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## Paper of the Month:

Bingjian Cui, Xiao Kong, Xi Chen, Decai Jin, Hongxun Zhang. **Pathogenic determination from rural wastewater treated by MBR process and effect of wastewater on lettuce pot planting.** *American Journal of Research Communication*, 2015, 3(6): 1-27. [\[Full Text-PDF\]](#)

Anita Deborah Anwar, Firman Fuad Wirakusumah, Sofie Rifayani Krisnadi, Tono Djuwantono, Yellianty, and Leri Septiani. **TGFBI and TGFBR2 gene polymorphisms and pathophysiology of severe preeclampsia.** *American Journal of Research Communication*, 2015, 3(6): 28-44. [\[Full Text-PDF\]](#)

## Regular Articles:

Anju, T.D; Solomon, S.G; Cheikyula, J.O. **Effects of aqueous leaf extract of *Tephrosia vogeli* as a traquilizer on the African cat fish *Heterobranchus Longifilis* Val. (Pisces 1840).** *American Journal of Research Communication*, 2015, 3(6): 45-59. [\[Full Text-PDF\]](#)

Yousra Tarek Zabady, Nesrin Kamal, Nawal Abd-El Rehim El Sayed, Mohamed Hussein Khalil. **Anthropometric and dietary assessment of gestational diabetic women.** *American Journal of Research Communication*, 2015, 3(6): 60-73. [\[Full Text-PDF\]](#)

Nahla Abdalrahman Babiker Abdalla, Elsadig.A.Adam, Ayda.D.A.allatif, Hadia. M. A. Abdalrhman, Ibtahal Abdelhag, Manal A.H.Goda, Sanaa M.H. Elsafi, Fathelrahman.M.A.Ibrahim. **Correlation between expression of E-cadherin and overexpression of Her2/neu in breast cancer in Sudanese patients.** *American Journal of Research Communication*, 2015, 3(6): 74-83. [\[Full Text-PDF\]](#)

Mamoud Edessy, Abd El-Aziz G. El-Darwish, Faisal Ali Mustafa, Zainab S.Sayed. **Hystroscopic endometrial ablation for treatment of perimenopausal bleeding in Upper Egypt.** *American Journal of Research Communication*, 2015, 3(6): 84-96. [\[Full Text-PDF\]](#)

Esmat Bayoumi Ali Shahin, Khalid Mohamed Hassan Hilmy, Mohamed Farag Ali Assar. **The association of serum testosterone and sex hormone-binding globulin with obese men and type 2 diabetic men.** *American Journal of Research Communication*, 2015, 3(6): 97-108. [\[Full Text-PDF\]](#)

Samah A. Moawd, Mariam E. Mohamed, Mervat A. Othman. **Impact of moderate intensity aerobic exercise versus high electric strength training on heart rate variability in diabetic patients with cardiac autonomic neuropath.** *American Journal of Research Communication*, 2015, 3(6): 109-125. [\[Full Text-PDF\]](#)

Cheikyula, J.O.; Solomon, S.G; Anju, T.D. **Evaluation of the anaesthetic properties of freeze-dried leaf extract of *Tephrosia vogelii* on *Heterobranchus longifilis* Val. (Pisces: 1846).** *American Journal of Research Communication*, 2015, 3(6): 127-141. [\[Full Text-PDF\]](#)



Omotayo Mayowa Emmanuel, Olawuni Adeolu, Oyajide Depo Olukayode, Babalola Fausat Arike. **Economic effect of connecting renewable energy to Grid Station in Nigeria.** *American Journal of Research Communication*, 2015, 3(6): 142-149. [\[Full Text-PDF\]](#)

Hager Osman Mohamed Ahmed, Amira A. K. Humeida, Ibrahim Khider Ibrahim, Elshazali Widaa Ali, Ebtihal Ahmed Babekir, Yasir Hamadna Alla Ahmed. **Vitamin D- Receptor (VDR) gene start codon polymorphism (FOKI) with polycythemia vera in Sudanese patients.** *American Journal of Research Communication*, 2015, 3(6): 150-160. [\[Full Text-PDF\]](#)

Elsara Mohammed Abd Elrahman, Wafa Ibrahim Elhag. **Detection of Extended-Spectrum - lactamases' (ESBLs) Resistance among Wound Infection Pathogens in Khartoum State.** *American Journal of Research Communication*, 2015, 3(6): 161-168. [\[Full Text-PDF\]](#)

## ***TGFB1* and *TGFBR2* gene polymorphisms and pathophysiology of severe preeclampsia**

**Anita Deborah Anwar\*, Firman Fuad Wirakusumah, Sofie Rifayani Krisnadi, Tono Djuwantono, Yellianty, and Leri Septiani**

Department of Obstetrics and Gynecology, Faculty of Medicine, Universitas Padjadjaran–Dr. Hasan Sadikin General Hospital, Bandung, Indonesia

\*All **correspondence** to: Anita D. Anwar, MD., PhD

Department of Obstetrics and Gynecology, Faculty of Medicine, Universitas Padjadjaran–Dr. Hasan Sadikin General Hospital, Bandung, Jl. Pasteur No. 38, Bandung 40161, West Java, Indonesia

E-mail: [anitadebbyanwar@gmail.com](mailto:anitadebbyanwar@gmail.com)

### **Abstract**

Transforming growth factor  $\beta 1$  (*TGFB1*) and transforming growth factor  $\beta$  type 2 receptor (*TGFBR2*) are key components of TGF- $\beta$  signaling and play an important role in vascular remodeling in placentation. Several polymorphisms have been identified in *TGFB1* and *TGFBR2* genes, including those associated with the regulation of TGF- $\beta 1$  levels and TGF binding to its receptor. The decrease of TGF- $\beta 1$  levels and the disruption of TGF TGF- $\beta 1$  signaling can cause abnormal placentation, hypoxia, and increased soluble endoglin (sEng), which can lead to preeclampsia. This study aims to determine the role of gene polymorphisms C-509T *TGFB1* and C1167T *TGFBR2* and their relation to TGF- $\beta 1$  and sEng levels in cases of severe preeclampsia. Genotyping performed using restriction fragment length polymorphism (RFLP) and a direct sequencing method was used to study 26 cases of preeclampsia against 26 control matched normal pregnancies. The results showed that the TGF- $\beta 1$  levels in severe preeclampsia were significantly lower compared to normal pregnancies, whereas the levels of sEng in severe preeclampsia were significantly higher compared to normal pregnancies. In addition, the genotypes -509CT/TT *TGFB1* and 1167CT/TT *TGFBR2* appeared in both groups. This analysis highlights the absence of a significant association between the genotype -509C/T *TGFB1* and TGF- $\beta 1$  levels in both