



## Polar Bear Sebum Sustainable Alternative to Forever Chemicals

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A study published in **Science Advances**, reveals that **polar bear fur** contains an oily substance called **sebum** with **anti-icing properties**, which could provide a natural alternative to harmful 'forever chemicals' like **Per- and polyfluoroalkyl substances (PFAS)**.

- **Study Focus:** Researchers tested the resistance of polar bear fur and **human hair** to ice, finding that sebum in the fur has **unique properties**, lacking **squalene (organic compound)** found in human sebum.
- **Sebum Properties:** Polar bear fur **sebum** helps keep them dry and enables them to **slide on ice and dive into water**, which is similar to **fluorinated ski skins** used for **ice resistance**, but without the **harmful PFAs**.
- **PFAS:** Group of forever chemicals that are resistant to water, oil, grease, and heat.
- **Health Concerns:** PFAS, widely used in cookware, food packaging, and food processing, do not degrade in the environment and pose serious health risks.
- **Potential Applications:** The study suggests that the **properties of sebum** could be used to create **naturally sourced coatings**, reducing reliance on PFAs and offering a more **environmentally friendly solution**.

Read more: [Forever Chemicals](#)

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