INDIGO Biosciences Announces Release of Gene Expression Kit Utilizing upcyte® Hepatocytes

Portfolio Expansion Helps Researchers Move to the Next Stage of Discovery Faster

State College, PA (December 5, 2018) – INDIGO Biosciences, Inc. (INDIGO), the recognized industry leader in nuclear receptor research, announced the addition of a gene expression assay kit featuring upcyte® hepatocytes to their portfolio. This addition both complements INDIGO's industry-leading nuclear receptor assays and meets the demand for an expansion of the portfolio to include methods for researchers to perform the next steps of discovery research in their own laboratories.

While primary hepatocytes have historically been the preferred *in vitro* model for assessing drug-induced expression of drug metabolizing enzymes, their limited supply from any one donor and their finite life span pose a challenge for their routine use. INDIGO's assay kit utilizes optimized upcyte® hepatocytes, which are human donor-derived hepatocytes established by upcyte® technologies GmbH. The upcyte® hepatocytes combine the characteristics and advantages of primary hepatocytes with the added practical advantage of having access to the same donor cells for use in iterative, large-scale testing over extended periods.

Cytochrome p450 (CYP) enzymes are responsible for Phase I metabolism of most drugs. Consequently, drugs that activate any of the xenobiotic sensing receptors—such as PXR, CAR, FXR, or AhR—can dramatically change the endogenous levels of CYP expression in the liver. Of particular concern are metabolic outcomes that either increase the potency of a drug or change its function. Assessing drug-induced changes in the expression of CYP genes provides a reliable predictive indicator of altered metabolic activities leading to drug-drug interactions in humans. It is estimated that CYPs are involved with the metabolism of 70 to 80% of drugs currently on the market, making understanding their metabolic actions crucial to the drug discovery process.

"The addition of the assay kit for the Expression Profiling of Clinically Relevant CYPs Utilizing upcyte® Hepatocytes to our portfolio represents a significant expansion in drug discovery capabilities. INDIGO is excited to meet the increasing industry need for extended assay platforms for pre-clinical research," says Dr. Jack Vanden Heuvel, Chief Scientific Officer of INDIGO.

The newly introduced assay kit provides optimized reagents for the culturing and treatment of upcyte® hepatocytes to assess drug-induced changes in the expression of seven clinically relevant CYPs: CYP3A4, CYP1A1, CYP2B6, CYP2C8, CYP2C9, CYP2C19, and CYP2E1. The reagents provided are formatted to allow for two alternative cell culture setups. In one scenario, 48 culture wells may be set up at two different times. In the other scenario, all 96 cell culture wells may be set up at one time. The kit does not include reagents or protocols for cell lysis, RNA isolation, cDNA preparation, or qPCR assays. Assistance with these stages is also available from the INDIGO Biosciences team.

About INDIGO Biosciences, Inc.

INDIGO Biosciences is a leading provider of nuclear receptor and *in vitro* toxicology solutions that accelerate scientific decision-making. INDIGO supplements the world's largest portfolio of nuclear receptor kits and services and *in vitro* toxicology solutions with greater results, readability, reproducibility, and faster turnaround times. Our solutions, plus supportive team and reliable science and platforms, aim to reduce time, cost, and risk associated with the discovery process. Learn more at www.indigobiosciences.com.