

BETULIN FROM BIRCH BARK

USE, EXTRACTION, ANALYTICS AND PURIFICATION



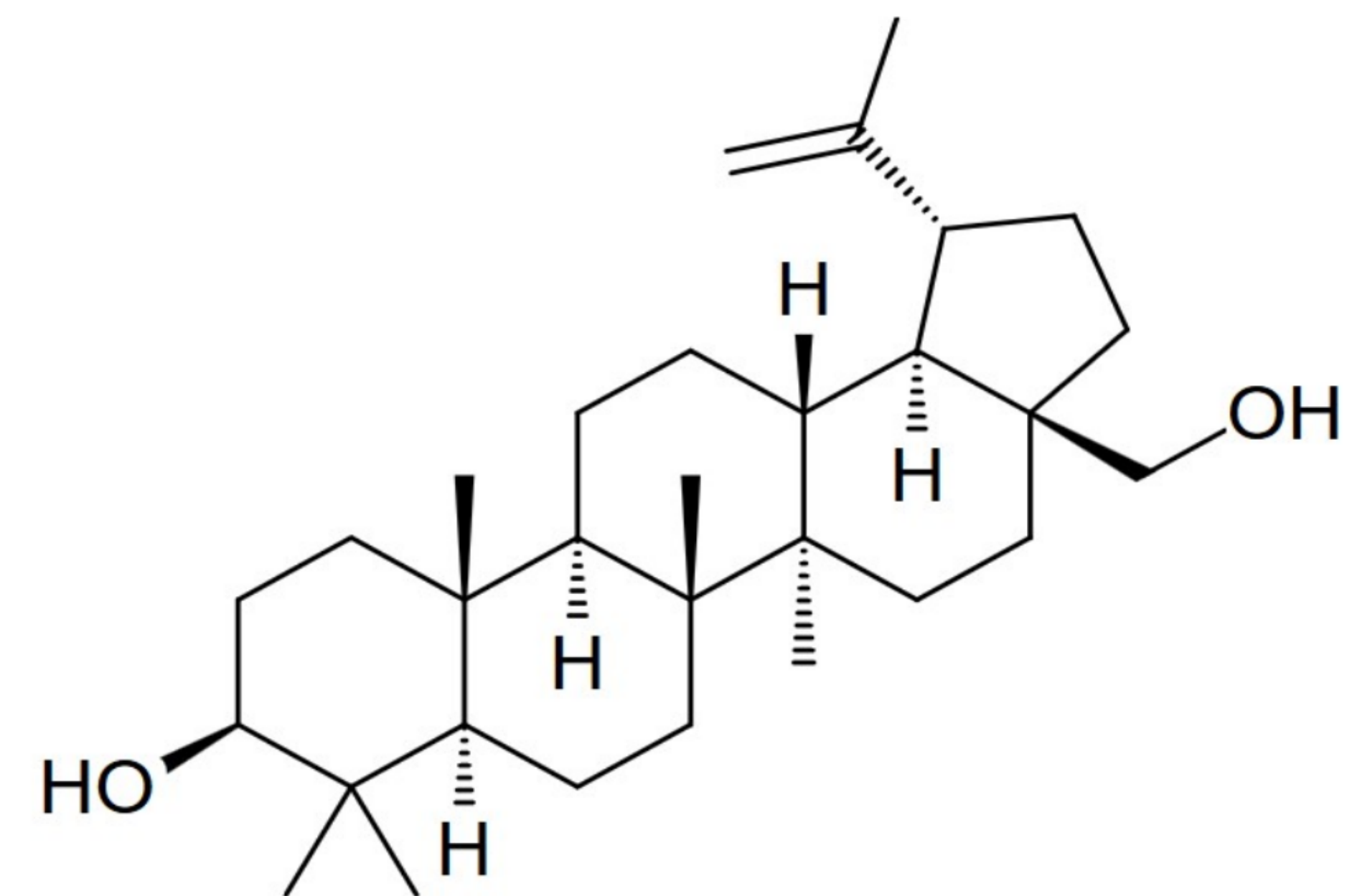
Birch wax cream and waxed birch

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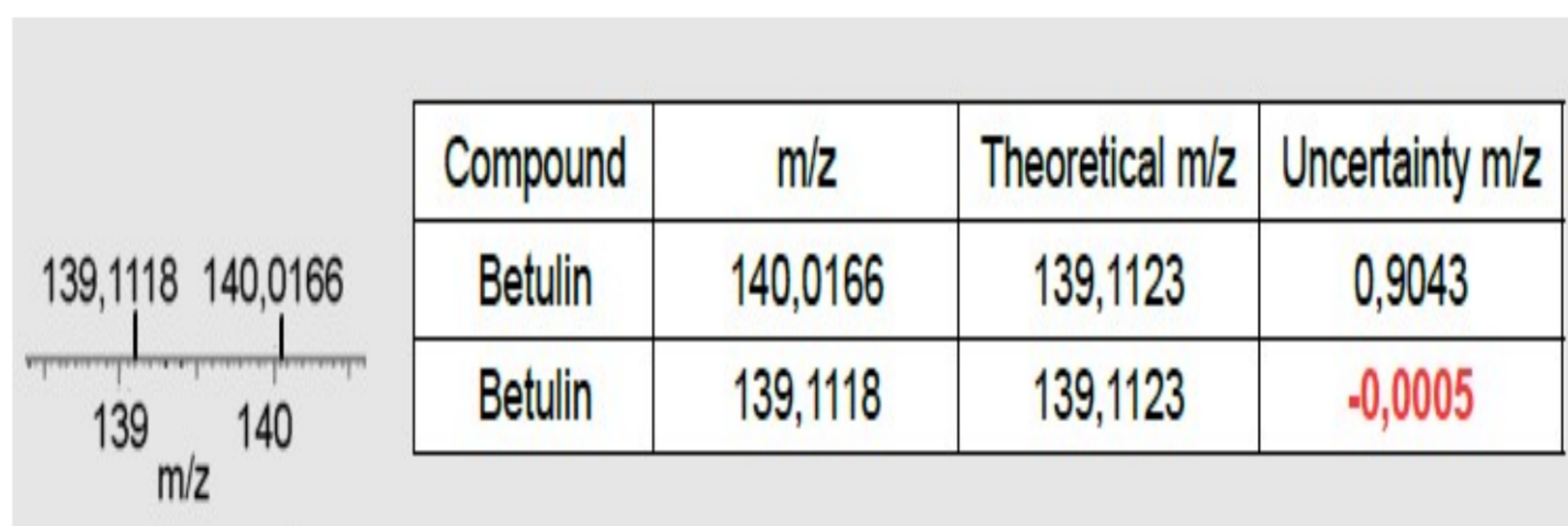
The research project has started by e-mail from professor Reijo Lappalainen. Proposed subject was birch bark, what is possible to find. First version was a literature search of natural products, medicines and other alternatives. Report was discussed with Reijo and Laura Tomppo

Discussion on 13.6.2019 with Reijo, Laura and biorefining students Heli Pirinen and Arto Yletyinen clarified that research project should concern betulin.



Betulin

Future possibilities to use betulin in medicine, cosmetics and food additive will be needed to examine. Also the possibilities of other chemicals in birch bark will need more attention.



LC-MS of betulin from cleaned raw betulin

Preprocessing of birch bark and cleaning raw betuline led to a promising result by proving possibility to remove compounds that interfered FT-IR and LC-MS results for betulin. It would be necessary to verify results concerning the extraction of raw betuline.

Purification of betuline from betulinic acid and lupeol was also examined.

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- industrial use of recycled plastics
- standards and challenges to advance use of recycled and biobased plastics

Bioproducts and energy

- future energy policy
- bioproducts – plastics, energy and chemicals

Bioeconomy foresight and innovations

- how to advance innovations and sell our skills
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