



Biotech Daily

Friday March 20, 2009

Daily news on ASX-listed biotechnology companies

*** ASX DOWN, BIOTECH UP: GENETIC TECH UP 22%; ANTISENSE DOWN 10%**

*** NOVOGEN'S NV-128 KILLS CANCER STEM CELLS IN VITRO IN 15 MINUTES**

*** AVEXA'S ALAN BOYD FORMALLY RESIGNS AS A DIRECTOR**

MARKET REPORT

The Australian stock market fell 0.4 percent on Friday March 20, 2009 with the S&P ASX 200 down 14.4 points to 3,465.8 points.

Thirteen of the Biotech Daily Top 40 stocks were up, 11 fell, 11 traded unchanged and five were untraded.

Genetic Technologies was best, up 0.8 cents or 21.6 percent to 4.5 cents with 190,000 shares traded, followed by Living Cell up 14.3 percent to 12 cents, Phylogica up 11.1 percent to five cents and Clinuvel up 10.3 percent to 21.5 cents.

Cathrx climbed 6.7 percent; Avexa was up five percent; Tyrian was up 4.6 percent; Heartware and Progen were up more than two percent; Cellestis and Impedimed were up more than one percent; with Arana and Pharmaxis up less than one percent..

Antisense led the falls, down 0.4 cents or 10.3 percent to 3.5 cents with 10,000 shares traded.

Polartech and Universal Biosensors lost eight percent or more; Alchemia, Bionomics and Genera were down more than six percent; Resmed was down 5.7 percent; Mesoblast fell 4.4 percent; Peplin was down 3.5 percent; Biota and CSL shed more than two percent; Cochlear and Novogen lost more than one percent; with Sirtex down 0.45 percent.

NOVOGEN

Novogen says an in vitro trial has shown that NV-128 has “a dramatic effect on the growth and differentiation of CD44+ ovarian cancer stem cells”.

Novogen said its synthetic isoflavonoid compound NV-128 induced cell death in ovarian cancer stem cells in a dose-dependent manner.

The company said study’s objective was to determine the cytotoxic effect of NV-128 on the ovarian cancer stem cells and it “had a dramatic effect on the growth and differentiation of CD44+ ovarian cancer stem cells”.

The company said CD44+ ovarian cancer stem cells were treated with increasing concentrations of NV-128 and positive results were observed as early as 15 minutes post-treatment.

Novogen said NV-128 prevented ovarian cancer stem cell differentiation in the Matrigel differentiation system.

Novogen’s research director Prof Alan Husband said the company was “encouraged by the selective cytotoxic effects and the impact of NV-128 on ovarian cancer stem cells”.

“We have observed similar selective cytotoxicity with NV-128 in non-small cell lung cancer models and we look forward to the further clinical development of this compound so that these aggressive diseases may be more safely and effectively treated using this new opportunity presented by NV-128,” Prof Husband said.

Novogen said ovarian cancer stem cells usually survived conventional chemotherapy and were considered to be the potential source of recurrence.

The company said it appeared that NV-128 promoted cell death in these cancer stem cells through inhibition of the mTOR pro-survival signaling pathway and these findings might open a new avenue for treating ovarian cancer patients, resistant to chemotherapy.

Prof Husband told Biotech Daily that mTOR stood for ‘mammalian target of rapamycin’. He said rapamycin was originally developed as an anti-fungal but was found to have immunosuppressant and anti-proliferative activity.

“The major pharmaceutical companies are investigating rapamycin analogs, which can target the mTOR pathway but they only inhibit the pathway leading to inhibition of mTORC1,” Prof Husband said.

“The cell then finds an escape route through the mTORC2 pathway and tumor growth resumes,” he said. “NV-128 is able to inhibit both the mTORC1 and mTORC2 pathways.”

Novogen said a Yale University team headed by Prof Gil Mor reported the identification and characterization of the epithelial ovarian cancer stem cells using the marker CD44 and demonstrated the up-regulation of the mTOR survival pathway in these cells.

In epithelial ovarian cancer cell lines NV-128 caused substantial cell death in mice engrafted with human ovarian cancers, reducing tumor growth, but more importantly, this effect was achieved without apparent toxicity.

Novogen said that when NV-128 was used in combination with phenoxodiol, apoptosis was enhanced because two pathways to cell death appear to be activated, according to pre-clinical studies completed in late 2008.

The company said the Yale team previously reported that NV-128 was able to specifically induce mTOR dephosphorylation resulting in inhibition of activity in both growth signaling pathways, mTORC1 and mTORC2.

The study will be presented by Yale’s Dr Ayesha Alvero at the Annual Meeting of the American Association for Cancer Research in Denver, April 18-22, 2009.

An abstract on the toxicology of Novogen’s Triphendiol (NV-196) for pancreatic cancer, cholangio-carcinoma and stage IIb-IV malignant melanoma will be presented at the same meeting.

Novogen fell one cent or 1.9 percent to 51.5 cents.

AVEXA

Avexa says that following the appointment of Stephen Kerr to replace Alan Boyd as chief financial officer and company secretary, Mr Boyd has formally resigned as a director. Avexa said Mr Boyd would remain with the company until April 3, 2009 to complete a three week handover period “and ensure a smooth and seamless transition” of the roles. Avexa was up half a cent or five percent to 10.5 cents with 1.3 million shares traded.