

# Depigmentary Effect of Lichen Compounds

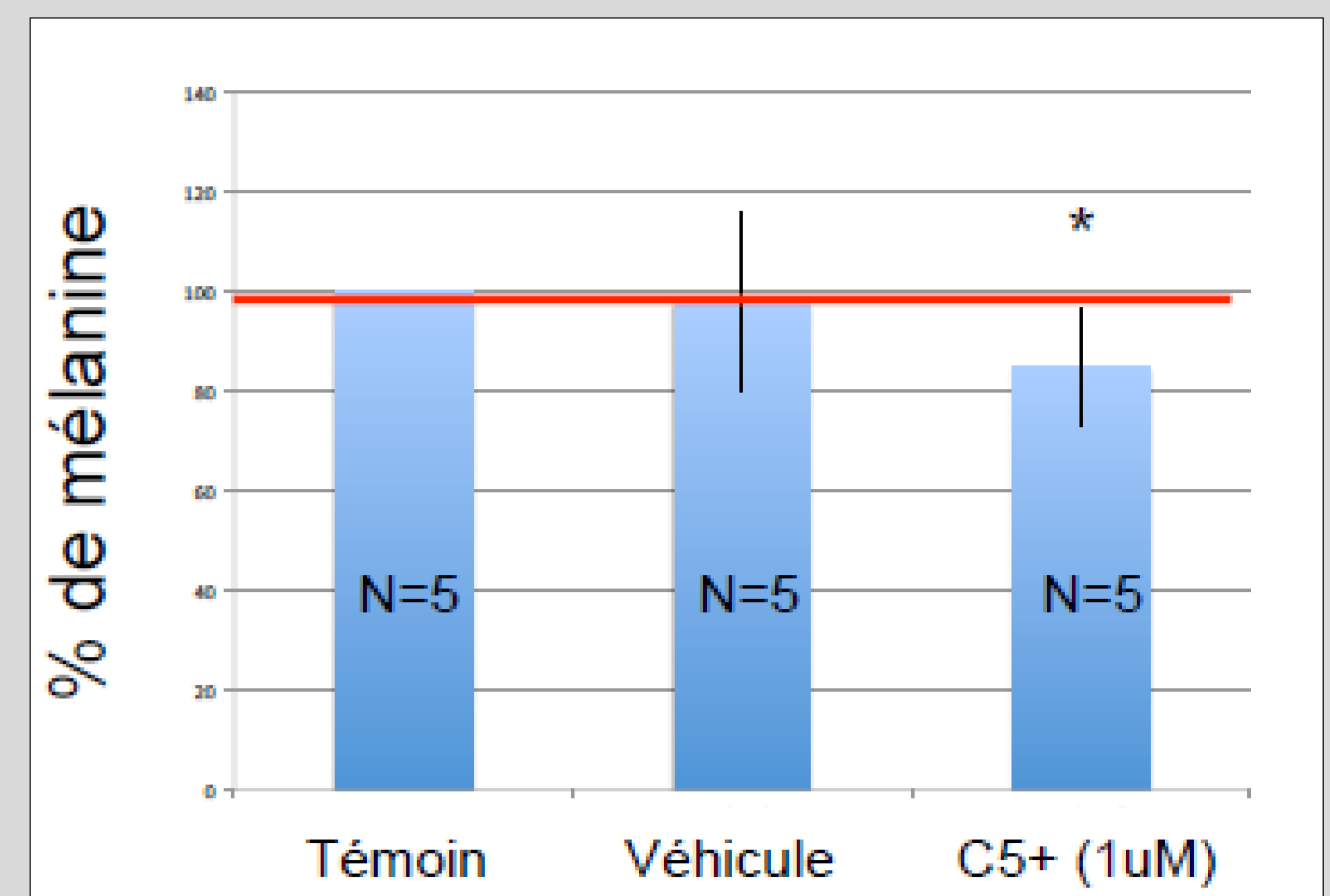
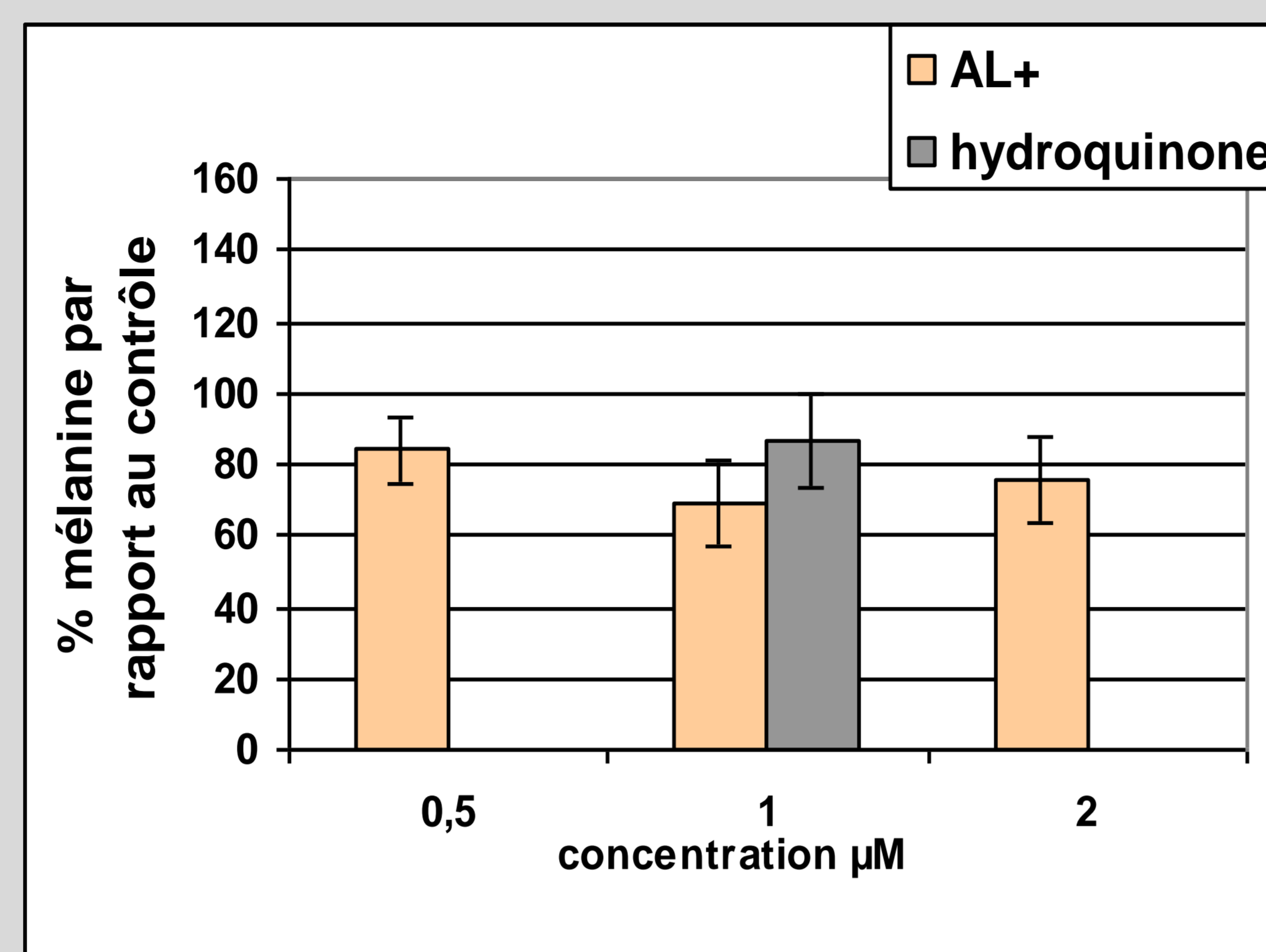
## APPLICATIONS • CASE STUDIES

### Health market :

- Melasma
- Vitiligo

### Cosmetic market :

- skin lightening cream
- skin discoloration



### Establishments :

Laboratory IGDR  
ISCR

### Technology Transfer Office :

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## TECHNOLOGY DESCRIPTION

**Context:** Researchers made the hypothesis that lichens may produce original compounds that may modulate pigmentation.

**Results:** Extract from the lichen, *Cetraria islandica* was proved to modulate pigmentation. One active molecule has been identified to down regulate pigmentation. Starting from this active compound, derived molecules have been synthesized and tested. Depigmentation effect was higher than the one induced by control molecules (hydroquinone, arbutin) with a 20% reduction of the melanin content.

## BENEFITS AND EARNINGS

- Natural derivative
- Better activity than hydroquinone
- No toxicity
- IC50 = 1 microM
- Chemical synthesis of the compound : 7 steps
- Possible biotechnological production
- Tests have been done on human skin explants (Nativskin®)



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