

Hyaluronic acid properties to enhance drug delivery

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A company that has been leveraging on drug delivery products is Alchemia. Its HyACT technology uses hyaluronic acid's (HA) unique properties to enhance delivery and retention of chemotherapeutic drugs and biologics at the site of a tumor.

Dr Peter Smith, CEO of Alchemia, says the HyACT drug delivery platform has been very successful, as has been indicated by an extensive preclinical pipeline and three successful phase I studies, along with a highly successful phase II study.

"This study in metastatic colorectal cancer patients, when compared directly with irinotecan, demonstrated that the HyACT formulation of HA-Irinotecan was able to provide therapeutic benefits and was efficacious as second line treatment in five-fluorouracil refractory colon cancer patients," he says. "It significantly increased the time to disease progression and treatment failure. It also improved tumor-control determined using RECIST criterion and demonstrated a trend towards better overall survival, which resulted in patients receiving more therapy via a greater number of cycles of therapy."

At Alchemia, three phase I clinical trials of the technology have been completed and are ready for the next stage of clinical development. Nine other HyACT formulations have shown enhanced preclinical activity.

"We have also demonstrated that the technology is effective with biologics, such as cetuximab, which is thought to be one of the staple anti-cancer products of the future," he says.

The lead product, HA-Irinotecan, will commence a phase III clinical trial in Q4 2010. "We estimate that a strong indication of

the primary endpoint will be reached within 20-to-24 months after the commencement of the trial that would translate into Q3 2013. If the phase III trial is successful, and assuming a one year review period by the FDA and EMA, we would expect HA-Irinotecan to be available to the US and European patients by Q1 2015," he adds.