

CORPORATE INQUIRIES TO:

Jen McMahon
jen.mcmahon@sial.com

MEDIA INQUIRIES TO:

Mitzi Rettinger, 512/310-5105
mitzi_rettinger@cerilliant.com

Cerilliant Introduces Stable-Labeled Certified Reference Materials of Kratom Alkaloids

SAINT LOUIS, MO – October 14, 2014 – Sigma-Aldrich Corporation (NASDAQ: SIAL) is pleased to announce that the Cerilliant[®] brand within its Applied Diagnostics and Testing business segment now offers stable-labeled internal standards of the kratom alkaloids mitragynine and 7-hydroxymitragynine. These new solution Certified Reference Materials (CRMs) offer testing laboratories deuterium-labeled internal standards suitable for quantitation of mitragynine and 7-hydroxymitragynine levels in biological and plant-based samples using mass spectrometry-based methods.

Mitragynine and 7-hydroxymitragynine are psychoactive alkaloids of the plant *Mitragyna speciosa*, commonly known as kratom. Kratom acts on μ -opioid receptors and purportedly exhibits dose dependent effects, acting as a stimulant at low concentrations and an analgesic at high concentrations. Kratom possesses a high addiction potential and can reportedly cause adverse health effects such as seizures, hallucinations, and delusions.¹

As a result of its psychoactive properties, kratom is controlled in some countries including Thailand, Australia, Malaysia, and Myanmar (Burma).² The US Drug Enforcement Administration (DEA) currently lists kratom as a “drug of concern,” due to its abuse potential and the absence of any legitimate medical use.²⁻⁴

Cerilliant offers a wide selection of certified Snap-N-Spike[®] solutions for current and emerging plant-based drugs of abuse from mitragynine; 7-hydroxymitragynine; and hallucinogens such as salvinorin A, mescaline, and bufotenine to natural and designer tryptamines; medicinal and recreational cannabinoids; and stimulants including cathinone derivatives, ephedrine, caffeine and nicotine. These reference standards are suitable for a variety of GC/MS and LC-MS/MS applications including clinical toxicology, forensic analysis, urine drug testing, and employee drug screening. Cerilliant's multiple ISO accreditations ensure that Cerilliant products and services meet the highest industry standards accepted across international borders.

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 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, 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, please visit www.cerilliant.com.

About Sigma-Aldrich: Sigma-Aldrich, a leading Life Science and High Technology company focused on enhancing human health and safety, manufactures and distributes more than 270,000 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 more than 9,000 employees worldwide, and had sales of \$2.7 billion in 2013. For more information about Sigma-Aldrich, please visit its website at 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.

1. <http://www.tandfonline.com/doi/abs/10.1080/02791072.2013.844532>
2. <http://www.scientificamerican.com/article/should-kratom-be-legal/>
3. http://www.justice.gov/dea/druginfo/drug_data_sheets/Kratom.pdf
4. http://www.deadiversion.usdoj.gov/drug_chem_info/kratom.pdf