

/ APPLIVER CHOLESTEROL



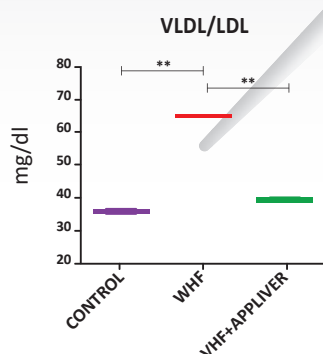
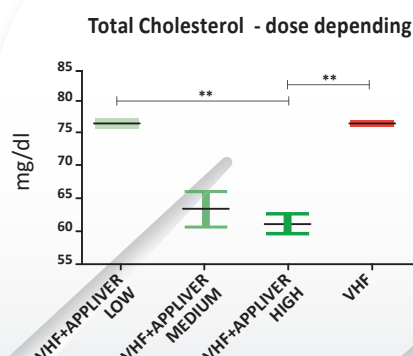
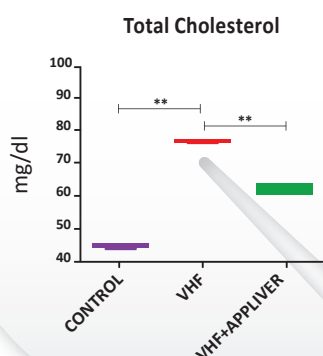
APPLIVER® is the new product obtained by the ABR innovative biotechnological platform NATRISE®. APPLIVER® is a freeze-drying quince stem cells compound obtained by plant cell culture, these stem cells are specifically coming from the fruit of *Cydonia oblonga* that is called quince. The quince is an **apple-shaped fruit**, with a delicious aroma and it is known for its exceptional health activities since ancient times.

Dyslipidaemias and particularly elevated plasma LDL-cholesterol levels are major risk factors for cardiovascular disease and among their different forms, hypercholesterolaemia is the most prevalent. Indeed, the prevalence of plasma hypercholesterolaemia was the highest in Europe (54% for both sexes), followed by North and South America (48% for both sexes) whereas Africa and Southeast Asia had the lowest prevalence (22.6% and 29.0%, respectively).

In collaboration with Fondazione Italiana Fegato Onlus and the Department of Molecular Medicine of the University of Padua, we studied the effects of APPLIVER® on *in vivo* diet-induced obesity mouse model. We have also evaluated the dose-effect relationship of APPLIVER® on dyslipidaemia.

In our studies, when APPLIVER® is administered, a significant reduction of total cholesterol and VLDL/LDL-cholesterol level was observed. The HDL-cholesterol level (the “good cholesterol transport”) was higher compared to the control. Indeed, it acts as scavenger of cholesterol excess. These findings were also confirmed by a dose-depending effect of APPLIVER® treatment.

APPLIVER



Our research studies confirm the beneficial effect on health of APPLIVER® in metabolic disorder as dyslipidaemia. This makes APPLIVER® the **perfect ingredient** for dietary supplements and functional foods.



Inspired by nature... driven by biotechnology!

Sustainable biotech ingredients, unique in the world

ABResearch (ABR), leader on the **plant stem cell culture biotechnology**, with its **ISO 9001, FSMA and GMP Food certified facility**, has been developing for many years its own industrial scale production platform, called **NATRISÉ®**, to extract secondary metabolites from plant cell culture for the pharmaceutical, the nutraceutical and the nutricosmetic market. This innovative production process has many advantages over the conventional methods based on crops harvesting.

NATRISÉ® biotechnology is **totally sustainable**:



pesticide
free



herbicide
free



water
saving



soil
saving



Plant cell cultures platform **NATRISÉ®** ensures a high degree of quality and safety of the product, improves the duplicability and the standardization of the active ingredients, and allows a better planning and a more flexible production process.

Furthermore, the global warming phenomenon is changing season and more and more plants are becoming scarce and rare. For these reasons some of our customers have chosen **NATRISÉ®** platform with our skills and experience **to create their own proprietary plant cell line**.

The more soil allocated to crops for the herbal extraction industry we manage to clear, the more soil we give back to the cultivation of food for human consumption. The less water we use, the more water we give back to our communities. We do not have the ambition to save the world on our own, but we certainly strive to give our contribution.

With the **NATRISÉ®** brand, which will be made available free of charge to those who use ingredients made with ABR platform, we will make together the products easily recognisable by the general public and we will raise awareness of our aim to sustainability.

The human health and the environmental protection are our priority.

**Our skills
and experience
for your needs**

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