

The role of Roquette's KLEPTOSE® HPβCD in the fight against coronavirus

Roquette publishes a scientific paper on how Cyclodextrins may help in the prevention and treatment of coronavirus.

Geneva, IL (USA), February 11, 2020 – Roquette has recently identified that its KLEPTOSE® hydroxypropyl beta-cyclodextrins (HPβCD) product, a functional excipient and a specialty active pharmaceutical ingredient (API), may be effective to help the joint efforts of the scientific and pharmaceutical communities working on treating and preventing new emerging viruses such as the coronavirus.

"We have products that may help in the formulations currently being developed by the scientific community to vaccinate against the coronavirus," said Paul Smaltz, Head of the Global Pharmaceutical business unit. "Our KLEPTOSE® HPβCD may be part of a helpful solution to speed up the early stage development process and help rapidly scale-up vaccine candidate production. Getting these medicines to market faster cannot only treat the current virus' threat to global health, but also help prevent the full slew of coronaviruses in this family."

HPβCD can effectively act as a safe, enabling excipient for solubility enhancement of antiviral drugs, stability improvement of therapeutic monoclonal antibodies, and as a vaccine adjuvant. KLEPTOSE® is a Cyclodextrin, a group of structurally related natural products formed during bacterial digestion of cellulose. Cyclodextrins have indeed been shown to be effective as solubilizing and stabilizing agents in vaccines, monoclonal antibodies and oral formulations. Moreover, Cyclodextrins can potentially be used for infection containment or as virucidal agents after structural modification. The company's new position paper speaks to the potential role of Cyclodextrins, such as HP β CD, in detail: "Combating Coronavirus: Key Role of Cyclodextrins in Treatment and Prevention."

Roquette has extensive experience and a long history of supplying markets with KLEPTOSE® HP β CD, approved for oral and parenteral administration in humans by the EU, the US, and Chinese regulatory authorities. HP β CD offers a high degree of solubility and an excellent safety profile, even at relatively high doses. Moreover:

- KLEPTOSE® HPβCD has been demonstrated to be an ideal solubilizer of active ingredients in pharmaceutical drug development.
- HPβCD has been shown to be a leading solution to increase protein stability.
- Roquette's KLEPTOSE® HPβCD may be helpful in speeding up the early stage development process to help rapidly scale-up production of vaccine candidates.

About Roquette

Offering the best of nature, Roquette is a global leader in plant-based ingredients for Food, Nutrition and Health markets and a pioneer of new plant proteins. A trusted global supplier to life science companies around the globe for more than 40 years, the Group considers that life-saving



pharmaceuticals start with high-quality ingredients and is committed to hold itself to the highest industry standards. From oral dosage excipients (pharmaceutical branded, generic, nutraceuticals, and over the counter) and biopharma materials to injectables and dialysis solutions, Roquette offers a competitive broad-range of customer-focused solutions, providing consistency and reliability across every ingredient. Each of these ingredients responds to unique and essential needs, and they enable healthier lifestyles. Thanks to a constant drive for innovation and a long-term vision, the Group is committed to improving the well-being of millions of people all over the world while taking care of resources and territories. Roquette currently operates in over 100 countries, has a turnover of around 3.5 billion euros and employs 8,600 people worldwide.

For more information about Roquette, please visit our website at www.roquette.com.

Media Contacts:

Oxygen PR roquette@oxygen-rp.com

Roquette - Corporate Communications carole.petitjean@roquette.com

Roquette - Pharmaceuticals Communications lena.stinsa@roquette.com