# AXL KINASE INHIBITOR DEVELOPMENT

2022

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# AXL KINASE

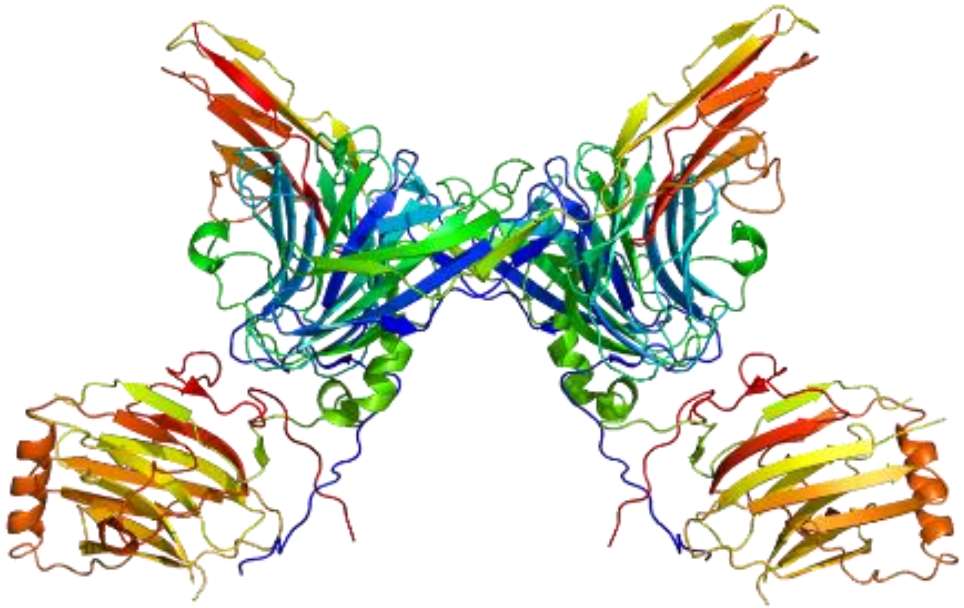
AXL is a Receptor Tyrosine Kinase (RTK) belonging to the TAM family. It is a cell-surface transmembrane receptor that exerts regulated kinase activity through its cytoplasmic domain.

AXL is widely expressed in many organs:

- Macrophages
- Endothelial cells
- Heart
- Liver and skeletal muscle

AXL signaling controls:

