

## An introduction to vaccine legal exemptions in the United States

**Alan Phillips J.D.**  
Attorney at Law, USA

Over recent decades, a continually growing number of vaccines have been added to mandatory vaccine schedules, and more recently, new categories of people have been the subject of vaccine mandates. In the U.S., there are over a dozen different contexts in which vaccines are required, including school enrollment, immigration, military, employees, and multiple subcategories of each of these broader categories. In each context and subcategory, one or more legal exemptions are available that enable at least some people to legally refuse mandatory immunizations. While there is some overlap of rights among the different contexts generally, precise rights can vary from context to context and individual situation to individual situation. In addition, rights are rapidly changing over time as laws in various jurisdictions are changing. This talk will introduce the different vaccine exemption contexts, the different types of exemptions, some of the legal issues and differences between these different contexts and subcategories, and recent legislative changes and trends in the vaccine rights arena. As we continue to move forward as an increasingly vaccinated population, it is important to note not only what impact vaccine policy is having on us medically and scientifically, but also what the implications and issues are legally. (This talk will not discuss vaccine injury legal issues.)

### Biography

Alan Phillips, J.D. of Chapel Hill, North Carolina is a leading U.S. vaccine rights attorney. He regularly advises individuals, families, attorneys, groups and organizations around the U.S. on vaccine exemption and waiver rights and vaccine legislative issues. He makes regular radio appearances and is a featured writer on several alternative and complementary health websites. He authored the e-book, "The Authoritative Guide to Vaccine Legal Exemptions," the only authoritative publication on this topic. One of Alan's early vaccine (lay) research articles was utilized in medical school classroom instruction in the U.S. and Italy, and by a homeopathic college in England.

attorney@vaccinerights.com

## Targeting tumor vessels by therapeutic vaccination

**Anna-Karin Olsson**  
Department of Medical Biochemistry and Microbiology, Uppsala University, Sweden

Monoclonal antibody-based therapies have made an important contribution to current treatment strategies for cancer and autoimmune disease. However, the cost for these new drugs puts a significant strain on the health-care economy, resulting in limited availability for patients. Therapeutic vaccination, defined as induction of immunity against a disease-related self-molecule, is therefore an attractive alternative. To analyze the potential of such an approach we have developed a therapeutic vaccine against the extra domain-B (ED-B) of fibronectin. This 91 amino acid-domain, inserted by alternative splicing, is expressed during vasculogenesis in the embryo, but essentially undetectable under normal conditions in the adult. However, ED-B is highly expressed around angiogenic vasculature such as in tumorigenesis. We here demonstrate that it is possible to break self-tolerance and induce a strong antibody response against ED-B by vaccination. Nineteen out of 20 vaccinated mice responded with production of anti-ED-B antibodies and displayed a 70% reduction in tumor size compared to those lacking anti-ED-B antibodies. Electron microscope analysis revealed that immunization against ED-B induced pronounced morphological changes of the tumor vasculature, consistent with an attack by the immune system. These data show that tumor vascular antigens are highly interesting candidates for development of therapeutic vaccines targeting solid tumors.

### Biography

Anna-Karin Olsson completed her Ph.D in 2000 at Uppsala University in the field of tumor biology. After post-doctoral studies focusing on tumor angiogenesis, she received a research position from The Swedish Research Council in 2007. She now heads a research group of three PhD students and one post-doc at the Dept of Medical Biochemistry and Microbiology at Uppsala University. The two main research lines of the group is 1) development of a cancer vaccine targeting tumor vessels and 2) studies of the mechanism of action of an endogenous regulator of tumor angiogenesis.

anna-karin.olsson@imbim.uu.se