26G-ISMS32 Discovery of ASP3026, a Potent and Selective Anaplastic Lymphoma Kinase (ALK) Inhibitor

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Anaplastic lymphoma kinase (ALK) is a promising therapeutic target for the treatment of cancers, including echinoderm microtubule-associated protein-like 4 (EML4)-ALK positive non-small cell lung cancer. We synthesized a series of 1,3,5-triazine derivatives and discovered ASP3026 as a potent and selective ALK inhibitor, which demonstrated dose-dependent antitumor activity in mice bearing NCI-H2228 tumor xenografts. ASP3026 also showed inhibitory activity against the L1196M gatekeeper mutant of ALK. Syntheses and structure-activity relationships of 1,3,5-triazine derivatives and computational modelings of ASP3026 will be presented.