

## Abstract

# Hidden Gems in the Genome: Pseudogenes Unleashing Revolution in Hepatocellular Carcinoma Detection and Therapy<sup>†</sup>

Kritika Chugh 

School of Natural Sciences and Mathematics, The University of Texas at Dallas, Richardson, TX 75080, USA; kritika.chugh@utdallas.edu

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**Abstract:** Hepatocellular Carcinoma (HCC), a formidable global health challenge, continues to claim numerous lives due to its asymptomatic nature in the early stages and limited treatment options. In this ever-evolving landscape of cancer research, pseudogenes, once relegated to the genetic sidelines as ‘non-functional’, have emerged as intriguing players. Contrary to their historical dismissal, pseudogenes are now recognized for their intricate roles in modulating gene expression and contributing to the complex molecular milieu of cancer. This comprehensive review delves into the uncharted territory of pseudogenes and their potential to revolutionize HCC detection and treatment. From deciphering the molecular connections between pseudogenes and HCC to exploring their utility as diagnostic biomarkers, prognostic indicators, and therapeutic targets, this article aims to solve the enigma of pseudogenes in hepatocellular carcinoma.

**Keywords:** hepatocellular carcinoma (HCC); pseudogenes; apoptosis; microtubule expression; tumor cell metastasis; epithelial-mesenchymal transition; cancer stem cells

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