



Transforming How Medicines are Developed and Delivered to Improve Efficacy, Safety and Global Accessibility

TFF Pharmaceuticals, Inc. is a clinical-stage biopharmaceutical company focused on developing and commercializing innovative drug products based on its patented Thin Film Freezing, or TFF, technology platform. Thin Film Freezing is designed to transform medicines into an elegant dry powder to overcome key limitations with current drug delivery:



EFFICACY/BIOAVAILABILITY

A therapy is only as effective as its ability to reach its target. Thin Film Freezing transforms therapies with poor absorption into dry powder formulations that offer multiple targeted mechanisms of delivery, yielding improved bioavailability, faster onset of action and better efficacy.



SAFETY

Therapies with poor solubility, nearly half of all medicines (NCEs), often require a high dose to generate an effective result, leading to poor safety profiles. Thin Film Freezing converts therapies into a concentrated dry powder that is >95% active drug, unlocking the potential to administer a lower effective dose with improved safety profile and reduced side effects.



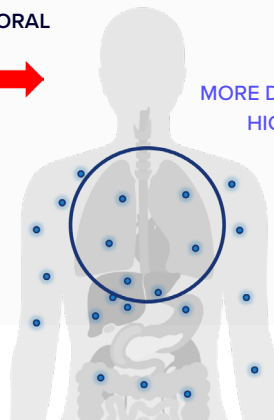
BROAD APPLICABILITY

Thin Film Freezing technology has universal applicability to large and small molecules, vaccines and biologics. The stable dry powder generated through Thin Film Freezing can be applied for inhalation as well as intranasal, intraocular, and topical delivery.

PROBLEM

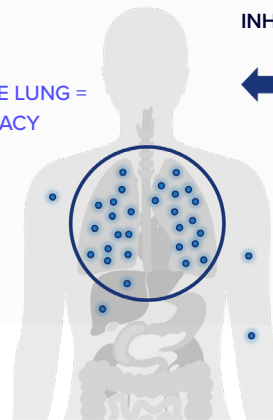
Typically 10% of oral drugs reach their target and often contain bulking agents, fillers, and high dosages contributing to unwanted side effects.

ORAL



- ↓ LOW EFFICACY
- ↑ INCREASE IN ADVERSE EVENTS

MORE DRUG IN THE LUNG = HIGHER EFFICACY



- ↑ HIGH EFFICACY
- ↓ DECREASE IN ADVERSE EVENTS

INHALED



SOLUTION

Our TFF platform has shown the ability to deliver precise dosages to the site of action, increasing therapy response time and reducing side effects.

Product Portfolio

TFF’s internal pipeline is focused on lung-directed drugs:

INHALED VORICONAZOLE POWDER (TFF VORI)

TFF VORI is an inhaled dry powder version of voriconazole, an approved oral first-line antifungal used to treat invasive pulmonary aspergillosis (IPA). TFF’s treatment is delivered directly to the site of infection to prevent IPA, reducing the risk of systemic exposure and drug-drug interactions and yielding better efficacy with a lower dose.

INHALED TACROLIMUS POWDER (TFF TAC)

TFF TAC is an inhaled dry powder version of tacrolimus, an immunosuppressive drug used in transplant medicine. Current therapies to prevent lung transplant rejection have low concentration in the lung, where they are most needed. TFF’s inhalable version specifically targets lung tissue, yielding improved immunosuppression with less systemic exposure and risk of adverse events.

TFF PHARMACEUTICALS’ EXPANDED ACCESS POLICY

TFF Pharmaceuticals is developing its two lead drug candidates, Voriconazole Inhalation Powder and Tacrolimus Inhalation Powder, through the conduct of clinical trials. We understand that in some cases, patients may have exhausted other therapeutic options and/or may not qualify for participation in clinical trials. In such cases, treating physicians may request the use of an investigational drug on an expanded access or compassionate use basis. It is important to remember that the potential risks of an investigational drug are not yet established and therefore the treating physician must weigh the potential risks of an investigational drug against its potential benefits before considering the use of an investigational drug.

At this point, TFF Pharmaceuticals will consider providing a requesting physician with access to a specific TFF Pharmaceuticals investigational drug on an expanded access/compassionate use basis when certain conditions are met.

The treating physician must submit a formal request for expanded access to TFF Pharmaceuticals at expandedaccess@tffpharma.com. The treating physician is responsible for obtaining local regulatory approval for the investigational use.

OUR PIPELINE

	PROGRAM	PLATFORM FORMULATION	INDICATION	PRECLINICAL	PHASE I	PHASE II	PHASE III
INTERNAL	TFF VORI	INHALED VORICONAZOLE	INVASIVE PULMONARY ASPERGILLOSIS (IPA)	▶			
	TFF TAC	INHALED TACROLIMUS	PROPHYLAXIS OF ORGAN REJECTION IN LUNG	▶			
PARTNERSHIPS	VACCINES	INHALED & INTRANASAL DELIVERY	INFLUENZA, EBOLA, MARBURG & ALPHAVIRUSES	▶			
	PHAGE-BASED BIOTHERAPEUTIC	INHALED FORMULATION OF COMPLEX BIOLOGIC	ANTIBIOTIC-RESISTANT BACTERIAL INFECTIONS	▶			
	CANNABIS	INHALED THC/CBD	AVOID VAPING-BASED LUNG INJURY	▶			
	ADV CHEM/BIO PROTECTION	FORMULATIONS FOR SKIN, EYES, LUNGS	NEUTRALIZING COUNTERMEASURES	▶			

Depth and Breadth of Partnerships



TFF collaborates with a broad array of pharmaceutical companies, academic institutions, government agencies and CDMO partners to leverage our disruptive technology and revolutionize healthcare around the globe.

Partnerships aim to improve the efficacy and safety of FDA approved therapeutics; broaden the potential of Thin Film Freezing technology to additional applications, including mRNA, sRNA, Bacteriophages, mAbs, Peptides, Peptoids and vesicular stomatitis virus (VSV) vaccines; and to develop therapies that can be transported and administered with ease for future pandemic preparedness and biodefense.

Current partnerships include many additional pipeline assets in early development, including 18+ already identified candidates.

Robust Intellectual Property Portfolio

The scope of TFF Pharmaceuticals IP protection includes 120+ patents issued and/or pending in the U.S. and internationally.

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