

# 5<sup>th</sup> World Congress on **Cell & Stem Cell Research**

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## **Development and validation of HPLC method for the determination of 5-fluorouracil as intra oral nanogel for oral cancer treatment**

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This study focuses on development and validation of the HPLC method for the determination of 5-Fluorouracil (5 FU), used in chemotherapy for oral cancer treatment as intra oral nanogel formulation. Oral squamous cell carcinoma (OSCC) is sixth most common cancer and mostly occurs in middle and older ages. The HPLC method was validated according to the International Conference on Harmonization (ICH) guidelines (2005). The following characteristics were considered for validation: specificity, linearity, range, accuracy, precision, LOD, LOQ and robustness. A fast, simple and reliable HPLC method using photodiode array detection for determining the encapsulation efficiency of 5-FU in PLA and PLA-PEG blended nanoparticles, has been developed and validated according to the ICH guidelines. The method fulfilled the requirements to be considered as a reliable and feasible method, including specificity, linearity, precision, accuracy, robustness, LOD and LOQ and further be evaluated in nanogel formulation. The analytical procedure has a chromatographic run time of 4.30 min, which allows analyzing a large number of samples in a short period of time.

### **Biography**

Shalini Gupta is working as the Associate Professor in the Department of Oral Pathology, KGMU, Lucknow, India. She had University Merit Scholarship and fourteen Gold Medals & distinction. She is actively involved with various extramural & intramural research projects and published 55 papers in indexed national & international journals. She is also in the Editorial Advisory Board & reviewer in various journals. She has many Fellowships & Scientific Awards to her credit. She has many National & International memberships in prestigious associations. She has also published two books. Her areas of interests are molecular genetics and cytogenetics, oral cancer genomics and proteomics, nanotechnology, cancer stem cell, bioinformatics & forensic odontology.

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