

Inhibitors for the Treatment of T Cell-Mediated Autoimmune Disorders

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ABSTRACT

Method of using Dantrolene, a FDA-approved drug, currently used for treatment of muscular skeletal dysfunction, to treat T-lymphocyte mediated disorders (autoimmune diseases and chronic graft versus host disease) in humans and animals.

FULL DESCRIPTION

T lymphocytes (T cells) play a critical role in regulation of immune system function. They control cell-mediated immunity, provide defense against infectious microbes, recognize and eliminate foreign substances, and act as surveillance for cancer cells. T cells, however, are also the primary causes of inflammatory responses in patients with autoimmune disorders and graft rejection in organ transplant patients.

Researchers at the University of California, Davis have discovered that Dantrolene, a FDA approved drug currently used for the treatment of muscular skeletal dysfunctions, significantly suppresses CD4+ T cell functions such as proliferation and cytokine production. By targeting T cells, Dantrolene can effectively reduce inflammation-induced tissue damage. Furthermore, this drug can effectively reduce graft rejection.

APPLICATIONS

- ▶ Therapeutic immunosuppressant in humans and animals
- Treat a broad range of T-cell mediated autoimmune disorders and chronic-graft-versus

host disease including:

multiple sclerosis, rheumatoid arthritis, type-1 diabetes, psoriasis, and chronic graftversus-host disease in humans and animals

FEATURES/BENEFITS

▶ This drug may be more effective in treating T-cell mediated diseases than other currently

marketed immunosuppressants

▶ This drug can be administered orally, subcutaneously, intramuscularly, or intravenously,

alone, or in combination with other drugs

Can be used as an alternative treatment in patients who cannot tolerate the severe side

effects of currently marketed immunosuppressive drugs

Can be used to treat autoimmune diseases or graft-versus-host disease in patients who underwent immunosuppressive drug treatments that did not produce desirable effects

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OTHER INFORMATION

KEYWORDS immunosuppressant, autoimmune disease, chronic graft-versus-host

disease

CATEGORIZED AS

Biotechnology

Health

Medical

New Chemical

Entities, Drug Leads

Therapeutics

RELATED CASES 2009-313-0

PATENT STATUS

| United States Of America | Issued Patent | 9,301,947 | 04/05/2016 | 2009-313 |
|--------------------------|---------------|-----------|------------|----------|
| United States Of America | Issued Patent | 8,664,251 | 03/04/2014 | 2009-313 |

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