The transport of glucosylceramides into keratinocytes occurs in an energy-requiring process (via ABCA12 proteins) and is essential for maintaining a normal stratum corneum. The primary storage site for glucosylceramides is the lamellar body, which is a type of organelle that is present in the keratinocytes of the epidermis. Glucosylceramides are synthesized in the Golgi apparatus, and then transported to the lamellar body for storage. The lamellar body is a specialized organelle that is responsible for the production of lipids that are necessary for the formation of the skin barrier.

**Starch Granules**
- These are small, spherical structures that are found in the cytoplasm of cells. They are composed of a polysaccharide called amylose, which is made up of long chains of glucose molecules. Starch granules are a type of storage granule, and they are found in a variety of plant and animal cells. They are used to store energy in the form of glucose, which can be broken down and released as needed.

**Fatty-Acid Recruitment**
- Fatty-acid recruitment is a process by which fatty acids are transported from the extracellular space into the cell. This process is important for the synthesis of lipids, which are necessary for maintaining the integrity of the skin barrier. Fatty-acid recruitment is mediated by fatty-acid transporters (FATPs), which are located on the plasma membrane of keratinocytes.

**ABC12 Proteins**
- ABC12 proteins are a class of ATP-binding cassette (ABC) transporters that are involved in the transport of lipids across the cell membrane. These proteins are also known as fatty-acid-transporter proteins (FATPs). They are responsible for the transport of fatty acids into keratinocytes, and they play a critical role in the maintenance of the skin barrier.

**Sphingolipids**
- Sphingolipids are a group of lipids that are important for maintaining the integrity of the skin barrier. They are synthesized in the skin and are involved in a variety of functions, including the regulation of cell growth and differentiation, the maintenance of the skin barrier, and the regulation of inflammation.

**Ceramides**
- Ceramides are a type of sphingolipid that are synthesized in the skin and are essential for maintaining the integrity of the skin barrier. They are synthesized in the skin and are involved in a variety of functions, including the regulation of cell growth and differentiation, the maintenance of the skin barrier, and the regulation of inflammation.

**Ester-Linked Omega-Hydroxy Fatty Acids**
- Ester-linked omega-hydroxy fatty acids are fatty acids that are attached to a glycerol backbone by an ester bond. They are important for maintaining the integrity of the skin barrier, and they are involved in a variety of functions, including the regulation of cell growth and differentiation, the maintenance of the skin barrier, and the regulation of inflammation.

**Amide-Linked Alpha-Hydroxy Fatty Acids**
- Amide-linked alpha-hydroxy fatty acids are fatty acids that are attached to a glycerol backbone by an amide bond. They are important for maintaining the integrity of the skin barrier, and they are involved in a variety of functions, including the regulation of cell growth and differentiation, the maintenance of the skin barrier, and the regulation of inflammation.

**Omega-3 Fatty Acids**
- Omega-3 fatty acids are a group of fatty acids that are essential for maintaining the integrity of the skin barrier. They are synthesized in the skin and are involved in a variety of functions, including the regulation of cell growth and differentiation, the maintenance of the skin barrier, and the regulation of inflammation.

**Omega-6 Fatty Acids**
- Omega-6 fatty acids are a group of fatty acids that are essential for maintaining the integrity of the skin barrier. They are synthesized in the skin and are involved in a variety of functions, including the regulation of cell growth and differentiation, the maintenance of the skin barrier, and the regulation of inflammation.

**Omega-9 Fatty Acids**
- Omega-9 fatty acids are a group of fatty acids that are essential for maintaining the integrity of the skin barrier. They are synthesized in the skin and are involved in a variety of functions, including the regulation of cell growth and differentiation, the maintenance of the skin barrier, and the regulation of inflammation.

**Tight Junctions**
- Tight junctions are specialized regions of the cell membrane that are involved in the regulation of cell permeability and the maintenance of the skin barrier. They are composed of a group of proteins that are known as the occludin family, and they are found in a variety of cell types, including the keratinocytes of the skin.

**Glycosylated Ceramides**
- Glycosylated ceramides are a type of ceramide that is modified by the addition of a sugar moiety. They are important for maintaining the integrity of the skin barrier, and they are involved in a variety of functions, including the regulation of cell growth and differentiation, the maintenance of the skin barrier, and the regulation of inflammation.

**Transglutaminase**
- Transglutaminase is an enzyme that is involved in the cross-linking of proteins and the maintenance of the skin barrier. It is synthesized in the skin and is involved in a variety of functions, including the regulation of cell growth and differentiation, the maintenance of the skin barrier, and the regulation of inflammation.

