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1. Press release dated April 4, 2006: Aeterna Zentaris Discloses Preclinical Results on Various Drug Candidates at the American Association for Cancer Research (AACR) Meeting in Washington

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PRESS RELEASE
For immediate release

AETERNA ZENTARIS DISCLOSES PRECLINICAL RESULTS ON VARIOUS DRUG CANDIDATES AT THE AMERICAN ASSOCIATION FOR CANCER RESEARCH (AACR) MEETING IN WASHINGTON

QUEBEC CITY, CANADA, APRIL 4, 2006 - Aeterna Zentaris Inc. (TSX: AEZ; Nasdaq: AEZS) today announced that it presented abstracts outlining preclinical results on various novel drug candidates for multiple cancers at the American Association for Cancer Research Annual Meeting, currently held in Washington, D.C.

TUBULIN INHIBITORS

The first poster entitled, "A NEW HIGHLY POTENT CYTOTOXIC COMPOUND WITH INHIBITORY EFFECTS ON TUBULIN POLYMERIZATION AND TOPOISOMERASE II" (abstract #499), reviewed results of a preclinical trial on ZEN-012/ZEN-017. Anti-proliferative effects of the active metabolite ZEN-012 were studied in a panel of 35 established human tumor cell lines including multi-drug resistant phenotypes. Given orally once weekly, ZEN-017 proved to be a potent inhibitor of IN VIVO tumor growth in melanoma, mammary, colon, as well as in leukemia cancers at acceptable and very well tolerated doses (40-80 mg/kg b.w.). The novel prodrug ZEN-017 is cleaved under physiological conditions to the active component ZEN-012. Mode-of-action studies revealed that ZEN-012 effectively inhibits tubulin polymerization (IC50 = 1490 nM) and induces apoptosis in U937 cells. Furthermore, it was demonstrated that ZEN-012 inhibits topoisomerase II activity.

"These preclinical results on ZEN-012/ZEN-017 demonstrated its capacity of inhibiting both tubulin polymerization and topoisomerase II as well as inducing apoptosis in multi-drug resistant cancer cells. These multiple mechanisms of action are what sets ZEN-012/ZEN-017 apart from other current compounds under development. ZEN-012/ZEN-017 continues to be evaluated in a series of safety pharmacology and toxicology studies and we expect to take this compound from the preclinical stage into a clinical Phase 1/2 study by year-end", underlined Dr. Jurgen Engel, Executive Vice President Global R&D and Chief Operating Officer at Aeterna Zentaris.

SIGNAL TRANSDUCTION INHIBITORS

The second poster entitled, "NOVEL PYRIDOPYRAZINE-UREA DERIVATIVES ARE HIGHLY SELECTIVE DUAL MECHANISM INHIBITORS OF PI3K AND ERK1/2" (abstract #3808) related preclinical results for signal transduction inhibitors in breast, colon

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and pancreatic cancer. In cancer, both the ras-Raf-Mek-Erk and the PI3K-Akt signalling pathways are constitutively activated through multiple mechanisms, and thus exert several key functions in tumor development and

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progression. The results of research to date indicate that both the MAPK and the PI3K signalling pathways represent promising therapeutic targets for the treatment of malignant tumors.

"We have been focusing efforts on single and dual inhibitors of Raf-Mek-Erk and PI3K-Akt pathways. Results disclosed showed that we now have identified a new compound class with inhibitory activity against both the Erk and PI3K pathways, therefore demonstrating their unique potential in treating malignant tumors", stated Dr. Engel.

CYTOTOXIC CONJUGATES

The third poster entitled, "TARGETED THERAPY OF GYNECOLOGICAL TUMORS WITH CYTOTOXIC PEPTIDE ANALOGS" (abstract #3082) outlined preclinical results on cytotoxic conjugates for gynaecological cancers. Human breast, endometrial and ovarian cancer cell lines were tested for the presence of Luteinizing Hormone Releasing Hormone (LHRH), bombesin and somatostatin receptors. Anti-tumor activity and toxicity of targeted cytotoxic analogs of LHRH (AN-207), bombesin (AN-215) and somatostatin (AN-238) were evaluated in nude mouse models of these tumors and compared with the non-targeted cytotoxic radical 2-pyrrolinodoxorubicin, a potent derivative of doxorubicin developed in collaboration with Noble Prize laureate Dr. Andrew V. Schally of the U.S. Veterans Administration in Miami. Tumor inhibition in these models ranged between 40%-68%. Authors, including Dr. Schally, concluded that targeted therapy of breast, endometrial and ovarian cancer with cytotoxic peptide analogs AN-207, AN-215 and AN-238 is more effective and less toxic than non-targeted chemotherapy. Among various cytotoxic peptide analogs under development by Aeterna Zentaris, the compound AN-152, a cytotoxic conjugate with an LHRH analog, is currently in a Phase 1 clinical trial.

"All preclinical studies presented at the AACR meeting are part of our strategy aimed at bringing at least one preclinical compound to the clinical stage each year, as we did last year with AN-152, in gynaecological and breast cancers. They also reflect the quality of our deep and focused pipeline as we continue to develop next generation cancer treatments from early drug discovery right through to advanced-stage clinical trials", concluded Gilles Gagnon, President and Chief Executive Officer at Aeterna Zentaris.

ABOUT AETERNA ZENTARIS INC.

Aeterna Zentaris Inc. is a growing global biopharmaceutical company engaged in the discovery, development and marketing of therapies for cancer and endocrine disorders.

Aeterna Zentaris also owns 48.4% of the equity of Atrium Biotechnologies Inc. (TSX: ATB.sv) and 64.8% of its voting rights. Atrium is a developer, manufacturer and marketer of science-based products for the cosmetics, pharmaceutical, chemical and nutritional industries.

News releases and additional information are available at www.aeternazentaris.com.

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FORWARD-LOOKING STATEMENTS

This press release contains forward-looking statements made pursuant to the safe harbor provisions of the U.S. Securities Litigation Reform Act of 1995. Forward-looking statements involve known and unknown risks and uncertainties, which could cause the Company's actual results to differ materially from

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those in the forward-looking statements. Such risks and uncertainties include, among others, the availability of funds and resources to pursue R&D projects, the successful and timely completion of clinical studies, the ability of the Company to take advantage of business opportunities in the pharmaceutical industry, uncertainties related to the regulatory process and general changes in economic conditions. Investors should consult the Company's quarterly and annual filings with the Canadian and U.S. securities commissions for additional information on risks and uncertainties relating to the forward-looking statements. Investors are cautioned not to rely on these forward-looking statements. The Company does not undertake to update these forward-looking statements.

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SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

AETERNA ZENTARIS INC.

Date: April 4, 2006

By: /s/ Mario Paradis

Mario Paradis
Senior Finance Director and

