani AlGhamdi, Saba Abdi, Nasser AlDaghri, Mohammed Masoud, Syed Danish Hussain, Kaiser Wani, Mohammed Ansari, Taim Muayqi**  
King Saud University, Saudi Arabia

Alzheimer's disease (AD) is a progressive irreversible neurodegenerative disease, characterized by the accumulation of insoluble extracellular amyloid plaques and intracellular neurofibrillary tangles causing damage and death of surrounding neurons. This in turn affects memory, attention, and communication of people with AD. The present study was aimed to determine the association between single nucleotide polymorphism (SNP) in ApoE (rs7412, rs429358) and CLU (rs11136000, rs1532278) genes and some biochemical parameters and their association with occurrence of AD. A total of 24 elderly Saudi subjects (14 males, 10 females) aged between 58-90 years with confirmed diagnosis of AD following the NINCDS-ADRDA and the DSM-IV criteria and 23 age matched normal subjects (11 males, 12 females) were recruited from King Khalid University hospital, Riyadh, Saudi Arabia. Serum total cholesterol, LDL-c, HDL-c, and triglyceride levels were measured by Autoanalyzer, serum concentrations of beta-amyloid 1-40, beta-amyloid 1-42, and clusterin were analysed by ELISA, and gene polymorphism were analysed by RT-PCR using Taqman assay. For ApoE rs429358 patients showed significantly increased frequency of TC allele than control [ $p=0.017$ , OR= 7.87, 95% CI (1.45-42.61)]. Whereas for CLU rs11136000 GG frequency was significantly increased in control than in patient [ $p=0.052$ , OR=0.18, 95% CI (0.03 - 1.02)] while in the other SNP for CLU rs1532278 GA allele was significantly higher in patient than in control [ $p=0.056$ , OR= 3.71, 95% CI (0.97 - 14.2)]. In conclusion, genetic variants in ApoE and CLU genes may be associated with increased risk of Alzheimer's disease among Saudi subjects.

**Biography**

Nouf Nasser Abdullah AlGhunaim is Protein Researcher Chair in King Saud University, and worked as an intern of Nanotechnology

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## DEMENTIA AND ALZHEIMER'S DISEASE

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**Association of IL-6 and TNF- $\alpha$  gene polymorphisms with the risk of Alzheimer's disease in Saudi subjects****Reem Moteb Abdulaali Almotairi, Saba Abdi, Amani Alghamedi, Taim Muayqil, Syed Danish Hussain, Mohammed Ghouse Ahmed Ansari, Mohammed Masoud, Nasser Al-Daghri**

King Saud University, Saudi Arabia

Alzheimer's disease (AD) is a progressive neurodegenerative disorder and the most prevalent type of dementia. In Saudi Arabia although the exact percent about the spread of AD has not been estimated, but the experts believe that there are approximately 50,000 patients in Saudi Arabia, most of them being females. Many of studies illustrate the role of the inflammation in development of AD, however no such study has been done on Saudi AD patients. Thus, the aims of this study were to investigate the association of inflammatory mediator's, interleukin-6 (IL-6), Tumour necrosis factor- $\alpha$  (TNF- $\alpha$ ) and C-reactive protein (CRP) with increased the risk of Alzheimer's disease (AD). Further, the association between the level of IL-6, TNF- $\alpha$  and CRP with the genetic variation in IL-6 (-174 rs1800795 G/C and -572 rs1800796 C/G), and in TNF- $\alpha$  (-308 rs1800629 A/G and -1031 rs1799724 C/T) and their role in occurrence of AD in among Saudi ethnic population was investigated. A total of 47 Saudi subjects with age (65-90 years) were enrolled for the study, 24 (14 male, 10 female) diagnosed as AD patients and 23 (11 male, 12 female) served as normal controls. The level of biomarkers (IL-6, TNF- $\alpha$  and CRP) were assessed by ELISA (Quntikine\*ELISA). Single nucleotide polymorphism (SNP) in selected genes were analyzed by RT-PCR using Taqman assay. This study showed that TNF- $\alpha$  was higher in AD patients with CC and GC genotypes for IL-6 gene SNPs rs1800796 ( $P=0.062$ ) and rs1800795 ( $P=0.066$ ) respectively. The level of IL-6 was also found to be significantly low among AD patients with AG genotype comparing to AD patients with GG genotype for -308 A/G (rs1800629) of TNF- $\alpha$  gene ( $P=0.040$ ). In conclusion; The level of inflammatory cytokines IL-6 and TNF- $\alpha$  may play role in the progression of AD depending on specific genotypes among Saudi AD patients.

**Biography**

Reem Almotairi is currently pursuing master's at Biochemistry Department, College of Science, King Saud University, Riyadh, Saudi Arabia. And certified with the license of Health Professionals Classification, Under the name "Laboratory Technician", from Saudi Commission for Health Specialties.

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