**Glycosyltransferase**
- Glycosyltransferase is an enzyme that is involved in the synthesis of glycoceramides and the maintenance of the skin barrier. It is synthesized in the skin and is involved in a variety of functions, including the regulation of cell growth and differentiation, the maintenance of the skin barrier, and the regulation of inflammation.

**Glucocerebrosidase**
- Glucocerebrosidase is an enzyme that is involved in the degradation of glucoceramides and the maintenance of the skin barrier. It is synthesized in the skin and is involved in a variety of functions, including the regulation of cell growth and differentiation, the maintenance of the skin barrier, and the regulation of inflammation.

**ABCA12 Proteins**
- ABCA12 proteins are a class of ATP-binding cassette (ABC) transporters that are involved in the transport of lipids across the cell membrane. These proteins are also known as fatty-acid-transporter proteins (FATPs). They are responsible for the transport of fatty acids into keratinocytes, and they play a critical role in the maintenance of the skin barrier.

**Purification Process**
- The purification process is a series of steps that are used to extract and purify a desired compound from a natural source. The steps typically include extraction, isolation, and purification. The extraction step involves the use of solvents or other techniques to remove the desired compound from the natural source. The isolation step involves the use of chromatography or other techniques to separate the desired compound from other compounds. The purification step involves the use of additional techniques, such as crystallization or recrystallization, to further purify the desired compound.
EFFECT ON GLYCOSYLTRANSFERASE

Tested at 0.3% on normal human keratinocytes, maximum of Pichia anomala formulated at 3% led to a 38% increase in the activity of β-Glc glycosyltransferase, an enzyme responsible for synthesis of glycosylceramide, precursors of ceramides. In addition, this study demonstrated the effect of Pichia anomala on expression of β2-micro globulin, the intercellular protein required to wash hands between products. No significant increase in the level of protein was found with Pichia anomala. These results are in Table 3.

EFFECT ON TRANSPORTER PROTEIN

Tested at 0.3% on normal human keratinocytes, maximum of Pichia anomala formulated at 3% led to a 38% increase in the activity of β-Glc glycosyltransferase, an enzyme responsible for synthesis of glycosylceramide, precursors of ceramides. In addition, this study demonstrated the effect of Pichia anomala on expression of β2-micro globulin, the intercellular protein required to wash hands between products. No significant increase in the level of protein was found with Pichia anomala. These results are in Table 3.

Day 0: Cells were inoculated in six-well plates. Cells were placed in a 37°C incubator containing 5% CO2. Day 1: Cells were grown in the presence of 50 µM cycloheximide for 3 hours in order to inhibit protein synthesis and for 3 hours with 1 µM actinomycin D, a DNA transcription blocker. Day 2: Cells were grown in the presence of 50 µM cycloheximide for 3 hours and then treated with sodium lauryl sulfate (SLS). This effect was determined by centrifugation of the hydrophobic material stained by the green lipid marker. The placebo was applied to predefined zones of the upper arms. Day 7: Samples were taken from each zone by adhesive stripping. Twenty volunteers completed the study. The change from Day 0 to Day 6 in transepidermal water loss for each product was determined. Measurements on the upper arms were determined. Zones were sampled from each zone by adhesive stripping. Evaluation of corneocyte hydration and the lipid structure of the stratum corneum.

The study was conducted with 20 healthy female volunteers 25 to 51 years old. Volunteers were required to wash their hands twice daily with an irritating SLS-based soap. Volunteers came to the laboratory, received information sheets, and were required to wash their hands twice daily with an irritating SLS-based soap. Volunteers washed the study areas twice daily with an irritating sodium lauryl sulfate (SLS) bar soap. Products were distributed. Day 0: Volunteers came to the laboratory with or without applying any product to the arms. Measurement zones on the upper arms were determined. Zones were sampled from each zone by adhesive stripping. Eighteen volunteers participated and completed the study. The study was conducted with 20 healthy female volunteers 25 to 51 years old. An irritation test was performed at subsequent kinetic points. The complementary DNA obtained was analyzed with quantitative PCR. The mRNA of β2-microglobulin, the intercellular protein required to wash hands between products.

The aim of this study was to quantify in vivo the effect of Pichia anomala on expression of β2-micro globulin, the intercellular protein required to wash hands between products. No significant increase in the level of protein was found with Pichia anomala. These results are in Table 3.

The aim of this study was to determine the effect of Pichia anomala on expression of β2-micro globulin, the intercellular protein required to wash hands between products. No significant increase in the level of protein was found with Pichia anomala. These results are in Table 3.

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