Methods to Inhibit the Progression of Follicular Lymphoma

Methods for obtaining specific and non-toxic inhibitors of Activation Induced Deaminase (AID) nuclear import that prevent progression of follicular lymphoma (FL), once diagnosed.

Problem Solved by this Technology
Activation Induced Deaminase (AID) causes DNA mismatch mutations. In B cells, AID’s heavily-regulated activity facilitates antibody diversification, but when it becomes unregulated for some reason, the mutation process leads to FL and other types of cancer. FL is considered a chronic illness with a relapsing and remitting pattern. It is, therefore, managed with close observation and chemotherapy. There is no gold-standard treatment, and it remains a manageable, but incurable disease.

Applications
Researchers at the University of Rochester have developed methods comprised of two novel fluorescence-based live cell assay screens to identify AID nuclear import inhibitors that do not have off-target toxic effects. AID-specific nuclear import inhibitors identified by the screens prevent nuclear entry, limit the access of AID to genomic DNA, and inhibit AID mutagenic activity. These AID-selective inhibitors compounds have the potential to become new anti-cancer agents preventing progression of certain types of cancer. In FL, these agents might keep patients in remission for longer periods preventing progression of cancers wherein chromosomal translocation and recombination are associated with advanced stages and grades.

Intellectual Property Status
Patent application pending in the United States.

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