A microscope-based high-throughput screen identifies novel compounds interfering with Notch trafficking/processing

Christoph Kaether

Leibniz Institut für Altersforschung-Fritz Lipmann Institut, 07745 Jena, Germany

Abstract

Notch signaling plays a pivotal role in numerous cell-fate decisions and its aberrant activity leads to developmental disorders and cancer. A ligand-independent Notch-EGFP reporter is presented that uses automated microscopy to get new insights into trafficking and processing of Notch. 16.000 small compounds were screened and data are presented about one component, FLI-06. This compound disrupted the Golgi, in distinct manner from Brefeldin A, and inhibited general secretion at a pre-ER exit step, making it the first inhibitor of such an early secretory traffic stage.