GLYcoPROFILE

Lectin array technology applied to cosmetics

Glycans structures from oligo/poly-saccharides, glycoproteins, glycolipids, proteoglycans and glycosaminoglycans play critical roles in communication/recognition processes like cell-cell communications, cell-matrix interactions, host-pathogen interactions, immune response and can vary according to the behaviour of the cell and their environment. Hence, the study of the **structures and accessibilities** of glycans motifs **represent the innovative strategy aimed for new glyco-products discovery or to anticipate the potentials biological activities mediated by proteins-sugars interactions.**

The technology is intended for the determination of interaction profiles with lectins allowing to identify glycans signatures (GLYcoPROFILE) or oligosaccharides receptors on the surface of molecules or cells. An adapted and optimized **lectin array technology** (own know-how) was developped in order to generate data related to glycan motifs, accessibility and a number of other valuable insights from molecules (purified or non-purified) or cells.

Natural or synthetic glycoconjugates (or mimics)

Cells, yeasts, molds, bacteria

GLYcoPROFILE ⇄ **Glycoanalytics (HPAEC, MALDI-MS, RMN)**

Applications

Drug discovery

From raw material to glyco-product

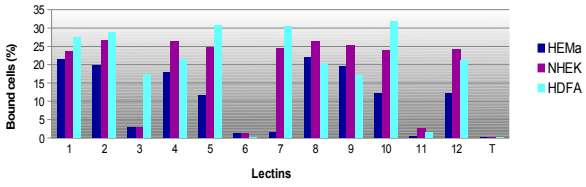
Activity analysis

- Surface glycome profiling
- Binding assay
- Microbiological activity
- Cells interaction / communication

Structure analysis

- Glycan signature (glycoprofile)
- Glycoprofile specific kits
- Carbohydrates diversity
- Motifs accessibility

Normal human Melanocytes (HEMA), Keratinocytes (NHEK) and Fibroblasts (HDFA) specific glycoprofiles evidenced by lectin array (normalized results)

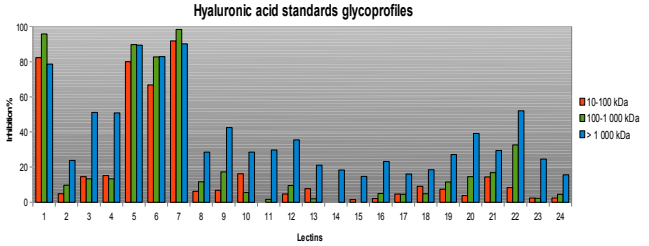


Example 1 :
Screen new raw materials and compare with reference standard glycoprofile.

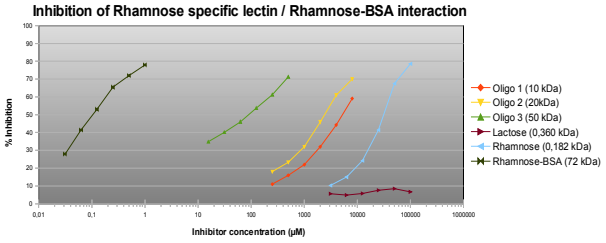
Example 2 :
Compare and confirm the real glycobiological interaction of your molecule with cells.

Example 3 :
Check your product for specific carbohydrates accessibilities.

Hyaluronic acid standards glycoprofiles



Inhibition of Rhamnose specific lectin / Rhamnose-BSA interaction



GLYcoPROFILE is a powerfull technology allowing :

- **The identification of glycans motifs structures and accessibilities (meaning potential biologic activity)**
- **The analysis of glycoprofile / activity relationship**
- **The determination of cells glyco-signatures under the presence of products (glyco or not)**
- **The connection of these data with specific glycans signature related to cells behaviours, cells environments or cells interactions**
- **The exploration and discovery of glycobiological processes of interactions**

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