

## PRESS RELEASE

### **BRAIN and DIANA Pet Food enter into a strategic partnership in cat taste science**

**Zwingenberg (Germany) and Elven (France), April 22, 2015:**

**Biotechnology company BRAIN AG and DIANA Pet Food, world's leading partner for performance solutions in the pet food industry, member of the Symrise Group, today announce a strategic partnership in the field of taste science. Through this unique strategic collaboration established for 5 years, the partners will work on different programs to study the mechanisms related to taste perception in cats. The joint goal of the first program is to use proliferating cat taste cells (CTC) for screening new ingredients which shall improve the palatability of pet food.**

Always striving for innovation, DIANA Pet Food intends to benefit from BRAIN CTC-technology to develop cutting-edge palatability enhancers for cat food. This CTC-technology is deduced from the recently patented and published BRAIN human taste cell (HTC) technology, which currently is used by BRAIN for screening purposes to improve human food formulations in order to reduce e.g. calorie and salt intake with the diet. Nonetheless, human taste cell lines cannot be used for screening

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purposes in order to improve pet food palatability, as it is well accepted that human taste and flavour perceptions is far different from that of cats and dogs.

"In the field of pet food, there is high demand for palatability, which depends first and foremost on the pet sensory equipment and individual preferences and on the pet food sensorial properties," says Isabelle Guiller, Global R&D Director at DIANA Pet Food. "Through the implementation of the programme, DIANA Pet Food in partnership with BRAIN, will generate new access routes to palatability performance in order to help pet food manufacturers achieve high quality and tasty pet food products."

Dr. Michael Krohn, Unit Head BioActives and Performance Biologicals at BRAIN AG states: "The combination of the CTC cell lines together with the BioCompActive® natural molecule library from our BioArchive® as a screening resource will help us to identify compounds which will increase the palatability of cat food. We are proud to use our technology in order to help our strategic partner DIANA Pet Food to improve the formulations of various cat food products."

The use of BRAIN innovative CTC-technology constitutes an additional way for DIANA Pet Food to support pet food manufacturers' brands performance. While developing the scientific knowledge on cat taste mechanisms, DIANA Pet Food will be able to offer customers new efficient and targeted solutions bringing added value to pet food by satisfying cats, thus their owners.

## About Pet Food Market

With 618 Mn cats and dogs in 2014, pet population continues to grow at average 2.1%\* per year, with the highest increase in emerging countries. As life styles change (decline of birth rate, aging populations, erosion of traditional family patterns) and income rise, the bond between pets and pet owners is evolving: pet owners today consider themselves more as parents. They are concerned about providing adequate nutrition to their pets, going from table scraps to industrially prepared pet food and looking for additional health benefits. Pet parents also want their pets to enjoy their meals and be satisfied by them.

This new attitude towards pets mostly explains why pet food market has enjoyed continued growth over the past years despite difficult economic situation. It proves resilient with an expected growth at 5.9% in value and 1.7% in volume\*, regions showing contrasted outlook. At a global level, dog and cat food follow similar patterns in terms of the preference for dry food which represents 73% of the total pet food market volume. With the noticeable benefit of lower unit prices, dry food is widely available across all distribution channels and remains the key segment with expected increases of 6.9 % in value and 2% in volume\* in the coming year. Growth in value for wet pet food, which counts for 24% of the market volume, is driven by the premium segment which should expand at 3.7% in value and 0.8% in volume\*. Treats, representing only 3% of market volume, enjoys though a high growth potential - + 5.9% in value and + 2.5% in volume expected\*- thanks to pet parent growing desire to please their pets.

\*CAGR 14/17

## KEY FIGURES

### Pet Population

- World pet population 618 Mio. of animals: 272 Mio. cats - 346 Mio. dogs.
- EU + NA = 56% of world pet population.

### Industrial pet food Market size

- Pet food Value 2014: 53 Bn€
- Pet food Volume 2014: 22 Mt

### Industrial Pet food market growth (CAGR 14/17 - in %)

	NA	WE	EE	LAM	ASP corrected**	ANZ, JP	MEA
Value	4.2	3.1	9.5	13	11.1	2.2	8.9
Volume	0.4	0.5	5.3	4.2	6.3	-0.2	3.6

\*\* excluding Australia, New Zealand, Japan (mature markets).

