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**Cerilliant Introduces Snap-N-Spike® Stable-Labeled  
Internal Standards of Antifungal Agents**

ST. LOUIS – June 9, 2015 – Sigma-Aldrich Corporation (NASDAQ: SIAL) announced today that the Cerilliant® brand within its Applied Diagnostics and Testing business unit has introduced five new stable-labeled internal standards of the antifungal agents fluconazole, itraconazole, ketoconazole, posaconazole, and voriconazole at 1.0 mg/mL concentrations.

Antifungal agents offer critically ill or immunocompromised patients multiple treatment options against invasive fungal infections. The use of antifungals can, however, impact drug metabolism and drug interactions due to their ability to act as a substrate or inhibitor of cytochrome P450 (CYP) metabolic enzymes<sup>2,3</sup> thus presenting several clinical challenges including interactions with co-administered drugs, concentration-dependent toxicity, and variations in drug absorption and metabolism. Therapeutic drug monitoring (TDM) by LC-MS/MS is considered for antifungal drugs to avoid such adverse clinical outcomes and to ensure effectiveness of the drug regimen.<sup>1,2</sup>

Cerilliant's solution certified reference materials offer clinical and diagnostic testing labs, hospitals, and bioanalytical/PKDM labs a full selection of internal standards for quantitation of the most common antifungal drugs in serum or plasma by mass spectrometry-based analytical methods. The deuterium or <sup>13</sup>C substitutions of each internal standard were carefully chosen to conserve a minimum [M+3] separation from the unlabeled drug in the major ion fragments used in LC-MS/MS antifungal TDM applications and metabolism studies.

These new internal standards complement Cerilliant's diverse catalog offering of triazole, imidazole, and other azole antifungal Certified Spiking Solutions®. Coming soon, Cerilliant will also introduce stable-labeled internal standards for the antifungal metronidazole and active metabolite hydroxyitraconazole. Cerilliant certified reference solutions are manufactured and certified to the highest industry standards including ISO Guide 34, ISO/IEC 17025, and ISO 13485 and are compliant with ISO 15194.

**About Cerilliant:** Cerilliant Corporation, located in Round Rock, Texas, is a global leader in providing certified reference standards for critical applications. The company has been providing Certified Reference Materials for over 30 years. Cerilliant offers more than 3,000 catalog products and a full range of custom products and services that address the stringent and complex requirements of the pharmaceutical, clinical diagnostic, clinical/forensic toxicology, and

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natural products industries. Cerilliant sustains a modern, robust quality system, which incorporates cGMP, GLP, and ISO requirements. The company is accredited to ISO Guide 34 and ISO/IEC 17025, is certified to ISO 13485 and ISO 9001:2008, and is compliant with ISO 17511 and ISO 15194. Cerilliant Corporation is a subsidiary of Sigma-Aldrich. For more information about Cerilliant, visit [www.cerilliant.com](http://www.cerilliant.com).

**About Sigma-Aldrich:** Sigma-Aldrich, a leading Life Science and Technology company focused on enhancing human health and safety, manufactures and distributes 250,000 chemicals, biochemicals and other essential products to more than 1.4 million customers globally in research and applied labs as well as in industrial and commercial markets. With three distinct business units - Research, Applied and SAFC Commercial - Sigma-Aldrich is committed to enabling science to improve the quality of life. The Company operates in 37 countries, has approximately 9,300 employees worldwide and had sales of \$2.79 billion in 2014.

For more information about Sigma-Aldrich, visit [www.sigma-aldrich.com](http://www.sigma-aldrich.com).

Sigma-Aldrich, Cerilliant, Snap-N-Spike, and Certified Spiking Solutions are registered trademarks of Sigma-Aldrich Co. LLC or an affiliated company.

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