

## Peer Collaboration



There is vast scientific knowledge beyond our walls and collaboration with external experts is a key driver of innovation at Pfizer. There is also a rich and highly networked health ecosystem where multiple organizations are focused on one goal: discover new therapies for patients, as fast as we can.

At Pfizer, we collaborate to accelerate the pace at which good scientific ideas can become promising therapies, building on or complementing our own in-house knowledge. We also work to advance unique models of collaboration with creativity, flexibility and openness to deliver innovation quickly regardless of where the talent and resources live. This includes working with foundations, patients, government, payers, health care professionals, academia, consortiums and competitors in the biopharma industry.

### Advancing Immuno-Oncology Research

“We know cancer is not a single disease and we cannot do this alone. Our approach to immuno-oncology is never a 'one-size-fits-all' approach and we continue to seek out smart, rational combinations and collaborations to help patients in need of treatments for difficult-to-treat cancers.”

**Chris Boshoff**

M.D., Ph.D., Senior Vice President, Immuno-Oncology, Early Development and Translational Oncology, Pfizer

At Pfizer, we are transforming our approach to cancer treatment through the development of targeted immunotherapies that represent the next generation of potential cancer treatments. These efforts are fueled by collaborations with innovative companies in the oncology and immunotherapy fields, including:

A development collaboration with Western Oncolytics Ltd. to advance its novel oncolytic vaccinia virus, WO-12, which has been engineered to infect and kill cancer cells while sparing healthy cells, in addition to enhancing the immune response to a patient's tumors. This collaboration to develop an oncolytic virus to potentially be used in combination with immunomodulators adds another novel technology platform to Pfizer's cancer vaccine efforts and provides an additional tool to bolster our immuno-oncology portfolio.

A partnership with MacroGenics, Inc., focused on the development of an advanced, bispecific Dual-Affinity Re-Targeting (DART<sup>®</sup>) antibody therapeutic candidate. In 2016, Pfizer dosed the first patient in the Phase 1 clinical study of PF-06671008, a DART developed by Pfizer and MacroGenics that targets P-cadherin and CD3. Increased levels of the protein P-cadherin have been reported in various tumors, including breast, ovarian, endometrial, colorectal and pancreatic cancers, and is correlated with poor survival.

A strategic collaboration with iTeos Therapeutics SA to develop therapeutics targeting the tumor immune environment. This year, the first patient was dosed in the Phase 1 dose-escalation study of PF-06840003 (EOS200271), which is being conducted in people with brain cancer (malignant gliomas).

A collaborative partnership with and investment in IGNITE Immunotherapy Inc., a new company focused on oncolytic virus vaccine design, discovery and development. This targeted and proprietary next-generation intravenous oncolytic (cancer cell killing) virus vaccine development is focused on potentially enhancing the immunologic responses to an individual's cancer. IGNITE is developing a robust and proprietary discovery platform, *Oncolytic Vaccine Evolution*, to potentially discover novel viruses for use in its cancer vaccine products.

A Cooperative Research and Development Agreement (CRADA) with the National Cancer Institute (NCI) to work alongside the NCI's Center for Cancer Research. Pfizer and the NCI will conduct preclinical and clinical trials to evaluate three investigational immunotherapy agents. Pfizer has a similar partnership with MD Anderson Cancer Center to evaluate investigational immunotherapy agents in solid tumors and hematological malignancies. These agents include Pfizer's proprietary immunotherapy agonistic monoclonal antibodies targeting OX40 (CD134; also known as PF-04518600); utomilumab (also known as PF-05082566), targeting the 4-1BB protein receptor (CD137, a member of the tumor necrosis family); and avelumab, a fully human anti-PD-L1 IgG1 monoclonal antibody (also known as PF-06834635 and MSB0010718C), which is being developed through an alliance between Merck KGaA and Pfizer.

Learn more about [our work in oncology](#).