

## News Release

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### **Merck KGaA, Darmstadt, Germany Joins German Research Project "Semiconductor-X"**

- **Merck KGaA, Darmstadt, Germany is part of a consortium of over 20 partners in Germany, led by Intel Germany and the Fraunhofer IFF**
- **Solutions for the digitalization of supply chains in the semiconductor industry aim to enhance resilience and sustainability**
- **The project, with a total volume of 30 million euros and a duration until September 2026, is funded by the German Federal Ministry for Economic Affairs and Climate Action (BMWK)**

Darmstadt, Germany, July 23, 2024 – Merck KGaA, Darmstadt, Germany, a leading science and technology company, joins the research project "Semiconductor-X" which focuses on the digitalization of supply chains in the semiconductor industry. The consortium, led by Intel Germany and the Fraunhofer IFF (Institute for Factory Operation and Automation), includes over 20 partners from across Germany. Merck KGaA, Darmstadt, Germany, as a member and supplier of materials and solutions for the semiconductor industry, will contribute to the development of digital structures and solutions for value chains. The project has a budget of around 30 million euros and is supported by the German Federal Ministry for Economic Affairs and Climate Action (BMWK) with EU funds under its "Manufacturing-X" initiative. The project duration is set until September 2026, and work has begun following the grant commissioning in May.

"The semiconductor industry plays a key role in the value chain of many other industries. With research projects such as Semiconductor-X, we can achieve greater resilience and a more sustainable use of resources through the digitalization of value



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chains. Both aspects are becoming increasingly important – even beyond the boundaries of the semiconductor industry," said Kai Beckmann, Member of the Executive Board and CEO Electronics of Merck KGaA, Darmstadt, Germany.

The goal of "Semiconductor-X" is to make supply chains in the semiconductor industry more resilient and sustainable. This will involve developing digital twins of supply and value chains and enabling a decentralized, sovereign, and secure data exchange. Through digital solutions and enhanced networking of various points along the value chain, operational and supply capabilities, especially in potential crisis situations, are expected to be strengthened. Data models and open-source software solutions provided in a data ecosystem will contribute to this effort. Additionally, the institutions and companies involved in the project are working on more sustainable solutions for semiconductor manufacturing, which could reduce the CO<sub>2</sub> footprint, energy, and water consumption along the entire value chain.

Merck KGaA, Darmstadt, Germany's Electronics business offers a wide range of materials and solutions for the semiconductor industry, covering nearly every step of wafer processing for computer chip manufacturing. Positioned at the beginning of the value chain, the company advocates for increased joint research and collaboration along the supply chain in its industry – with customers and partners from industry and academia. In 2023, for example, [Merck KGaA, Darmstadt, Germany and Intel launched a joint academic research program with research institutions in Europe](#) to enable new sustainable solutions for semiconductor manufacturing.

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### **About Merck KGaA, Darmstadt, Germany**

Merck KGaA, Darmstadt, Germany, a leading science and technology company, operates across life science, healthcare and electronics. Around 63,000 employees work to make a positive difference to millions of people's lives every day by creating more joyful and sustainable ways to live. From providing products and services that accelerate drug development and manufacturing as well as discovering unique ways to treat the most challenging diseases to enabling the intelligence of devices – the company is everywhere. In 2023, Merck KGaA, Darmstadt, Germany, generated sales of € 21 billion in 65 countries.

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The company holds the global rights to the name and trademark "Merck" internationally. The only exceptions are the United States and Canada, where the business sectors of Merck KGaA, Darmstadt, Germany, operate as MilliporeSigma in life science, EMD Serono in healthcare and EMD Electronics in electronics. Since its founding in 1668, scientific exploration and responsible entrepreneurship have been key to the company's technological and scientific advances. To this day, the founding family remains the majority owner of the publicly listed company.