Press Release

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Insilico on the fast track: Supercomputer breaks into new high performance dimensions

(Stuttgart) – Starting today, Insilico Biotechnology will use Europe's very fastest civil computer – going by the name of "Hermit" – for its modeling and simulating processes. Hermit will cut computing time radically allowing metabolic predictions over several orders of magnitude. In the near future, predictions on the toxic effects of drugs across scales from cellular to organ level will be feasible.

"Hermit", the new supercomputer, was put into action in HLRS, the High Performance Computing Center in Stuttgart, in February 2012. The event was crowned by the presence of Prof. Dr. Annette Schavan, Federal Minister of Education and Research, and Winfried Kretschmann, Minister President of Baden-Württemberg. Both stressed the significant role the supercomputer from the Cray company will play for Germany and Baden-Württemberg, an important location when it comes to research and industry. With Hermit's help, HLRS and its partners – including Insilico Biotechnology AG – are becoming members of the petaflop computing class. But the new computer can deal with even more than a petaflop which is equal to one quadrillion computing operations per second. It is not difficult to foresee that Hermit will not be allowed to live up to his name due to high demand from research and industry – another reason why Insilico is pleased that it was able to book computing operations on the supercomputer.

Insilico Biotechnology will use Hermit to raise its simulations, in particular, to a new level of computation resulting ultimately in the design of innovative whole-body models. These will enable users to make fast reliable predictions on which metabolic reactions they can expect when they administer specific substances. This is especially important for Insilico customers looking for predictions on the toxicology of therapeutic substances. "The novel whole-body models process genomic data on both cellular and organ levels, and are distinguished by their high complexity. Thanks to its massively parallel architecture, the new computer is ideal for running the simulation of lots of different cells at the same time", explains CEO Klaus Mauch, delighted with this addition to Insilico's virtual options, which is certain to provide many pharmaceutical and bioindustrial companies with competitive advantages in real life. Insilico is also planning on using the new supercomputer to bridge load peaks which sometimes occur in the simulation of bioprocesses when their own in-house computing capacities are no longer sufficient. "We are expecting a cut in computing time of more than one dimension compared with the units we have used to date," states Mauch, who aims at integrating this bonus as far as possible in Insilico's comprehensive service portfolio.

Incidentally, the supercomputer is also a striking role model when it comes to protecting the environment because its infrastructure uses energy in a highly efficient manner. To top it all, Hermit's computing capacities are

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to be upgraded by a further four to five petaflops per second in the coming year. It goes without saying that Insilico and its customers will again profit enormously from this additional increase in efficiency.

Insilico Biotechnology is a market-leading company providing solutions and software for the simulation of living cells. An interdisciplinary team of experts offers customised solutions for the efficient manufacturing of biotechnological products and for the development of drug test systems by using high-performance computing and Insilico's proprietary software. For world-leading companies from the chemical and pharmaceutical industries, Insilico's technology lowers time, risk and costs of development processes. Founded in 2001, Insilico is a privately held company based in Stuttgart, Germany. For further information, please visit www.insilico-biotechnology.com.

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