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Novel polymer system for controlled delivery of chemotherapeutics to improve patient outcomes

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Abstract

Controlled drug delivery technologies have continued to evolve in recent years. The promise of controlled delivery is exemplified by sustained adequate levels of drug at the site of malignancy. Nowhere is the need for such technology more evident than the field of chemotherapy. Currently, chemotherapy is administered in a maximum tolerable dose format followed by a period (>3 weeks) of non-treatment for the patient. This administration schedule not only inflicts debilitating side effects on the patient but also allows the associated tumor time to regrow and develop resistance between treatments. The utilization of a controlled delivery system would allow for many improvements over the current paradigm, such as constant exposure of the malignancy to pharmaceutics, larger tolerable administrable dose, and lower side effects, amongst others.

Poly-Med Inc. (PMI) has developed a system which allows for an increase in the level of tolerable drug at site as well as theoretical improved tumor response. PMI uses novel block copolymers to allow for superior control in terms of drug delivery. Such work holds great promise for improving patient outcomes in the clinic.

Biography

Jason Olbrich is completing his Ph.D at the age of 26 from Clemson University. He is a scientist at Poly-Med Inc., a world-leader in the design of medical grade polymers for a wide variety of uses. He has published papers, presented at multiple conferences and authored a book chapter in the fields of absorbable polymers and drug delivery.