

FRIL – From Hyacinth Bean to Barrier Care

(An Educational Overview)

FRIL is a naturally occurring protein found in the **hyacinth (lablab) bean**, a traditional food source. Scientific studies show FRIL's ability to **bind to sugars on cell surfaces** — including those used by viruses such as **cold, flu, COVID-19, and herpes** to gain entry. This natural binding property allows FRIL to act at the body's barriers, where first contact with environmental challenges often occurs.

Key Insights

- **Barrier Action** – Published research suggests FRIL can buffer viral contact at mucosal surfaces by attaching early, potentially reducing opportunities for intrusion.
- **Plant-Derived** – As a lectin from the edible lablab bean, FRIL reflects nature's own molecular defense strategies.
- **Future Potential** – At U&I; Labs, we are translating this science into safe cosmetic and wellness applications, including balms, gels, and washes, so everyday care benefits from these natural inspirations.

Our work with FRIL continues under the **Edible Bean Amino Complex (EBA Complex)** initiative. This document is for **educational purposes only** and does not describe therapeutic or medical use.

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Reference

Cooper, C.A., et al. *Lectin from Lablab purpureus binds viral glycoproteins and blocks infection in vitro*. Journal of Biological Chemistry, 2020.