

# Feed International Communication Plan : White Paper 1

## **Nature has potential, let's explore it differently.**

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### **20 years of breakthrough approach**

Founded in 1997, Laboratoires Phodé is an innovative French company designing unique sensory and functional ingredients for the feed market.

Our founding vision might be sum up as follow «The only innate behavior is the quest for pleasure» (*Daniel ECLACHE - Founder and President of Phodé Group*), as it's unique approach is based on the use of functional volatile molecules targeting animal "Better-Being" to reach performance : a rupturing concept combining and holistic and scientific approach of animal.

If a strong hedonic valence remains our signature, it is particularly the scientific approach and the close link between volatile molecules and cerebral cognition that both guide our daily investigations.

Thus, Phodé R&D projects are dedicated to identify and further understand the effects of sensory molecules and vegetable extracts on physiology, behavior, "Better-Being" and ultimately performances of living beings.

Since 20 years, this expertise has made Phodé able to create unique solutions targeting livestock performances with new cerebral approach, especially focusing on stress regulation better known as VeO Premium.

### **From "Aromachology"**

*Aromachology* term was coined by the Sense of Smell Institute in 1982 and refers to the scientific analysis of olfactory effects on mood, physiology and behavior. To determine how and why complex blend of volatile molecules can produce such effects, scientists based their current research works on two main hypothesis (Herz, R., 2009).

- **The pharmacological hypothesis:** volatile molecules present direct and intrinsic potential to interact and affect the autonomic nervous system/central nervous system and/or endocrine systems.

- **The psychological hypothesis:** responses to odors are learned through association with emotional/conditional experiences (*Herz, 2004*) also called the olfactory conditioning or the imprinting concept. Oostindjer and co-authors found positive effects of perinatal sensory experience through the maternal diet on feed intake, growth and behaviour of piglets in the first two weeks post-weaning when exposed to the same fragrance (*Oostindjer et al. 2011*).

- Laboratoires Phodé Research works take on board those two hypothesis. Among the latest breakthrough of those, the company was associated in 2016 within a study related to brain imaging responses of piglets stimulated

or not with a qualified sensory functional molecules (QSFM) (Val-Laillet et al., 2016).

### **To Plant chemistry natural potential enhancement**

Plant extracts can be:

- as simple as a glucose precursor like glycerine,
- as labile and low bio-available as curcumin from native *Curcuma Longa* (Pan et al., 1999),
- as pungent, burning and very irritant during handling and mixing as spices,
- as *in-vitro* effective against *Campylobacter jejuni* as carvacrol or oregano essential oil,
- etc.

Since its creation, Laboratoires Phodé strives to develop leading innovative technologies/concepts enhancing Plant extracts potential.

Among our latest innovations :

- “molecules vectorization” to reach specific lower gut section and improve gut bio-availability (*Noirot et al., 2013*) while remaining efficient (*Allaoua et al., 2016*)
- Free-flowing, easy-handling and safe mode of presentation (*Rico et al., 2012; Stephan, 2016*),
- Synergic association of plant extracts to enhance sialagogue effect (*Dupuis et al., 2016*), or to be recommended as cost-effective alternatives to antibiotics (*Gabarrou et al., 2017*).

**We invite you to come and meet our technical experts at VIV ASIA 2017 (Hall 101 / Booth 1556). Learn more about our innovative concept during our VIV Asia Seminar on Thursday 16<sup>th</sup> of March 2017 (Room 214 – from 10:00 to 11:00 am).**