

عنوان مقاله:

Novel function of Nanos γ in expression of innate immunity genes and its probable roles in maintenance of pluripotency state

محل انتشار:

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خلاصه مقاله:

Objective(s): Cell-based therapeutic approaches have witnessed significant developments during the last decade especially after approval of MSCs based treatment of graft versus host disease. Several cell-based approaches have shown immunomodulatory behavior during regeneration following the unknown cascade of events but the exact mechanisms are yet to be defined. Clinical applications of cell-based drugs are hampered all over the world because of incomplete understanding of molecular mechanisms requiring the application of mechanistic approaches to solving the mystery. Current work has given us the idea that Nanos γ enhances the cellular pluripotency characteristics while down-regulating the innate immunity genes, simultaneously. Materials and Methods: The immunomodulatory behavior of cells was studied against cells carrying the ectopic expression of Nanos γ in comparison with Stella and Oct 4 individually and simultaneously using SON vector (Stella, Nanos γ and Oct 4). Results: It was observed that overexpression of Nanos γ leads to down-regulation of Interferon-Stimulated Genes (ISGs)-mRNAs such as Ifitm1, Isg15, Oas γ , and Oas1 γ . Nanos γ overexpressing MEF cells have shown restrictive inflammatory effects when cells were treated with inflammatory stimuli such as LPS and Poly (I:C). Conclusion: From our recent findings in line with many others, it can be concluded that Nanos γ acts as a coin with two sides, regulating pluripotency and immunity together which enhances resistance against inflammatory stimuli. Nanos γ could be a potential candidate as a molecular drug for management of inflammation and immunomodulation but it requires a comprehensive comparative expression analysis of innate immunity genes in vitro and in vivo.

کلمات کلیدی:

Acetylsalicylic acid Anti, oxidants Epididymis Melatonin Sperm Testosterone

لینک ثابت مقاله در پایگاه سیویلیکا:

