## Amyris Partners with IPCA Labs to Earn the 2018 CPhI Award for Excellence in Pharma: API Development

EMERYVILLE, Calif. and MADRID, Spain, Oct. 23, 2018 (GLOBE NEWSWIRE) -- At the prestigious CPhI Pharma Awards Gala held October 9, in Madrid, Ipca Laboratories, Ltd. was awarded the 2018 CPhI Pharma Award for "Excellence in Pharma: API Development" for its work with Amyris, Inc. (Nasdaq:AMRS) in the creation of an efficient, lower cost method of synthesizing artemisinin, a critical component of artemisinin combination therapies (ACTs) recommended by the World Health Organization as a first-line treatment for malaria.

The <u>CPhI Pharma Awards</u> celebrate thinkers and creators breaking new ground in the industry and strongly advocate companies that are committed to driving the industry forward.

Each year more than half a million people die of malaria despite the existence of this single-dose cure, largely due to supply and price volatility. Early on in its history, Amyris developed yeast strains that can utilize low-cost sugar and convert it to precursors of artemisinin. These precursors can then be chemically converted to artemisinin, the active ingredient in ACTs. The first precursor delivered under a royalty-free, transferable license to One World Health was artemisinic acid, and the drug maker Sanofi developed a chemical conversion process to make artemisinin and entered the market.

Despite that effort, the world has yet to fully realize an affordable malaria treatment for the poor owing to the lack of a cost-effective chemical conversion into artemisinin. Recently, Ipca, with another precursor called amorphadiene provided by Amyris, developed a novel process and efficient chemical conversion to artemisinin. A manuscript describing this work entitled "Amalgamation of Synthetic Biology and Chemistry for High Throughput Non-Conventional Synthesis of Antimalarial Drug Artemisinin" was published in February of 2017, in the journal *Organic Process Research & Development (21(4))*.

Combining the biological production of amorphadiene using engineered yeast with simple chemistry, Amyris and Ipca have created a new path to the production of this critical anti-malarial drug on an even more cost effective basis.

"We are proud to have been recognized by CPhI for this effort with the award of the 2018 Pharma Award for Excellence in Pharma: API Development," said Dr. Ashok Kumar, President – Centre for Research & Development, Ipca Laboratories Limited. Only 17 winners were chosen from over 250 entries.

"It is gratifying to receive such distinguished recognition for the important work we're doing with Ipca Laboratories, which is ultimately saving lives," said Joel Cherry, President of Research & Development at Amyris. "There is no feeling more rewarding."

## About Ipca

Ipca Laboratories is fully-integrated Indian pharmaceutical company manufacturing over 350 formulations and 80 APIs for various therapeutic segments. Ipca is one of the world's largest manufacturers and suppliers of over a dozen APIs. A therapy leader in India for anti-malarials with a market-share of over 34%, Ipca Labs is one of the world's largest manufacturers of Artemisinin based APIs & Formulations. Ipca is committed to bring the results of innovative research and development into widespread use for the benefit of the general public. More information about the company is available at <a href="https://www.ipca.com">www.ipca.com</a>

## About Amyris

Amyris is the integrated renewable products company that is enabling the world's leading brands to achieve sustainable growth. Amyris applies its innovative bioscience solutions to convert plant sugars into hydrocarbon molecules and produce specialty ingredients and consumer products. The company is

delivering its No Compromise<sup>™</sup> products and services across a number of markets, including specialty and performance chemicals, flavors and fragrances, cosmetics ingredients, pharmaceuticals, and nutraceuticals. More information about the company is available at <a href="https://www.amyris.com">www.amyris.com</a>.

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Contacts:

Ipca Labs Limited
Dr. Ashok Kumar FRSC
President - Centre for Research & Development
+91-2262105121
ashok.kumar@ipca.com

Amyris, Inc.
Peter DeNardo
Director, Investor Relations and Corporate Communications
+1 (510) 740-7481
investor@amyris.com

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