

Expression profile of serum LncRNA THRIL and MiR-125b in inflammatory bowel disease

الملف التعبيري للحمض النووي الريبسي الطويل غير المشفر LncRNA THRIL و الميكرو MiR-125b في مرض التهاب الأمعاء

اسماء الباحثين: عزة الأمير- ألفت شاكر - مروة كمال - عبير خليفة - مصطفى عبد الواحد - فدوى عبد الرحيم - طارق أحمد - عصام على حسن - شيماء أيوب

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Abstract

Background Inflammatory bowel disease (IBD) is a chronic inflammatory disease of the gastrointestinal tract. We aimed to investigate, for the first time, the expression profile of serum level of LncRNA THRIL and MiR-125b in IBD patients and their relations with patient's clinical and biochemical investigations. Methods Our study included 210 subjects divided into 70 healthy subjects considered as control group (male and female), 70 patients with ulcerative colitis (UC), and 70 patients with Crohn's disease (CD). Blood samples were obtained from all subjects. Expression of LncRNA THRIL and MiR-125b in serum was detected by Quantitative real time PCR (qRT-PCR). Results Our results showed a significant increase in the fold change of LncRNA THRIL in UC patients (Median = 11.11, IQR; 10.21–12.45,  $P < 0.001$ ) and CD patients (Median = 5.87, IQR; 4.57–7.88,  $P < 0.001$ ) compared to controls. Meanwhile there was a significant decrease in the fold change of MiR-125b in UC patients (Median = 0.36, IQR; 0.19–0.61,  $P < 0.001$ ) and CD patients (Median = 0.69, IQR; 0.3–0.83,  $P < 0.001$ ) compared to controls. Furthermore, there was a negative significant correlation between LncRNA THRIL and MiR-125b in UC patients ( $r = -0.28$ ,  $P = 0.016$ ) and in CD patients ( $r = -0.772$ ,  $P < 0.001$ ). ROC curve analysis was done showing the diagnostic value of these markers as predictors in differentiating between cases of UC, CD, and control. Conclusion Serum LncRNA THRIL and MiR-125b could be used as potential biomarkers for diagnosis and prognosis of ulcerative colitis and Crohn's disease.