

April 27, 2020



## APCER Report Confirms Endari® Safety

TORRANCE, Calif., April 27, 2020 (GLOBE NEWSWIRE) -- **Emmaus Life Sciences, Inc. (OTCQB: EMMA)**, a leader in sickle cell disease treatment, announced today that APCER Life Sciences (APCER) has confirmed the safety profile of Endari®, Emmaus' prescription grade L-glutamine oral powder for the treatment of sickle cell disease. Using the signal detection method to identify adverse drug reactions (ADR), APCER indicated that no serious safety concerns were reported among patients using Endari® during the period from July 7, 2017 to April 6, 2020. See <https://ir.emmausmedical.com/company-information/presentations>.

Yutaka Niihara, M.D., M.P.H., Chairman and Chief Executive Officer of Emmaus, stated, "We are pleased that the APCER report has reconfirmed the safety profile found in the clinical trials where there were no serious ADRs attributable to Endari. Since its approval by the FDA in July 2017, there have been approximately 20,000 prescriptions written for Endari and it is significant that the drug's safety profile has been further substantiated."

### 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.emmausmedical.com](http://www.emmausmedical.com).

### 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 pediatric patients with sickle cell disease younger than five years of age has not been established.

For more information, please see full Prescribing Information of Endari at: [www.ENDARlrx.com/PI](http://www.ENDARlrx.com/PI).

### About Sickle Cell Disease

Sickle cell disease is an inherited blood disorder characterized by the production of an

altered form of hemoglobin which polymerizes and becomes fibrous, causing red blood cells to become rigid and change form so that they appear sickle shaped instead of soft and rounded. Patients with sickle cell disease suffer from debilitating episodes of sickle cell crises, which occur when the rigid, adhesive and inflexible red blood cells occlude blood vessels. Sickle cell crises cause excruciating pain as a result of insufficient oxygen being delivered to tissue, referred to as tissue ischemia, and inflammation. These events may lead to organ damage, stroke, pulmonary complications, skin ulceration, infection and a variety of other adverse outcomes. Sickle cell disease is a significant unmet medical need, affecting approximately one hundred thousand patients in the U.S. and millions worldwide, the majority of which are of African descent. An estimated 1-in-365 African American children are born with sickle cell disease.

### **About APCER Life Sciences**

APCER is committed to improving health in partnership with its clients. It brings independent expertise in safety, medical, regulatory and technology resources to ensure that patients receive the safest, most effective therapies possible. Emmaus engaged APCER to provide pharmacovigilance services including the related Endari<sup>®</sup> safety report. Pharmacovigilance, also known as drug safety, plays a key role in the healthcare system by monitoring and assessing the adverse effects of pharmaceutical products. For more information on APCER, please visit [www.apcerls.com](http://www.apcerls.com).

### **Forward-looking Statements**

This press release contains forward-looking statements made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995, as amended, including statements regarding patients' experience with Endari<sup>®</sup>. These forward-looking statements are subject to numerous assumptions, risks and uncertainties which change over time, including Emmaus' working capital and ability to carry on its existing operations and obtain needed financing and other factors previously disclosed in the company's reports filed with the Securities and Exchange Commission, and actual results may differ materially. Such forward-looking statements speak only as of the date they are made, and Emmaus assumes no duty to update them, except as may be required by law.

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