



Press Release

Abies Ventures, Inc.
April 13, 2021

Abies Ventures announces its investment in Quantum Simulation Technologies, Inc.

Abies Ventures, Inc. (Head Office: Tokyo, Japan; Managing Partner: Fuyuki Yamaguchi; hereafter, “Abies Ventures”) is pleased to announce that Abies Ventures Fund I, L.P. has invested in Quantum Simulation Technologies, Inc. (Head Office: Cambridge, Massachusetts, USA; CEO: Toru Shiozaki; hereinafter, "QSimulate"), a company that develops a platform which enables material property simulation based on quantum mechanics at high throughputs, for its Series Seed round.



QSIMULATE

Abies Ventures is a Japan-based venture capital firm that aims to discover startups that contribute to the further development of humanity and the creation of a sustainable society through the use of advanced science and engineering technology (deep tech), and to develop them into global companies. Its focus areas include functional materials, which Japan is globally competitive, and advanced computing technologies that accelerate data science.

As the complexity of new materials development and drug discovery accelerates, materials informatics (MI), a method that makes full use of computer simulations and AI, is attracting attention to increase the speed of development. Abies Ventures believes that MI has the potential to accelerate the development of breakthrough new materials and drugs, as well as change the landscape of the chemical and pharmaceutical industries. In MI, it is becoming increasingly important to accumulate large amounts of highly accurate data for AI-based selection of new material candidates. However, since accurate simulations based on quantum mechanics (QM) require enormous computational resources and time, it is not easy to accumulate large amounts of highly accurate data. In addition, it has been practically impossible to apply QM-based simulations to the development of pharmaceuticals, which have larger molecular weights than chemical materials.

“QSimulate-MI”, QSimulate's innovative cloud-based platform, developed by QSimulate based on years of research by Toru Shiozaki, co-founder and CEO of QSimulate, a quantum chemistry researcher, who earned doctor of engineering from the University of Tokyo and was an associate

professor at Northwestern University in the U.S., has already been adopted by chemical and material manufacturers in Japan and the U.S. QSimulate-MI enables automatic QM-based calculations of material properties for thousands of molecules per day at up to 1,000 times faster speed than conventional tools, helping to accelerate the new material development for user companies. In collaboration with a major pharmaceutical manufacturer, QSimulate has also developed a method for scoring the interactions between proteins and drug molecules using QM-based calculations, paving the way for the use of QM simulations in drug discovery. The effectiveness of QSimulate's simulations has also been confirmed in the development of new drugs for COVID-19. In recognition of these achievements, the National Institutes of Health (NIH) has awarded QSimulate a grant for innovation of the drug discovery processes using QM simulations. In addition, QSimulate has already developed simulation tools for quantum computers, and has been selected as a partner for quantum computer cloud platforms of Google and Amazon.

QSimulate plans to accelerate product and business development by this funding, and considers Japan to be one of its key markets. Abies Ventures invested in QSimulate because Abies Ventures believes that QSimulate will open up the next generation of MI and contribute to increasing the development competitiveness of Japanese chemical, material and pharmaceutical manufacturers.

■ About Abies Ventures

Business: Venture capital to support deep tech startup companies

Headquarters: Minato City, Tokyo, Japan

Representative: Fuyuki Yamaguchi, Managing Partner

URL: <https://abies.vc/en>

■ About QSimulate

Business: Development and sales of next generation quantum mechanics based simulation platform

Headquarters: Cambridge, Massachusetts, USA

Representative: Toru Shiozaki, co-Founder and CEO

URL: <https://qsimulate.com/>

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