Extended Abstract Open Access

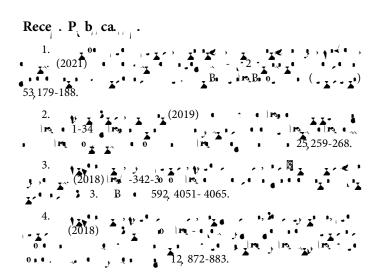
Preosteoblast-Enriched Lnc-Evf2 Facilitates Osteogenic Differentiation by Targeting Notch

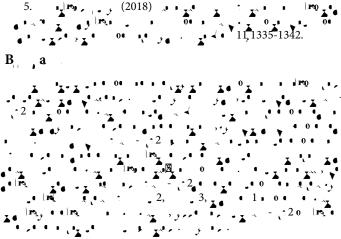
Han Xia and Yuan Xue*

Department of Orthopedic Surgery, Tianjin Medical University General Hospital, China

Abstract

Ossifcation of ligaments (OL) and osteoporosis (OP) are multifactorial disorders without definitive clinical biomarkers. Long non-coding RNAs (IncRNAs) are known to involve in regulating pathogenesis. Here, we have identifed a preosteoblast-enriched Inc-Evf2 that was overexpressed in ossifed ligamentum favum (OLF) and down-expressed in OP. Inc-Evf2 is gradually upregulated during osteogenic induction, correlating with the enhanced expression of osteogenic marker genes and matrix mineralization. Moreover, knockdown of Inc-Evf2 significantly inhibits the expression of osteogenic differentiation markers and delays the osteoblastic mineralization process, indicating that this molecule is involved in osteogenesis. Mechanistically, we demonstrated that silencing of Inc-Evf2 decreases the protein level but not the mRNA levels of Notch2, Notch3, and Hes1, all of which correlate with ontogenesis. Taken together, our data demonstrate that Inc-Evf2 promotes osteogenic differentiation and bone formation through the Notch signaling, revealing that Inc-Evf2 may serve as a novel potential clinical target of OL and OP.





*Corresponding author: Yuan Xue, Department of Orthopedic Surgery, Tianjin Medical University General Hospital, China

Received: 01-Sep-2022, Manuscript No: jpgb-22-131, **Editor assigned:** 05-Sep-2022, Pre QC No: jpgb-22-131(PQ), **Reviewed:** 19-Sep-2022, QC No: jpgb-22-131, **Revised:** 26-Sep-2022, Manuscript No: jpgb-22-131 (R), **Published:** 30-Sep-2022, DOI: 10.4172/jpgb.1000131

Citation: Xia H, Xue Y (2022) Preosteoblast-Enriched Lnc-Evf2 Facilitates Osteogenic Differentiation by Targeting Notch. J Plant Genet Breed 6: 131.

Copyright: © 2022 Xia H, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.