Arch Cancer Res 2018, Volume 6
DOI: 10.21767/2254-6081-C4-015

Cold isostatic pressing of hydrating calcium sulfate to produce parenteral slow-release drug formulations

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This lecture will address a novel principle to produce slow-release depots containing a water-solvable calcium sulfate formulation encapsulating the anti-androgen substance 2-hydroxyflutamide in a microstructurally designed calcium sulfate matrix. The microstructure of the solidified depot consists of a composite of porous and dense material providing a combination of faster and slower release features. By mixing the drug loaded powder, consisting of densified and non-densified granular components, with an aqueous sodium carboxymethyl cellulose solution, an injectable suspension is formulated, which is injectable and which solidifies *in viv*o as a result of the ability of calcium sulfate to solidify by hydration. This technology has been tested in four clinical trials with injection into the prostate gland in order to decrease the prostate volume and to delay the prostate cancer progression. In addition to these subjects, attendees of this lecture will be familiarized with the future promising potential therapy areas for intra-tumoral injection which are close to enter clinical trial evaluation in cancer patients.

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