Biosfeen®

Lipid extract rich in sphingolipids

Skin Health

Biosfeen® is a unique ingredient. It is a lipid extract of animal origin with a high sphingomyelin content. Barrier defects, such as those occurring in cases of compromised skin integrity like atopic dermatitis, are associated with decreased levels of ceramides and reduced filaggrin expression.

Ceramides and filaggrin play a key role in maintaining skin barrier functions.

BIOSFEEN® BENEFITS

- Promotes filaggrin expression.
- Stimulates the endogenous synthesis of ceramides, essential for the stratum corneum.
- Sphingomyelin reduces the release of PGE2.
- Aids in maintaining the skin barrier.

PRODUCT DOSE

Recommended product dose in topical products

Dog and cat: 0,45%

Drum of **10Kg, 5Kg y 1kg**

Shelf life: **24 months**

Find out more info about Bioiberica's Pet Health

Bioiberica

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Skin
Health

TRIAL

Cerrato et al. 2016. Effects of sphingolipid extracts on the morphological structure and lipid profile in an in vitro model of canine skin. The Veterinary Journal, 212, 58-64.

PURPOSE

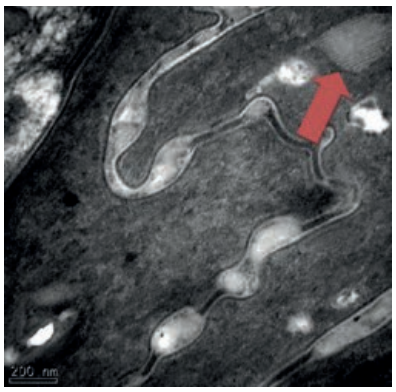
investigate changes induced by three different sphingolipid extracts (Bioiberica, Spain): SPE-1, SPE-2 and SPE-3 on morphological structure and lipid composition of canine skin, using an in vitro model.

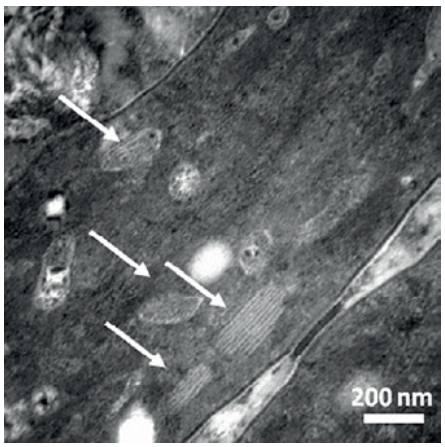
METHODS

- Skin equivalent model: keratinocytes seeded onto fibroblast embedded collagen type I matrix at the air–liquid interface.
- Cell cultures supplemented with vehicle (control) or SPE-1, SPE-2, SPE-3 (extracts of animal origin with ≠ lipid profile, provided by Bioiberica SAU) 0.001% for 14 days.
- Relative concentrations of lipids determined by ultra-performance liquid chromatography coupled to mass spectrometry.
- Ultrastructural morphology examined by transmission electron microscopy (TEM).

RESULTS

- SPE-1 stimulates production of CERs (changes in lipid composition and TEM).
- Ceramides: SPE-2>>SPE-1; Sphingomyelins: SPE-1>SPE-2 increases in CERs: SPE-1>SPE-2.
- CER subclasses most widely reported to be reduced in canine and human AD, particularly CER[EOS] and CER[EOP] (Yoon 2013), increased after SPE-1 treatment.
- Increase in SC lipid lamellar-related structures with SPE-1 → potential improvement in barrier function of the skin.
- The sphingolipid extracts used in the present study were of animal origin → more suitable for endogenous synthesis of CERs?
- SPE-1 contributes to formation of well-organized SC and represents a potential therapeutic target for improving skin barrier function in atopic dermatitis.





Lipid classs	Treatments		
	SPE-1	SPE-2	SPE-3
Ceramides	0.81	26.70	11.63
Monohexosylceramides	0.32	0.04	0.06
Sphingomyelins	63.01	52.50	15.90
Monoacyl glycerols	0.06	0.04	0
Diacyl glycerols	4.16	10.67	0.91
Triacyl glycerols	1.41	18.98	36.22
Diacyl glycerophosphocholine	17.98	0.05	28.61
Monoether monoacyl phosphatidylcholine	1.74	0	6.61
Diacyl glycerophosphoethalnolamine	0.60	0	0.05
Diacyl glycerophosphoinositol	0.06	0.02	0.01
Monoacyl glycerophosphocholine	9.85	0	0

Bioiberica

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