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The Pomeranian Medical University in Szczecin

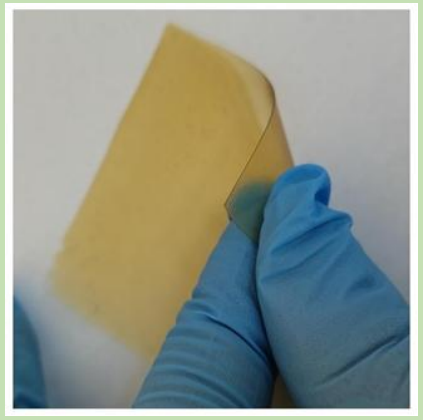
- ✓The Faculty of Pharmacy
- ✓The Medical Biotechnology and Laboratory Medicine
- ✓The Faculty of Medicine
- ✓The Faculty of Dentistry
- ✓The Faculty of Health Sciences

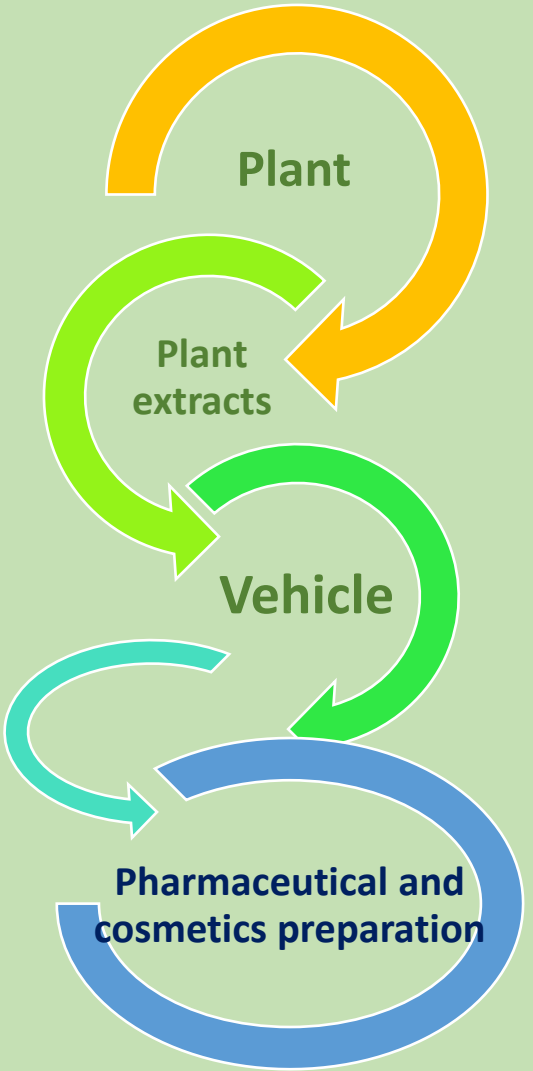
Department of Cosmetic and Pharmaceutical Chemistry

Visegrad Fund

- Design and preparation of new dermatological and cosmetic formulations containing plant extracts, other natural resources synthetic drugs, or drug derivatives.

- Modification of ready dermatological and cosmetic formulations containing plant extracts or other active substances





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- Comprehensive research plant extracts

✓comparison of extraction methods

✓searching for interesting and new plants, focusing on local plants growing in Poland

✓comparison of different plant parts, growing season

✓antioxidant activit

✓chemical composition using HPLC

✓biological activity, including among others analysis of the cytotoxicity of plant extracts, effects on skin cells (keratenocytes), and wound healing, anti-inflammatory effect

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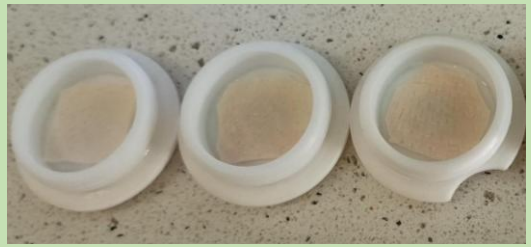
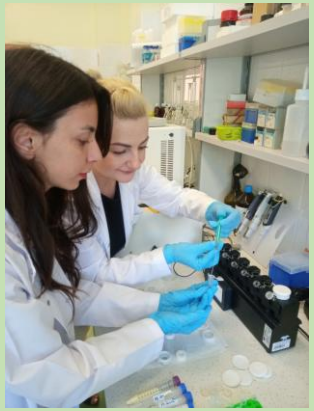
The penetration study

- ✓Franz diffusion cell
- ✓Human skin, porcine skin or artifical membrane
- ✓The accumulation of active ingredients in the skin.





Ministry of Foreign Affairs
Republic of Korea

Visegrad Fund

Visegrad - Accelerated Wound Healing

Our possibilities

Analysis of multifunctional dressings

Design of a natural hydrogel containing plant extracts with anti-inflammatory, antibacterial, and wound-healing properties

- delivery of active substances to the skin
- biological properties

Analysis:

- **Designing a natural hydrogel containing plant extract**
- **Antioxidant Activity Evaluation:**
  - antioxidant assays: DPPH, ABTS, FRAP
  - total polyphenol content (TPC)
- **Permeation Studies:**
  - Franz diffusion cells
  - assessment of active compound accumulation in the skin
- **Cytotoxicity Assessment:**
  - human skin fibroblasts
- **Wound Healing Evaluation:**
  - analysis of fibroblast migration and wound assay

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Thank you for attention!

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