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## NanoLabs Raises £10M to Aid Race for a Cheaper Genome

**By Nuala Moran**  
**BioWorld International Correspondent**

LONDON – As the race for the \$1,000 genome heats up, Oxford NanoLabs Ltd., one of the leading European contenders, raised £10 million (US\$19.89 million) in a second private round, enabling the company to develop working prototypes of its nanopore-based DNA sequencing technology.

Gordon Sanghera, CEO, told *BioWorld International*, “While the markets are in absolute turmoil at the moment, we were fully subscribed. That’s down to the fact that the institutional and private investors really believe in the technology.”

The company’s nanopore technology has the potential to sequence single molecules of DNA directly, avoiding the need for chemical labeling and time-consuming DNA amplification.

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## Pieris Gets \$39.5M for Anticalin Pipeline

**By Cormac Sheridan**  
**BioWorld International Correspondent**

Confirming the ongoing interest in novel, non-antibody-based protein scaffolds, Pieris AG raised €25 million (US\$39.5 million) in a Series B round to progress development of its preclinical pipeline of Anticalins, ligand-binding proteins based on the lipocalin family of proteins that are involved in the transport of small hydrophobic molecules.

New York-based OrbiMed Advisors LLC led the round. Novo Nordisk Biotech Fund, the venture capital arm of Bagsværd, Denmark-based Novo Nordisk A/S, also joined as a new investor. Previous investors also participated.

“We went out with a certain expectation on the valuation for this round, and basically, we got what we wanted,” Evert Küppers, CEO of Freising-Weihenstephan, Germany-based Pieris, told *BioWorld International*. The financing

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## RNA Silencing Strategy Targets Cholesterol and Hepatitis C

**By Sharon Kingman**  
**BioWorld International Correspondent**

LONDON – A clinical trial will begin in Denmark later this year to assess the safety of a novel treatment for infection with hepatitis C virus (HCV). The treatment acts by suppressing a specific micro-RNA (miRNA) – a small RNA molecule present in the liver, which normally helps to regulate synthesis of lipids and cholesterol, but which also plays an important role in the replication of HCV.

Studies published in the March 28, 2008, issue of *Nature* have shown that the treatment can reduce blood cholesterol levels in nonhuman primates without any evidence of unwanted side effects. Cell studies reported in the same paper suggested that the therapy also can inhibit replication of hepatitis C virus in human liver cells.

Henrik Ørum, chief scientific officer of Santaris Pharma,

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## Another EU Administrative Approval for a GM Crop

**By Peter O'Donnell**  
**BioWorld International Correspondent**

BRUSSELS, Belgium – The continuing paralysis of the European Union’s authorization mechanism for biotechnology products was demonstrated again last week when EU officials announced that they had extended the approval for another GM maize that EU governments have been unable to agree on.

Food and feed produced from GA21 already is authorized in the EU, but the decision broadens the scope of the authorization to cover import and processing of GA21 to maize grains. That will allow imports from non-EU countries where this GMO is cultivated. Cultivation of GA21 is still not allowed in the EU.

The decision reflects the persistent unresolved divisions at the heart of EU policy in the area. Although GA21

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## Pieris

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round was closed within three months. "Even with the [weak] dollar it was a very good deal," he said.

The company, which previously raised about €20 million, was established in 2001 to commercialize scaffold technology developed by Arne Skerra at the Technical University of Munich. Diversity is generated by introducing substitutions at 22 amino acid positions in a 152-residue, single polypeptide chain.

Like other engineered protein scaffolds, anticalins offer several technical and commercial advantages over antibodies, because of their small size, lack of immune effector functions, ease of production in bacterial expression systems, potential for alternative delivery routes and freedom from third-party patent claims. Pieris also has created a bivalent format, called "Duocalins," which can bind two different antigens.

As with other novel formats, anticalins still have to prove their mettle in the clinic. The latest injection of funds is intended to kick start that process, beginning with the company's lead program, PRS-050, an antagonist of vascular endothelial growth factor (VEGF).

"That project should come into the clinic in mid-2009," Küpper said. "We look at this as a next-generation Avastin," he added, referring to the angiogenesis-blocking monoclonal antibody marketed in several cancer indications by South San Francisco-based Genentech Inc.

Behind that is another VEGF antagonist, PRS-055, in development for treating neovascular eye conditions such as age-related macular degeneration (AMD) and diabetic retinopathy. Also in the pipeline are two molecules against undisclosed targets, which are in development for asthma and hematological tumors, respectively, and an anti-CTLA-4 anticalin, in development for immunotherapy of solid and hematological tumors.

The company has nine projects under way in total, and it has obtained preclinical proof-of-concept data for four of those. That includes the pulmonary delivery of an anti-asthma anticalin. "We've proven that we can deliver anticalin via the lungs into the bloodstream," Küpper said. "We've done it in a preclinical study in a highly unoptimized form."

The company also has an alliance in the diagnostic imaging area with the GE Healthcare unit of the General Electric Co., of Fairfield, CT., and with Lelystad, the Netherlands-based Pepscan Therapeutics BV in the area of G-protein coupled receptors.

"We are the most advanced, still accessible non-antibody technology," Küpper said.

Several other formats have been the subject of acquisition deals of late. Thousand Oaks, Calif.-based Amgen Inc., acquired Avidia Inc., of Mountain View, Calif., in October 2006. New York-based Pfizer Inc. acquired BioRexis Pharmaceuticals Inc., of King of Prussia, Penn., last year.

Bristol-Myers Squibb Co. also acquired its erstwhile partner, Adnexus Therapeutics Inc., of Waltham, Mass. ■

## GM Crops

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maize grains received a positive safety assessment from the EU's food safety agency, EU member states did not reach a majority for or against the authorization either in the EU's expert committee on the food chain and animal health, or subsequently when the matter was referred to the most senior level in the European council of national ministers.

EU law allows an administrative approval to be granted by officials in such circumstances, and while it is a small victory for one product, it is a second-best solution for the European biotech industry, which every day faces the rooted opposition of many EU member states to GM technology.

The former EU commissioner for agriculture, Austrian Franz Fischler, weighed into the GM debate after the decision. Although he was no strong backer of the biotech industry during his term in office, which ended in 2004, Fischler argued publicly in Brussels last week in favor of GM technology.

"We need a modern policy framework, which enables our farmers to meet world food demand in an environmentally sustainable way," he said at a forum on the future of EU agriculture.

Fischler's views were echoed by John Atkin of Syngenta: "By 2030, 50 percent more food will be needed. This is 2 billion more people and mouths to feed via better diets," Atkin said. "Technology can contribute hugely to responding to the challenges of food security. For this, it is important to demonstrate what technology can do and illustrate the consequences of better seeds, better chemicals and better use of fertilizers," he added.

Meanwhile, senior EU officials have postponed a major review of biotechnology policy that was scheduled for this spring, owing in large part to the continuing resistance to the technology among key member states, including France, Germany, Austria and Poland. ■

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## OTHER NEWS TO NOTE

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• **Galantos Pharma GmbH**, of Manz, Germany, said it has selected a candidate molecule, which is expected to move into clinical development in Alzheimer's disease in 2009. The selection triggered the payment of the final €1.2 million (US\$1.9 million) tranche of a €2.8 million Series B financing round. The molecule is a derivative of galantamine, a nicotinic acetylcholine receptor sensitizer that has been marketed for the treatment of Alzheimer's since 2000 in the European Union and 2001 in the U.S.