



Molecular Targeting Technologies, Inc. Development Pipeline

CLASS: Imaging Agent

NAME: TDURA

INDICATION: cancer, injury due to drug toxicity, atherosclerotic plaque and acute myocardial infarction

USES: demonstrated in multiple preclinical studies visualizing:

- Tumor response to chemotherapy
- Systemic inflammatory response syndrome (SIRS)
- Injury due to drug toxicity
- Atherosclerotic plaque
- Acute myocardial infarction

TECHNOLOGY: Cell death is the surrogate endpoint for most disease states and anticancer therapies (tumor death). There is no direct cell death imaging agent yet accepted in routine clinical practice.

TDURA, a small, peptide-based radiopharmaceutical imaging agent labeled with ^{99m}Tc, sees cell death, in vivo, directly and enables early, actionable efficacy tracking of tumor cell death within days of the first treatment. It has a unique mechanism of action, binds well to markers on dying cells, and clears readily, a model imaging agent.

UNMET NEED:

Lack of response to therapy is a major hurdle for cancer treatment. Early assessment of tumor response to therapy is critical. Current methods to measure tumor response observe tumor shrinkage or metabolic changes, which may not be detectable for weeks. Ending ineffective therapy early minimizes costs and patient stress.

Systemic inflammatory response syndrome (SIRS) is associated with the presence of pro- and anti-inflammatory cytokines in serum, including tumor necrosis factor (TNF). TNF has multiple effects and leads to cytokine production, leukocyte infiltration, blood pressure reduction and coagulation, thereby contributing tissue damage and organ failure. TDURA imaging can be used for whole body assessment of tissue damage during diseases associated with inflammation and injury.

PROOF OF CONCEPT: 28 publications proving concept and demonstrating utility in multiple indications (see above) concentrated on visualizing tumor death in colorectal cancer.

STAGE OF DEVELOPMENT: Ready for Phase 0/1 development in 2018. Seeking partner.

PRINCIPAL COLLABORATOR: University of Antwerp MICA (Molecular Imaging Center Antwerp)

IP: US 7,877,783 B2, US 8,778,303B2, Chinese patent CN102014970B, European approved 2017. These patents are secure through 2029 in US, EU and China. MTTI obtained an exclusive license from the Medical College of Wisconsin.

FUNDING: Obtained ~\$1 million non-dilutive grants from NIH & EU.

OWNERSHIP: MTTI