- EMT
- Survival
- Motility
- Invasion
- Metastasis development



**AXL**

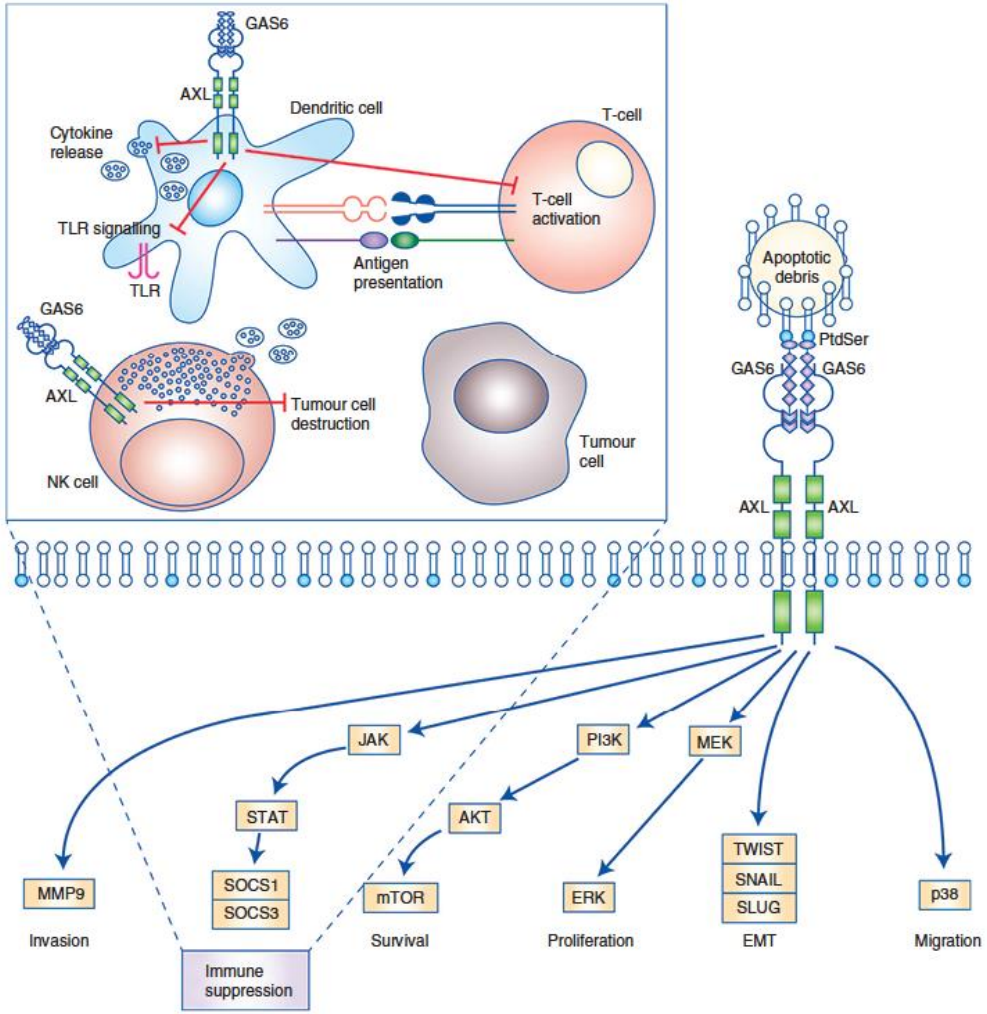
receptor tyrosine kinase

# AXL INHIBITION

- GAS6/AXL signalling functions is an important pathway driving cancer cell survival, proliferation, migration and invasion, which makes AXL a potential target in cancer treatment.
- AXL's crucial role in both tumour biology and therapeutic resistance, makes it an attractive target for antineoplastic therapies.
- Targeting the AXL to inhibit its function might be a promising strategy for the treatment of various malignant tumors.

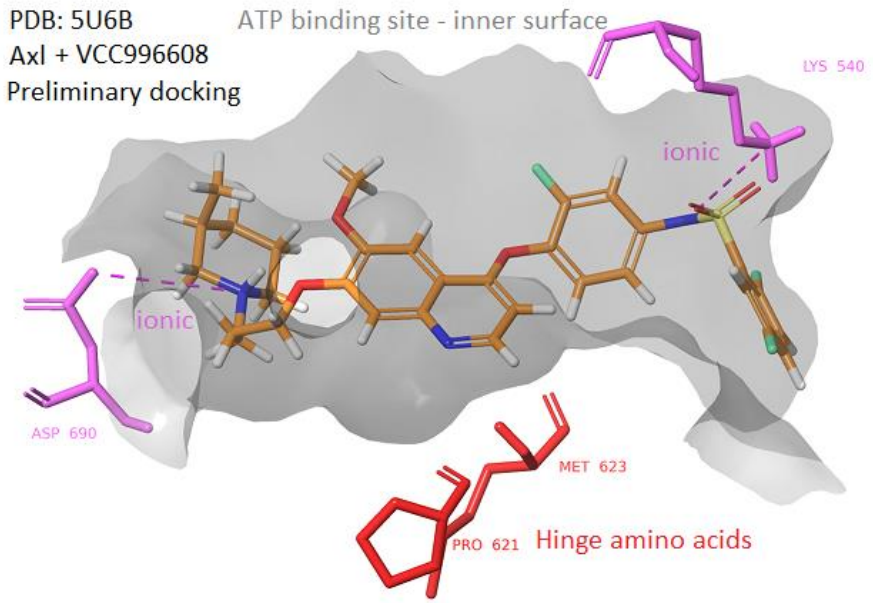
Different strategies of targeting the AXL:

- Breast cancer
- Non small cell lung cancer
- Glioblastomas and renal cell cancer
- Implications for inhibition cancer associated macrophages (M2)
- Aml
- In the tumor microenvironment
- Metastasis preventions and treatment




Spectrum of cellular processes regulated by AXL activity.

# PROJECT TEAM AND GOALS




Predicted binding in AXL kinase binding site

**AIM:**

Development of novel next generation AXL smart targeting inhibitors as potential treatment for a variety of solid and hematological tumors and metastatic cancers

**Dr. Pjotr Knyazev**
Chief Scientific Officer
*Max Planck Institute of Biochemistry, DE*

- Together with Prof. Axel Ullrich was one of the pioneer researchers of AXL receptor kinase
- His team has developed **the first AXL inhibitor**

  *Quinoline derivatives as AXL kinase inhibitors Patent No.:US 9.206,130 B2 Date of Patent: Dec. 8, 2015*
- Compound was licensed by Max-Planck Organization to Korean Biotech Qurient Co. Ltd. for **clinical development** (Q702)
- In 2020 the first patients were dosed with Q702 in the phase 1 study being conducted in the U.S.

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