Abstract:
The PP2C family serine/threonine phosphatase WIP1 is characterized by distinctive oncogenic properties mediated by inhibitory functions on several tumor suppressor pathways, including ATM, CHK2, p38MAPK and p53. PPM1D, the gene encoding WIP1, is aberrantly amplified in different types of human primary cancers, and its deletion in mice results in a profound tumor-resistant phenotype. Numerous downstream targets of WIP1 have been identified, and genetic studies confirm that some play a part in tumorigenesis. Recent evidence highlights a new role for WIP1 in the regulation of a cell-autonomous decline in proliferation of certain self-renewing cell types, including pancreatic beta-cells, with advancing age. Furthermore, Wip1 phosphatase modulates lifespan. These emerging functions of WIP1 make it a potent therapeutic target against cancer and aging.

Biography:
Dmitry Bulavin obtained his MD in 1994 and his PhD in 1996 from the Medical Academy, St. Petersburg, Russia. He did his postdoctoral work at the National Cancer Institute (Bethesda, USA) where he found that p38 MAPK and Wip1 phosphatase play an important role in the regulation of oncogenic transformation. He joined the Institute of Molecular and Cell Biology (IMCB) in 2004, where he continues to investigate the importance of these proteins using in vivo genetic approaches. He is currently an associate professor.