96th Annual Meeting
April 16-20, 2005
Anaheim/Orange County, CA

Abstract Number:	1534
Presentation Title:	**Retrieval of autoantibodies from ovarian cancer cells present in ascites fluid**
Presentation Start/End Time:	Sunday, Apr 17, 2005, 1:00 PM - 5:00 PM
Board Number:	Board #2
Author Block:	*Geeth Gunawardana*, *Liu-Ying Luo*, *Eleftherios P. Diamandis*. The University of Toronto/Mt. Sinai Hospital, Toronto, ON, Canada

The immune system can differentiate self-antigens from non-self-antigens. Aberrantly expressed, mutated, or improperly processed self-proteins can also elicit immune responses, as is the case during cancer development. In general, the immune response to cancer can be either mediated by T cells (cellular immunity) or B cells (humoral immunity). In both cases, the immune response is against proteins known as “tumour associated antigens” (TAAs). Our previous studies and those of others have demonstrated the existence of humoral immune response in ovarian cancer. In this study, tumour-specific antibodies were isolated from tumour cells in the ascites fluid of patients with ovarian cancer. Ascites fluid from ovarian cancer patients was centrifuged to pellet tumour cells. Cell pellets were washed under conditions that avoided cell lysis, yet ensured the removal of loosely bound antibodies, which were assumed to be non-specific. Bound antibodies were released from cells by a low pH wash under isotonic conditions. Figure 1 illustrates the efficiency of removing non-specifically bound IgG and of retrieving tumour specific IgG. Using ELISA, the IgGs isolated from the tumour cells were calculated to be 0.0002 % of the total IgG in the ascites fluid. We conclude that tumour-specific antibodies can be retrieved from the surface of tumour cells and these antibodies may be used to identify TAAs, which may then be used as targets for cancer vaccine therapy.

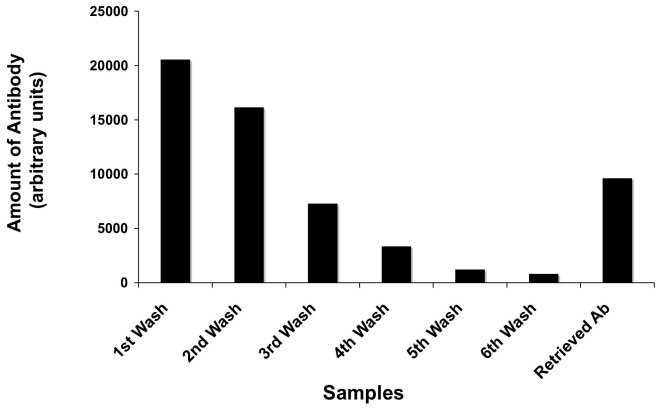

Figure 1. The isolation of antibodies from the surface of ovarian cancer cells. Cells were pelleted from ascites fluid and washed 6 times to remove loosely bound antibodies. Following the final wash, tumour specific antibodies were released from cell surfaces by a low pH incubation under isotonic conditions. All wash fractions and the retrieved antibody fraction were immunoblotted for IgG. Bars 1,2,3,4,5, and 6 depict the amount (in arbitrary units) of non-specific antibody removed during the 1st, 2nd, 3rd, 4th, 5th, and 6th wash respectively. Bar 7 shows the amount of antibody retrieved from the surface of tumour cells.

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Citation format: Proc Amer Assoc Cancer Res 2005;46:1534.