

Poster presentation

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Immunization of Rhesus monkeys with a conjugate vaccine IGN402 induces immune responses against carbohydrate and protein antigens, and cancer cells

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Introduction

Tumor-associated antigens resulting from aberrant glycosylation, such as the Sialyl-Tn carbohydrate antigen, are over-expressed or exposed on cancer cells and provide potential targets for cancer vaccination. However, as T-cell independent antigens carbohydrates are poorly immunogenic, and fail to induce memory.

resulted in the production of carbohydrate-specific IgG antibodies. The data indicate that carrier-induced T-cell help was sufficient for carbohydrate specific class switch induction.

Methods

In order to increase the immunogenicity we have coupled the Sialyl-Tn carbohydrate antigen to a highly immunogenic carrier molecule. The carrier molecule, the mAb17-1A antibody, provides additional antigens for vaccination. An immunogenic formulation of mAb17-1A-Sialyl-Tn conjugate on alhydrogel, IGN402, with or without additional adjuvants was tested in Rhesus monkeys for tolerability and immunogenicity.

Results

A significant antibody response against the mAb17-1A antibody was found by ELISA. Furthermore, also a specific immune response against the Sialyl-Tn carbohydrate was induced, and immune sera showed binding reactivity to a variety of cancer cells.

Conclusion

Immunization in the presence of additional adjuvants, such as QS-21, strongly enhanced the immune response against the carbohydrate antigen, and importantly also