Puringe: Pure syringe system for contamination-free storage, transport and injection of therapeutics

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SUMMARY

200 million people are affected by macular degeneration leading to 20 million intravitreal injections per year. Silicone oil which is prevalent in most syringe systems can lead to interfering floaters in the eye.

The solution is Puringe. Key element is a membrane which separates the medication from the syringe material to avoid contamination with silicone oil and other particles. Further, the Puringe is designed to provide precise dosing and dead space free injections.

PROJECT GOALS

- Identifying material composition and thickness for the membrane of the Puringe.
- Establishing a Finite Elemente Method (FEM) -simulation framework.
- Prove of basic functionality and testing rupture safety of the membrane.

LONG-TERM GOALS

- Developing a contamination- and dead space free syringe system for storage, transport and injection of therapeutics.