INTRODUCTION: Advanced glycation end products (AGEs) play a central role in diabetic complications, including, cardiovascular complications. AGEs may act directly to induce cross-linking of long lived proteins such as collagen and may interact with certain receptors to induce intracellular signaling and activation of profibrogenic factors such as TGFβ, leading interstitial fibrosis formation, considered as a key alteration in diabetic hearts, preceding cardiac fibrosis development, resulting in impaired diastolic function and finally in heart failure. AIM: Determine the correlation between cardiac fibrosis progression with serum advanced glycation end products levels and TGFβ expression in diabetic rats

METHODS: DM was induced doses (20mg/kg) of intraperitoneal Streptozotocin (STZ), associated with a high fat diet in Wistar rats. With blood glucose levels over 300 mg/dL was considered diabetic. Histological studies by tricrome Masson staining to evaluate the progression of fibrosis through qualitative analysis of cardiac tissue. Was performed determination of serum AGEs by Elisa (BlueGene Elisakit) and real-time PCR to determine the gene expression of TGFβ in diabetic and control rats

STATISTICAL ANALYSIS: Data were presented as mean tstandard deviation, statistical analysis was performed using ANOVA one-way test, P 0.05 was considered significant. RESULTS: In this study, we observed a gradual development of interstitial fibrosis after induction of diabetes mellitus, which progresses significantly with the passage of time, becoming very obvious and extensive in the 25 week follow-up, these observations coincide with a statistically significant increase in serum AGEs concentration and in turn to an increase in the expression of TGFβ.