Dr. Guzel will give a presentation regarding GK (Glucokinase activators) for Type-2 diabetes. He will summarize from lead discovery/identification to currently Phase-2B drug candidate which he was involved in discovery and development earlier years at TTP. The title of his presentation will be:

Type 2 diabetes is mainly characterized by elevated blood glucose levels resulting from a pancreatic β-cell secretory insufficiency combined with insulin resistance, most significantly manifested in skeletal muscle and liver. If untreated, various diabetic complications may develop such as loss of vision, peripheral neuropathy, impaired kidney function, heart disease, and stroke. Selection of new drug targets to treat type 2 diabetes has to be guided primarily by consideration of established physiological chemistry of glucose homeostasis. At the late 90s and earlier 2000s, the glucose-phosphorylating enzyme glucokinase (GK) was identified as an outstanding drug target for developing antidiabetic medicines because it has an exceptionally high impact on glucose homeostasis because of its glucose sensor role in pancreatic β-cells and as a rate-controlling enzyme for hepatic glucose clearance and glycogen synthesis, both processes that are impaired in type 2 diabetes. During the presentation the essential aspect of the role of GK in glucose homeostasis, of the biochemical pharmacology of GKA, and small drug discovery and development efforts as well as their therapeutic application will be highlighted.

References: