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Method of treating cancer using C-26 modified Bryostatins

AzTE Case # 97-014

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Intellectual Property Status:

U.S. Patent 6,060,505

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Invention Description

Bryostatins are a class of macrocyclic lactones with a unique polyacetate backbone. Currently, there are 20 known exceptionally potent anti-neoplastic natural compounds belonging to the Bryostatin family. Bryostatin 1 has undergone Phase II clinical trials for treatment of cancer, and is now in combination therapy trials.

Bryostatins modified at the C-26 position show a significantly increased therapeutic window versus unmodified Bryostatin 1.

Potential Applications

This new development has applications in:

- **Anti-cancer agents with enhanced therapeutic windows.**

Benefits and Advantages

- **Diversity** – Numerous modifications are proposed.
- **Efficacy** – Testing results demonstrate diminished toxicity for modified Bryostatins, with equivalent antineoplastic activity.
- **Synthesis** – Bryostatins are both available from total synthesis and from extraction from biological material.