Swift Biosciences Launches New Assay for Faster, More Efficient Routine Screening of the CFTR Gene

**Accel-Amplicon™ CFTR Panel presented at the 2017 American College of Medical Genetics Annual Meeting**

(ANN ARBOR, Mich. – March 22, 2017) Swift Biosciences today announced the commercial release of its Accel-Amplicon CFTR Panel. This panel will offer research laboratories a more comprehensive, next-generation sequencing (NGS)-based approach to interrogate the coding region and select introns within the Cystic Fibrosis Transmembrane Conductance Regulator (CFTR) gene for disease-relevant mutations and variants.

Cystic Fibrosis (CF), an autosomal recessive disorder, impacts more than 70,000 children and adults worldwide with approximately 1,000 new cases diagnosed in the United States each year. There are more than 2,000 known mutations in the CFTR gene, yet most available panels only screen for common CFTR mutations most prevalent in Northern European ancestry. The frequency of CFTR variants varies among populations, therefore, new innovative assay designs, coupled with the speed and depth of NGS, are needed to expand the genomic content and increase the detection rate.

The Accel-Amplicon CFTR panel is a simple, rapid and complete assay tailored for clinical researchers and reference laboratories to help discover novel variants; screen common and rare mutations to explore the disease mechanism; and develop new therapeutic options. It is designed to offer a higher resolution view into the CFTR gene and is optimized to work with crude, low-input samples, such as dried blood spots (DBS), a sample type frequently collected for research and newborn screening programs.

“Cystic Fibrosis is a complex genetic disease with a widely varying severity of symptoms for each individual,” said Haley Fiske, Chief Commercial Officer of Swift Biosciences. “With no known cure, carrier screening is paramount to disease research and management. Our new Accel-Amplicon CFTR Panel is a broader genomic tool to better identify both common and rare mutations in diverse populations.”

Key features and benefits of the Accel-Amplicon CFTR Panel include:

- Detects a wide range of variants and mutations in all exonic and select intronic regions of the full gene and covers a genomic footprint of 10kb, which is the largest footprint of any available method.
- Produces ready-to-sequence libraries in only two hours and offers three to four times more libraries processed per day compared to other NGS or Sanger sequencing-based methods.
- Requires as little as 10 ng sample input from diverse sample types, such as whole blood, DBS, saliva or buccal swabs. It is the only commercially available CFTR panel sequencing assay that requires the lowest sample input.
• Uses an easy, single-tube workflow to minimize labor cost and sample tracking errors.
• Generates high-quality data with low-error rate and greater confidence in variant calling.

As recently detailed in Centers for Disease Control and Prevention (CDC) publication Newborn Screening Quality Assurance Program for CFTR Mutation Detection and Gene Sequencing to Identify Cystic Fibrosis, CFTR mutation detection has increased in complexity as laboratories transition to new methods. To accommodate new quality assurance needs, the CDC evaluated samples with several traditional genotyping methods, Sanger sequencing, and 3 NGS assays, including Swift’s Accel-Amplicon CFTR Panel, using a high-quantity, low-concentration DNA extraction method. While the samples performed well in all, the test metrics revealed Swift outperformed many panels.

“Swift is committed to making genomic sequencing more accessible and routine for research laboratories,” said Timothy Harkins, Ph.D., President and CEO of Swift Biosciences. “By broadening the scope of genomic content, simplifying the workflow, and delivering robust assays to accommodate limited biological samples, we’re finally enabling researchers to execute the studies they’ve always wanted to pursue in a cost-effective manner.”

The Accel-Amplicon CFTR Panel addresses multiple applications including:
• Discover and screen common, rare, and novel mutations in the CFTR gene; its interaction with other cellular mechanisms; and how those mutations impact protein processing.
• Identify new druggable targets and gene therapies, as well as investigate safety, effectiveness and metabolism of novel therapies.
• Conduct population studies to estimate mutation frequencies of race-specific variants, laying the foundation to establish new policies and guidelines for carrier screening.
• Assess the presence of CFTR mutations in newborn samples, which had suspected CF but could not be confirmed with use of traditional methods.

The Accel-Ampicon CFTR panels covers all 27 exons including the 5’ and 3’ untranslated regions, and regions of interest in introns 1, 12, 22 and 25. Additionally, the Accel-Ampicon CFTR Panel captures all recommended ACMG common CFTR mutations. This panel generates targeted libraries compatible with Illumina® sequencing platforms and comes as a complete kit, comprised of all components necessary for generating ready-to-sequence libraries including primer pairs and indexed sequencing adapters.


About Swift Biosciences
Swift Biosciences, based in Ann Arbor, Michigan, develops novel library preparation solutions for emerging applications based on next-generation sequencing. The energetic, highly innovative company delivers on better tools to accelerate genomic discoveries and to deliver superior science. Swift Biosciences’ products are designed to help customers analyze samples faster, easier, and with greater sensitivity and accuracy while being compatible with leading instrumentation.

The company opened its doors in February 2010, and its product development enables new applications in multiple industries, including agrigenomics, pharmaceutical, academic, biotechnology, and oncology research fields.

For more information, visit SwiftBioSci.com and follow Swift Biosciences on Twitter (@SwiftBioSci).

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