

Spermatech, Evotec to Screen Target for Male Contraceptive

By **Cormac Sheridan**
BioWorld International Correspondent

Spermatech AS, an early stage Norwegian firm developing a nonhormonal male contraceptive pill, has chosen Evotec AG as its partner for a high-throughput screening and lead discovery project against a novel target associated with regulating sperm motility.

Oslo-based Spermatech was established in 2001 to commercialize independent discoveries on the regulation of sperm motility made by Norwegian and American scientists. An intellectual property licensing agreement the company signed in 2005 with the Worcester-based University of Massachusetts Medical School (UMMS) united the European and U.S. patent estates on these discoveries.

George B. Witman, professor of cell biology at UMMS, and colleague Jovenal San Agustin identified a protein expressed only in mammalian sperm cells which, when activated, switched on the sperm's molecular motor and imparted motility to its tail.

The protein, designated C-alpha-S, is a catalytic subunit of the holoenzyme Protein Kinase A (PKA). In its inactive state, the enzyme exists as a tetramer consisting of two regulatory subunits and two catalytic subunits. At high concentrations, molecules of cyclic adenosine monophosphate (cAMP) bind the regulatory subunits and trigger a conformational change that releases the catalytic subunits, which are then activated. (A different catalytic subunit acts in all other cell types.)

Working at the University of Oslo and with G. Stanley McKnight at the University of Washington in Seattle, Spermatech co-founder Bjorn Steen Skalhegg independently developed a knockout mouse lacking the gene encoding Cs, which was 100 percent infertile.

Spermatech now wants to find molecules that can block the target and thereby offer a completely new cate-

gory of male contraceptive, which would be both reversible and non-hormonal.

The screening program with Hamburg, Germany-based Evotec will take about nine months to complete, Spermatech director of development Ken Rosendal told *BioWorld International*.

"We're doing a high-throughput screen[ing] on whole sperm cells," he said. The company has developed a proprietary assay based on an indirect marker of motility. "We will hit a lot of false positives, but we know our assay will uncover a lot of interesting leads," Rosendal said.

Those could include molecules that have potential as fertility treatments. "The assay will also, we think, pick up compounds that will increase motility," Rosendal said.

Spermatech is about three years from taking this program into the clinic, Rosendal said.

The company, which has received seed financing from private investors and grants from the Research Council of Norway, aims to take a drug candidate through early clinical development. It will seek further financing later this year, Rosendal said, once it has some screening data in hand. ■

OTHER NEWS TO NOTE

• **Amgen Ltd.** and **Lab21**, both of Cambridge, UK, said they partnered to introduce a genetic therapy test for advanced bowel cancer treatment in the UK. Terms of the deal call for Lab21 to provide a screening test to indicate which patients are likely to benefit from Amgen's bowel cancer drug, Vectibix (panitumumab), which was approved in the European Union with the stipulation that a predictive test be made available. Biomarker analyses from the Vectibix pivotal trial showed that the drug doubled the median progression-free survival in patients with non-mutated KRAS (v-Ki-ras2 Kirsten rat sarcoma 2 viral oncogene homolog) compared with patients receiving best supportive care alone.

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