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Noscapine: An upcoming promising oral chemotherapeutic agent

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Cancer chemotherapy generally hampers with extensive use of injectable anticancer drugs like paclitaxel, doxorubicin and many more. However for better patient compliance, it is necessary that anticancer drugs should be administered through oral route with biocompatible and biodegradable dosage forms. Our group not only invented the anticancer portfolio of noscapine, an alkaloid from *Papaver somniferum* but also delivered it successfully in tumor cells by scaling successfully noscapine-loaded nanovesicles. We have successfully improved aqueous solubility and oral bioavailability of noscapine from 40% to 65%. Our noscapine loaded stealth gelatin nanoparticles have shown the immense potential in breast tumor (MCF-7 cells) targeting with low IC_{50} value. Moreover, solid lipid nanoparticles of noscapine have crossed the blood brain barrier and enhanced noscapine brain concentration. Thus anticancer attributes of noscapine made it as a promising oral chemotherapeutic agent for the management of cancer.

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