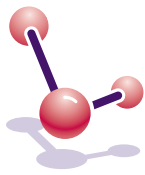


Alliance for Lupus Research

PREVENT. TREAT. CURE.

Since 1999, the Alliance for Lupus Research (ALR) has given more money to lupus research than any non-governmental agency in the world, and is committed to identifying new and improved treatments for the disease. The ALR is proud to be a catalyst for increased attention to lupus research and will continue its aggressive efforts until new therapies are brought to market. The chart below highlights some of the agents currently being studied for people with lupus. The ALR has supported research leading to the development of 30% of these agents in the clinical pipeline (marked with an asterisk below). The solution to lupus is research! More information about lupus and the ALR can be found by visiting www.lupusresearch.org.

Treatment name	Type	Focus of Studies	Company or Organization
Anti-interferon alpha therapies			
Hydroxychloroquine	Anti-malarial / TLR antagonist	Recent studies to measure the reduction of lupus flares	Assistance Publique—Hôpitaux de Paris & Sanofi-Synthelab
Rontalizumab (rhuMab IFNalpha)*	Anti-Interferon-alpha / Monoclonal antibody	Safety and efficacy studies to evaluate anti-inflammatory benefits in lupus patients	Genentech
Sifalimumab (Medi-545)	Anti-Interferon-alpha / Monoclonal antibody	Studies to measure safety and tolerability in lupus patients	Medimmune, Inc.
AGS-009*	Anti-Interferon-alpha / Monoclonal antibody	Single dose escalation trial in SLE	Argos Therapeutics
IFN Kinoid	Interferon-alpha vaccine	Dose escalation study in SLE	Neovacs
IMO-3100*	TLR7 and TLR9 blockers	Early studies evaluating anti-inflammatory effects (drug intended to block production of multiple pro-inflammatory cytokines)	Idera Pharmaceuticals
DV1179*	TLR7 and TLR9 inhibitor	Studies to measure long-term safety in lupus patients	Dynavax Technologies GlaxoSmithKline National Institutes of Health
Anti-Cytokine therapies			
CNTO-136	Anti-interleukin-6 antibody	Studies to measure the safety and efficacy in patients with lupus nephritis (inflammation of the kidneys)	Centocor, Inc.
AMG811	Anti-interferon-gamma / monoclonal antibody	Study to evaluate the safety, tolerability, and clinical efficacy in discoid lupus	Amgen
Immunosuppressive therapies			
Mycophenolate mofetil (cellcept)	Immunosuppressant / transplant anti-rejection drug	Organ transplant rejection drug being studied for lupus & lupus nephritis	Genentech / Roche, multiple institutions
Tacrolimus (sustained release capsules)	Immunosuppressant / transplant anti-rejection drug	Organ transplant rejection drug being studied for lupus & lupus nephritis	Multiple sites in Asia
Sirolimus	Immunosuppressant	Study in SLE	State University of New York-Upstate Medical Center
B-Cell therapies			
Atacicept (TACI-Ig)*	B-cell inhibitor / recombinant fusion protein	Studies ongoing to pinpoint most effective dosing	EMD Serono
Epratuzumab (anti-CD22)*	B-cell inhibitor / Monoclonal antibody	Study of the CD22 protein	UCB and Immunomedics
SBI-087 (anti-CD20)	B cell-inhibitor/Small Modular ImmunoPharmaceutical	Ascending single dose study	Pfizer



Benlysta® (FDA approved drug) (Belimumab/anti-BLys)*	B-cell inhibitor / monoclonal antibody	Long-term safety and efficacy studies continue	GlaxoSmithKline Human Genome Sciences
LY2127399 (anti-BAFF monoclonal antibody)	B-cell inhibitor / monoclonal antibody	Studies to measure the safety and tolerability in lupus patients	Eli Lilly
A623 (anti-BAFF)	Anti-BAFF peptibody	Efficacy, safety and tolerability in SLE	Anthera
Bortezomib (Velcade)	Proteasome inhibitor	Proliferative lupus nephritis	Weill Cornell Medical College
Immunomodulatory therapy			
Lupuzor™ (CEP-33457)	CD4 T-Cell Modulator	Ongoing studies to measure efficacy; Lupuzor is thought to modulate, through a unique mechanism, a specific subset of CD4 T cells which play a critical role in the physiopathology of lupus	Cephalon
Abatacept (CTLA4-Ig)*, Orencia®	TNF Antagonists, rheumatoid arthritis drug	Safety and efficacy studies to evaluate anti-inflammatory benefits in lupus patients	National Institute of Allergy and Infectious Diseases (NIAID) Immune Tolerance Network Bristol Myers Squibb
AMG557	Anti-B7RP-1	Ascending, multiple dose study in SLE	Amgen
Laquinimod	Immunomodulator	Active lupus nephritis	Teva
Paquinimod	Immunomodulator	Mild active SLE	Active Biotech Research
Leflunomide	Immunomodulator	Maintenance therapy for lupus nephritis	RenJi Hospital
Medi-570	Anti-ICOS	Single ascending dose study	MedImmune/Astra Zeneca
CDP7657	Monovalent Fab PEG Anti-CD40 ligand antibody	Phase I dose escalating study	UCB
KRP203	Sphingosine-1-phosphate receptor antagonist	Safety and efficacy in subacute cutaneous lupus	Novartis
Other			
Vitamin D*		Ongoing studies to evaluate the impact vitamin D has on alpha-interferon production in lupus patients; research indicates that a Vitamin D deficiency may impact the disease	Various
CC-11050	Phosphodiesterase 4 inhibitor	Discoid lupus and subacute cutaneous lupus	Celgene
Rosuvastatin	Statin	Study of atherosclerosis in SLE	Imperial College
N-acetylcysteine*	Precursor of glutathione	Treatment of SLE	State University of New York – Upstate Medical Center
Dehydroepiandrosterone (DHEA)	Steroid	To evaluate the potential the impact DHEA may have on lowering risk for cardiovascular disease in lupus patients	University of MichiganArthritis Foundation
Duloxetine (Cymbalta)	SNRI	Pain reduction in SLE	Eli Lilly Brain Resource Center
Stem cell transplantation (following immunosuppression)		Study to evaluate infusing lupus patients with stem cell after the function of the immune is reduced through chemotherapy. (Stem cells are undeveloped cells that have the capacity to grow into mature blood cells, which normally circulate in the blood stream.)	Northwestern University
Levothyroxine	Thyroid hormone	Studies being designed to evaluate the drug's potential to inhibit preterm delivery in lupus patients by regulating hypothyroidism	Johns Hopkins University New York University Medical Center Duke University University of Chicago Stanford University

*These studies are made possible, in part, through funding from the Alliance for Lupus Research.