historical study details could obviate the needless repetition of studies, reduce the number of animals used, expedite model implementation projects, refine current animal models and build on existing work. The net result would be a significant improvement in information sharing, much more efficient use of limited research resources and ultimately a decreased time to identify, develop and market new therapeutics.

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T.101. Treatment of HIV-Infected Patients with Gc Protein-Derived Macrophage Activating Factor (GcMAF) and Its Coned Derivative (GcMAFc) Eradicates HIV-Infection

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Serum Gc protein (known as vitamin D-binding protein) is the precursor for the principal macrophage activating factor (MAF). The MAF precursor activity of serum Gc protein of HIV-infected patients was lost or reduced because Gc protein is deglycosylated by serum infected patients. Thus, Gc protein is deglycosylated by serum infected patients. Therefore, the activity of Gc protein is reduced or lost because Gc protein is deglycosylated by virus infected patients. The MAF precursor activity of serum Gc protein of HIV-infected patients was lost or reduced because Gc protein is deglycosylated by virus infected cells. Since Gc protein is the intrinsic component of gp120, serum Nagalase was already complexed with anti-HIV immunoglobulin G (IgG) in patient blood stream. The IgG-bound virions were infectious and retained Nagalase activity, leading to immunosuppression. Stepwise treatment of purified serum Gc protein or its cloned Gc protein with immobilized β-galactosidase and sialidase generated the most potent MAF (termed GcMAF or GcMAFc, respectively) ever discovered, which produces no side effect in humans. Macrophages activated by intramuscular administration of GcMAF or GcMAFc (100 ng/patient) developed a large amount of Fc receptors as well as enormous variation of receptors that phagocytize IgG bound and unbound HIV virions. Cells harboring HIV provirus were unstable and spontaneously released the virions at a high rate. After less than 18 weeks intramuscular administrations of 100 ng GcMAF or GcMAFc to twenty-four nonanemic patients, they exhibited healthy systemic autoimmune diseases, but there are only few modifications including infliximab (Remicade; 5 mg/kg e.v. every 8 weeks) and etanercept (Enbrel; 25 mg twice weekly s.c.). Expression of CD28 on CD3+, CD4+ and CD8+ lymphocyes was determined by flow cytometry on whole blood, using triple fluorescence analysis on a FACScalibur (Beckton-Dickinson, San Jose, CA). Mononuclear cells loaded with CFSE (Sigma, St Louis, MO) were cultured for 5 days with anti-CD3 and antiCD3+ anti-CD28 (Immunotech). Determination of cell divisions through CFSE dilution was obtained by the FlowJo software (Tree Star, Inc Ashland, OR). Statistical evaluation was performed with SigmaPlot ver.9 (Systat GmbH, Germany). A significant increase of CD28+ cells within CD4+ lymphocytes was observed in RA patients treated with TNFα inhibitors, but not in other seronegative arthritides. Unstimulated lymphoproliferation was increased in untreated patients. CD3-induced lymphoproliferation was similar in all patients, with lower responses in seronegative arthritis after treatment. Anti-CD28 increased cell division in only half of the patients; this was unrelated to the number of CD28+ T cells. Spontaneous proliferation decreased after treatment with TNFα inhibitors, whereas T cell stimulation, as CD28 triggering, seem to be unrelated to CD28 molecule expression prior to culture, and unaffected by treatment with TNFα inhibitors.

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T.102. Treatment with TNFα Inhibitors in Rheumatoid Arthritis Rescues CD28 Expression in CD4+ Cells but does not Affect Proliferative Responses to Anti-CD3 ± Anti-CD28

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In rheumatoid arthritis (RA) CD4+CD28null cells are expanded, related to high levels of TNFα. We evaluated the changes in CD28 expression and in vitro T cell response to CD28 costimulation in 21 patients (13 F and 8 M) affected by inflammatory rheumatic diseases in which TNFα blockade is indicated (9 had RA, 7 psoriatic arthritis and 5 ankylosing spondylitis). All were newly diagnosed and not previously treated. 10 received TNFα inhibitors for at least 1 year, including infliximab (Remicade; 5 mg/kg e.v. every 8 weeks) and etanercept (Enbrel; 25 mg twice weekly s.c.). Expression of CD28 on CD3+, CD4+ and CD8+ lymphocytes was determined by flow cytometry on whole blood, using triple fluorescence analysis on a FACScalibur (Beckton-Dickinson, San Jose, CA). Mononuclear cells loaded with CFSE (Sigma, St Louis, MO) were cultured for 5 days with anti-CD3 and antiCD3+ anti-CD28 (Immunotech). Determination of cell divisions through CFSE dilution was obtained by the FlowJo software (Tree Star, Inc Ashland, OR). Statistical evaluation was performed with SigmaPlot ver.9 (Systat GmbH, Germany). A significant increase of CD28+ cells within CD4+ lymphocytes was observed in RA patients treated with TNFα inhibitors, but not in other seronegative arthritides. Unstimulated lymphoproliferation was increased in untreated patients. CD3-induced lymphoproliferation was similar in all patients, with lower responses in seronegative arthritis after treatment. Anti-CD28 increased cell division in only half of the patients; this was unrelated to the number of CD28+ T cells. Spontaneous proliferation decreased after treatment with TNFα inhibitors, whereas T cell stimulation, as CD28 triggering, seem to be unrelated to CD28 molecule expression prior to culture, and unaffected by treatment with TNFα inhibitors.

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T.103. Pulse Cyclophosphamide Therapy can Prevent Neuromyelitis Optica Relapses in Systemic Lupus Erythematosus Associated Cases

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Neuromyelitis optica (NMO, Devic’s disease) is an uncommon demyelinating neuro-immunological disease, with relapsing course, causing early disability. It’s characterised by optic neuritis, transverse myelitis and 2 from the following criteria: myelitis involving more than 3 segments; brain MRI, non-diagnostic for multiple sclerosis; presence of anti-aquaporin-4 antibody. NMO can be associated with systemic autoimmune diseases, but there are only few publications about individual cases. In a systemic lupus erythematosus (SLE) associated case NMO revealed years before other SLE manifestations. There are no specific recommendations for the treatment of NMO, especially not for the SLE overlapping cases. High dose corticosteroid medication followed by long time immunosuppression seems