

## Two new patents to widen Fermentalg's technological head-start

**Press release – Libourne – 3 March 2015** – Fermentalg, an industrial biotechnology company that specializes in the production of oils and proteins derived from microalgae, has been issued two new major patents for the industrial exploitation of high-yield microalgae strains: Botryococcus and Odontella.

### **Destination: green chemistry with Botryococcus**

The Botryococcus microalgae from Fermentalg's strain bank is the only microalgae on earth that is able to produce its own hydrocarbons (botryococcenes, alkadienes, alkatrienes). The derivative applications for these fossil carbon molecules that are a substitute for petrochemicals are numerous, particularly in the field of green chemistry. Their hydrocarbons can also be used in the production of biokerosene. Fermentalg has patented a process for breeding microalgae in a mixotrophic environment which allows it to select the strains of Botryococcus that offer the most promising potential for the production of hydrocarbons. The increase in the yield of lipids obtained using these microalgae is crucial for the profitable production of hydrocarbons on an industrial scale. Better yet, unlike severely degraded fossil hydrocarbons, hydrocarbons produced from Botryococcus have the advantage of being complete molecules with double bonds which require extremely energy-inefficient petrochemical processes to replicate.

Botryococcus microalgae are also able to synthesize under mixotrophic conditions to form another type of rare lipid used in numerous domains: squalene. Its antioxidant, antistatic and emollient properties are particularly sought-after in cosmetology, pharmacology and for nutritional supplements.

Alongside Fermentalg's Trans'Alg programme, the Botryococcus patent further reinforces the company's technological base on which to build its goal to become the leading industrial producer of microalgae. Announced at the end of January, Trans'Alg will enable Fermentalg to extend its target reach in green chemistry through a €31.2 million collaborative programme with partners Arkema, Soprema and other industrial operators.

### **A new addition in human nutrition with Odontella**

Odontella is a marine microalgae that produces high-quality Omega-3 lipids such as Eicosapentaenoic Acid (EPA) Docosahexaenoic Acid (DHA). Omega-3 are essential fatty acids for mankind which, because the human organism cannot synthesize them, must be obtained from food. Their numerous therapeutic properties means that they are also regularly used as food supplements.

Fermentalg has patented the breeding of *Odontella* using a mixotrophic process ("4<sup>th</sup> generation" process) which allows it to improve the strain performance, both in terms of growth and in terms of the production of lipids.

The company has already received a European Novel Food authorization, opening the way for the commercialization of its DHA-enriched oil on today's vast human nutrition market.

### **An unrivaled portfolio of patents worldwide**

Since 2009, Fermentalg has constantly built and enriched its portfolio of patents to protect its technological innovation. With 26 families of patents filed at the end of 2014, Fermentalg is a benchmark player in microalgae and market leader in cutting-edge technology.

### **About Fermentalg**

Founded in 2009 by Pierre Calleja, Fermentalg is an industrial biotechnology company that specializes in producing sustainable oils and proteins derived from the exceptional properties of microalgae. Its patented technology allows it to target a range of fast-growing global markets, from nutrition and animal feed to cosmetics and health, green chemistry and energy. Fermentalg has already signed its 1<sup>st</sup> industrial and commercial joint-venture for the production of Omega-3 oils rich in EPA and DHA as well as several other partnerships with leading industrial groups. Fermentalg shares are listed on Euronext in Paris (FR0011271600 - FALG). For more information, visit the Fermentalg website at: [www.fermentalg.com](http://www.fermentalg.com).

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