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Early Detection of Ovarian Cancer Using Markers to Short Chain Carbohydrates

Tech ID: 25895 / UC Case 2004-324-0

ABSTRACT

Researchers at the University of California, Davis have developed a unique method for early detection in ovarian cancer using chemical markers corresponding to short chain carbohydrates.

FULL DESCRIPTION

Ovarian cancer is the fifth leading cause of death from cancer and has the highest mortality rate among the gynecologic malignancies within the United States. Often called "the silent killer", ovarian cancer is notorious for its lack of noticeable early symptoms. When it is detected in its early stages however, ovarian cancer becomes very treatable and patient survival rates increase significantly.

Researchers at the University of California, Davis have developed a unique method for early detection in ovarian cancer using chemical markers corresponding to short chain carbohydrates, which are post-translational modifications of proteins. In this method, glycoproteins are collected and their oligosaccharide contents released for mass spectrometry analysis, revealing the presence and type of cancer cells that are detected. Through mass spectrometry, analysis of ovarian cancer is greatly simplified.

APPLICATIONS

- ▶ Early detection in ovarian cancer

FEATURES/BENEFITS

- ▶ Simplified analysis
- ▶ Isolation and detection of the oligosaccharides
- ▶ Early detection of ovarian cancer
- ▶ The ability to monitor the course of a cancer
- ▶ The ability to isolate and detect specific oligosaccharides for cancer markers

PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Issued Patent	7,651,847	01/26/2010	2004-324

CONTACT

Sharron J. Thompson
srthompson@ucdavis.edu
tel: 530-754-7661.



INVENTORS

- ▶ An, Hyun Joo
- ▶ Lam, Kit S.
- ▶ Lebrilla, Carlito B.
- ▶ Miyamoto, Suzanne

OTHER INFORMATION

KEYWORDS

Ovarian cancer, gynecologic disease, early detection, oligosaccharide, mass spectrometry, cancer detection, gynecologic cancer

CATEGORIZED AS

- ▶ **Biotechnology**
 - ▶ Health
- ▶ **Medical**
 - ▶ Diagnostics
 - ▶ Disease: Cancer
 - ▶ Disease: Women's Health
 - ▶ Screening

RELATED CASES

2004-324-0

ADDITIONAL TECHNOLOGIES BY THESE INVENTORS

- ▶ Novel Solid Tumor Chemodrug LLS2
- ▶ Diagnosis and Treatment of Inflammatory Disease by Glycan Profiling of High Density Lipoprotein (HDL)
- ▶ Affinity Peptides for Diagnosis and Treatment of Severe Acute Respiratory Syndrome Coronavirus 2 and Zika Virus Infections

- ▶ Nanoparticles for Drug Delivery, Tissue Targeting and Imaging Analysis
- ▶ Conjugates That Combine HDAC Inhibitors and Retinoids into Disease Preventatives/Treatments
- ▶ Artificial Intelligence-Based Evaluation Of Drug Efficacy
- ▶ A Novel RGD-Containing Cyclic Peptide for use in Cancer Imaging and as a Targeted-Therapy Ligand
- ▶ Site-Specific Ligation and Compound Conjugation to Existing Antibodies
- ▶ Ligands for Alpha-4-Beta-1 Integrin
- ▶ Functional Illumination in Living Cells
- ▶ Multifunctional Porphyrin-Based Nanomedicine Platform
- ▶ Engineered Biomaterial to Prevent Endothelial Inflammation
- ▶ PVA Nanocarrier System for Controlled Drug Delivery

University of California, Davis

Technology Transfer Office

1850 Research Park Drive, Suite 100, ,
Davis, CA 95618

Tel: 530.754.8649

techtransfer@ucdavis.edu

<https://research.ucdavis.edu/technology-transfer/>

Fax: 530.754.7620

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