

## News Release

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### **MilliporeSigma Launches First Commercial Service to Predict Multiple Sources of DNA Damage**

- **Determines genotoxicity and mode of action in single high-throughput assay**
- **Accelerates analysis of chemicals, ingredients and drugs**

Billerica, Massachusetts, January 18, 2017 — [MilliporeSigma](#) has introduced [CAN MultiFlow™](#) screening services to more accurately predict genotoxic and mode of action\* properties of substances, ingredients and drug compounds. Offered through its BioReliance® testing facilities, MilliporeSigma will be the first company to provide this service in the United States.

The screening process uses flow cytometry to quickly and efficiently screen for clastogens, aneugens and non-genotoxicants (CAN) in pharmaceutical compounds, agricultural chemicals, flavors, fragrances and consumer products. The results from the assay can help manufacturers reject harmful substances during product development or reduce undesirable properties at an early stage.

“Assessing toxicology is one of the most important steps in the development of chemicals, ingredients and drugs for use in pharmaceuticals, agriculture or consumer goods,” said Andrew Bulpin, Head of Process Solutions Strategic Marketing & Innovation, MilliporeSigma. “MilliporeSigma’s new CAN MultiFlow™ screening services provide more accurate predictions for toxicity than other approaches. This highly efficient and accurate service will allow for faster evaluation of compounds for potential hazards, making drugs, cosmetics, flavors, fragrances and other chemicals safer for consumers in the long run.”



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Unlike other screening tests, the CAN MultiFlow™ assay analyses multiple biomarkers (p53, hH2AX and Phospho-Histone H3) associated with DNA damage in a single high-throughput assay. This model provides more accurate predictions of genotoxicity to help avoid false positives or other misinformation that may exclude an otherwise safe compound from a development pipeline. The CAN MultiFlow™ assay uses a minimal amount of material for testing and rapidly provides results.

The new CAN MultiFlow™ assay is based on the MultiFlow™ kit from Litron Laboratories. At this time, MilliporeSigma is the only provider of the service in the United States. With the addition of this new service, MilliporeSigma now offers the industry's most current and comprehensive range of solutions for genotoxicity assessment, from discovery to lead optimization, and from regulatory assessment to lead rescue.

\* mode of action properties are functional or anatomical changes that occur at the cellular level as a result of exposure to a toxic substance.

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### **About the Life Science Business of Merck KGaA, Darmstadt, Germany**

The life science business of Merck KGaA, Darmstadt, Germany, which operates as MilliporeSigma in the U.S. and Canada, has 19,000 employees and 65 manufacturing sites worldwide, with a portfolio of more than 300,000 products enabling scientific discovery. Udit Batra is the global chief executive officer of MilliporeSigma.

Merck KGaA, Darmstadt, Germany completed its \$17 billion acquisition of Sigma-Aldrich in November 2015, creating a leader in the \$125 billion global life science industry.

Merck KGaA, Darmstadt, Germany is a leading company for innovative and top-quality high-tech products in healthcare, life science and performance materials. The company has six businesses – Biopharmaceuticals, Consumer Health, Allergopharma, Biosimilars, Life Science and Performance Materials – and generated sales of € 12.85 billion in 2015. Around 50,000 employees work in 66 countries to improve the quality of life for patients, to foster the success of customers and to help meet global challenges.

Merck KGaA, Darmstadt, Germany is the world's oldest pharmaceutical and chemical company – since 1668, the company has stood for innovation, business success and responsible entrepreneurship. Holding an approximately 70 percent interest, the founding family remains the majority owner of the company to this



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day. The company holds the global rights to the name and the trademark "Merck" internationally except for the United States and Canada, where the company operates as EMD Serono, MilliporeSigma and EMD Performance Materials.