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Emmaus Life Sciences Granted European Patent for use of Pharmaceutical-grade L-glutamine in Treating Diverticulosis

Related patents granted in the United States, Japan, Australia, Mexico, China, Indonesia, South Korea and Russia; Patents pending in Brazil and other countries

TORRANCE, Calif., Sept. 3, 2019 /PRNewswire/ -- Emmaus Life Sciences, Inc. (Nasdaq: EMMA), a leader in sickle cell disease treatment, announced today the allowance of patent application number 12860587.0, directed to the treatment of diverticulosis, by the European Patent Office. The allowance of this application follows the issuance of corresponding patents in the United States, Japan, Australia, Mexico, China, Indonesia, South Korea and Russia. Patent applications are currently pending in various jurisdictions around the world, including Brazil and India.

The allowed European application reports a significant reduction in the number of intestinal diverticula, the primary indicator of diverticulosis, through the therapeutic application of - pharmaceutical-grade L-glutamine (PGLG). There are no commercial therapies that claim an ability to reduce intestinal diverticula at the present time.

"We have seen the tremendous therapeutic potential of PGLG through the efficacy of Endari® in treating sickle cell disease, and are excited to expand its application across additional indications to address a range of unmet medical needs, including the treatment of diverticulosis," said Dr. Yutaka Niihara, M.D., M.P.H., Chairman and Chief Executive Officer of Emmaus Life Sciences. "As we continue to further our research and product development efforts, these patents will allow us to protect our intellectual property moving forward."

The covered invention is directed to methods and/or compositions for the treatment of diverticulosis. It is more specifically directed to compositions including PGLG or uses of such compositions in the treatment of diverticulosis. Diverticulosis refers to a condition where pouches (i.e., diverticula) form along the colon wall. Over time, some people get an infection in the pouches (diverticulitis). Epidemiological studies indicate that the prevalence of this disease is increasing worldwide. It is estimated that at least 50% of the population over the age of 60 in the United States, Europe and Australia have diverticulosis.

Emmaus announced the initiation of the company's Pilot/Phase 1 clinical study on the treatment of diverticulosis with PGLG on July 8, 2019.

About [Endari® \(L-glutamine oral powder\)](#)

Indication - Endari is indicated to reduce the acute complications of sickle cell disease in

adult and pediatric patients five years of age and older.

Important Safety Information - The most common adverse reactions (incidence >10 percent) in clinical studies were constipation, nausea, headache, abdominal pain, cough, pain in extremities, back pain, and chest pain.

Adverse reactions leading to treatment discontinuation included one case each of hypersplenism, abdominal pain, dyspepsia, burning sensation, and hot flash.

The safety and efficacy of Endari in sickle cell disease patients younger than five years of age have not been established.

For more information, please see full Prescribing Information of Endari at: www.ENDARlrx.com/PI.

About Emmaus Life Sciences

Emmaus Life Sciences, Inc., is a commercial-stage biopharmaceutical company engaged in the discovery, development, marketing and sale of innovative treatments and therapies, including those in the rare and orphan disease categories. For more information, please visit www.emmauslifesciences.com.

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