### Penetration rate of industrial petfood (2014 – in %)

	USA	UK	BRASIL	MEXICO	JAPAN	THAILAND
CAT	90	79	28	63	88	33
DOG	76	61	50	27	65	21

**Glossary:** EU=Europe; WE= Western Europe; EE= Eastern Europe; NA=North America; ASP=Asia Pacific (Asia + Australia + New Zealand); LAM= Latin America; MEA=Middle East & Africa; ANZ= Australia + New Zealand; JP= Japan; CAGR= Compound Annual Growth Rate

**Source:** Passport Euromonitor 2014

## About BRAIN

BRAIN AG is an industrial "white" biotech company which discovers and develops novel bioactive natural compounds and proprietary enzymes for its partners and customers in the chemical and pharmaceutical industries, as well as the food and cosmetics industries. With its unique approach to the discovery and production of new biological compounds and biocatalysts, the company achieves creative solutions by harnessing nature's untapped biodiversity. Its success is built on its proprietary BioArchive comprising millions of genes, proteins and metabolic pathways from microbial isolates and metagenome libraries. Since its foundation in 1993, BRAIN has entered into over 100 strategic collaborations with nearly all the relevant companies within the chemical industry as e.g. BASF, Ciba, Clariant, Evonik, DSM, Genencor, Henkel, Nutrinova, RWE, Sandoz, Schering, Südzucker and Symrise, to name but a few. Currently, BRAIN employs 120 highly skilled personnel.

For their groundbreaking industrial biotechnology activities for a sustainable „biologisation of the chemical industry“ using nature's toolbox for industrial processes, BRAIN with its CEO Dr. Holger Zinke received the "Deutschen Umweltpreis 2008" of the "Deutsche Bundesstiftung Umwelt", DBU.

[www.brain-biotech.de](http://www.brain-biotech.de)

## About DIANA Pet Food

DIANA Pet Food, the world's leading partner committed to improving pet food performance, develops innovative solutions to increase the well-being of cats and dogs, and pet owner satisfaction. Member of the Symrise Group, the Pet Food Business unit of DIANA relies on a strong establishment in 5 continents with 730 employees, 17 industrial sites, 17 sales offices, 1 research center, 4 regional development and technical support centers and 3 cats and dogs expert palatability measurement centers.

Worldwide leader in palatability enhancers, DIANA Pet Food works closely with its customers with the sole objective of supporting their brand positioning and their values. Thanks to a unique innovation policy based on a combined understanding of pet food product attributes, animal specificities and pet owners' expectations, DIANA Pet food offers an exclusive set of services and a wide product portfolio targeting pets and pet owners Sensorial Satisfaction, pets Health & Nutrition and natural pet food Protection.

## About DIANA and Symrise

Symrise is a global leading provider of fragrances, flavors and active ingredients as well as aroma chemicals for the perfume, cosmetic, pharmaceutical, food and beverage industries.

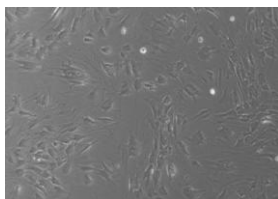
Within the Symrise Group, DIANA operates as a division delivering natural-ingredient based solutions for Food, Pet Food, Dietary Supplements, and Aquaculture markets.

DIANA and Symrise are committed to a common ambition: to create a unique position in the industry with a differentiated product portfolio supporting customer's brand development.

[www.diana-group.com](http://www.diana-group.com)

[www.symrise.com](http://www.symrise.com)

## Images:



Cat taste cell lines will be used to screen for natural ingredients which in future will help to improve the pet food formulations.

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Satisfying cats appetite is a daily challenge for DIANA Pet Food.

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## Images and text:

Images and text from this press release can be found at [www.brain-biotech.de](http://www.brain-biotech.de) and [www.diana-group.com](http://www.diana-group.com).