Targeted Imaging and Therapy for Cancer using the Fibroblast Activated Proteins (FAP)

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Categories:
- Medical/Health
- Pharmaceuticals

Keywords:
- Cancer
- Cancer Therapy
- Fibroblast
- Fibrotic Diseases
- Imaging
- Medical/Health

Researchers at Purdue University have developed a new class of ligands as drug candidates and imaging agents for targeting FAP-containing cancer-associated fibroblasts (CAFs) and myofibroblasts in cancers. Traditional diagnostics and therapeutics used to identify and treat FAP-positive cancers and fibrotic diseases are often ineffective because they are administered off-target. Patients with FAP-positive cancers are currently given a long-term survival rate of less than fifty percent, leaving an unmet need to develop imaging and therapeutic tools. Purdue researchers have optimized the abundant presence of FAP on the surfaces of diseased cells to develop an off-the-shelf class of ligands for FAP-targeted drug delivery and imaging. In addition, the new method can improve patient care by targeting drug delivery with improved specificity and less toxicity.

Advantages:
-Improved specificity
-Detects wider range of cancers
-Reduced non-specific toxicity

Potential Applications:
-Targeted treatment of cancer patients by reducing tumor burden
-Imaging and treatment of other fibrotic diseases

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