

# Navrogen Granted Patent to Develop Antibodies That Are Refractory to Immunosuppressive Humoral Immuno-Oncology Factors

*Navrogen Granted Patent to Develop Antibodies and Next Gen Antibody Formats That Are Refractory to Immunosuppressive Humoral Immuno-Oncology (HIO) Factors*

CHEYNEY, PA, UNITED STATES,  
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EINPresswire.com/ -- [Navrogen, Inc.](#), a biopharmaceutical company specialized in developing antibody-based therapies for cancer, announced today that the United States Patent and Trademark Office has granted the company Patent No. 12,416,642. The patent covers Navrogen's platform technology that detects native antibodies (mAbs) and [next gen antibody formats](#) susceptible to humoral immuno-oncology (HIO) factor immunosuppression. The patent also covers the application of the technology to direct the engineering of HIO-refractory mAbs, T-cell engager antibodies (TCEs) and antibody-drug conjugates (ADCs) as well as for screening small chemical libraries to identify HIO factor antagonists.



HIO factors are tumor-derived proteins that bind to mAbs, TCEs and ADCs, which then change their dynamic structure leading to suppressed antibody-mediated cytotoxicity against target cells. HIO-factor immunosuppression of mAbs results from allosteric changes that perturb their ability to engage with natural killer cells through the CD16a Fc-receptor, thereby impairing humoral immune-mediated tumor cytotoxicity. HIO factor binding to TCEs alters the spatial distancing of the tumor antigen and T-cell CD3 binding domains thereby reducing optimal tumor/T-cell synapse, while HIO factor binding to ADCs results in reduced ADC tumor cell internalization, a requirement for maximal ADC target cell killing.

“We have applied our proprietary platform technology to develop several HIO-refractory mAb, TCE and ADC therapeutic agents as well as discover small molecule HIO factor antagonists in our pipeline,” stated Dr. Nicholas Nicolaides, Chief Executive Officer of Navrogen. “These unique HIO-refractory agents, such as NAV-001 anti-mesothelin ADC, NAV-310 anti-HER2 ADC, NAV-106 anti-CD20:CD3 TCE and NAV-006 anti-CD20 mAb offer the medical community alternative therapies to address cancer patients with HIO-positive cancers for which current therapies are inadequate.”

The company is currently advancing several of these agents towards proof-of-concept clinical trials.

#### About Navrogen

Navrogen is a biotechnology company focused on the discovery of tumor-produced Humoral Immuno-Oncology (HIO) factors that are associated with suppressed humoral immunity, poor prognosis and limited therapeutic response of immune-mediated anti-cancer therapies. The company’s mission is to develop best and first-in-class agents that can overcome the immunosuppressive effects of HIO factors by employing its proprietary screening and engineering technologies as well as diagnostic assays that can identify patients whose tumors produce HIO factors to advise physicians on therapeutic options. For more information, please visit [www.navrogen.com](http://www.navrogen.com).

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