

Private Company 🌸 🔒

# Advanced fiber materials mimicking human hair

Beauty & skincare

## Background

We are working at the intersection of haircare innovation and material science, with a focus on developing high-performance solutions for professional applications. Human-hair-like fibers are essential across both beauty and medical fields, yet most premium solutions still rely on natural human hair. This creates ongoing challenges related to sourcing consistency, limited availability, and quality variability. While synthetic alternatives exist, many fall short in replicating the realistic texture, appearance, and tactile feel required for professional use. We are therefore looking for advanced synthetic fibers that closely mimic human hair and meet the high standards needed for demanding cosmetic and therapeutic applications.

## What we're looking for

We are looking for advanced synthetic hair fibers engineered to mimic the physical and aesthetic properties of natural human hair.

#### Solutions of interest include:

- Multi-polymer blends
- Protein-based synthetic fibers
- Thermoplastic elastomers

#### Our must-have requirements are:

- Natural hair like texture and appearance
- High durability under daily use (washing, styling, heat exposure)
- Color stability and dyeing capabilities
- Safe to use in the cosmetic industry

#### What's out of scope:

- Scalp integration or hair regrowth technologies
- Medical-grade implantable hair systems or surgical solutions
- Synthetic fibers intended for wigs or theatrical/costume use only

#### Acceptable technology readiness levels (TRL): Levels 4-9

- 1. Basic principles observed
- 2. Concept development
- 3. Experimental proof of concept
- 4. Validated in lab conditions
- 5. Validated in relevant environment
- 6. Demonstrated in relevant environment
- 7. Regulatory approval
- 8. Product in production
- 9. Product in market

### What we can offer you

#### Eligible partnership models:

- Sponsored research
- Material transfer
- Co-development
- Supply/purchase

#### **Benefits:**

#### **Sponsored Research**

Funding is proposal-dependent starting with proof-of-concept. **Expertise** 

Partners will have access to industry experts in chemistry and toxicology, depending on the stage of the project.

#### **Tools and Technologies**

Partners will receive guidance on industry best practices in techniques.

Please contact the University of South Florida Technology Transfer office representative for submission - Karla Schramm at <u>kschramm@usf.edu</u>