

■ ELISA/ACT Biotechnologies LLC ■

# LRA by ELISA/ACT®

## CLINICAL PEARLS UPDATE#40

---

### *Pemphigus*

October 8, 2004

Dear Colleague,

**Pemphigus is an autoimmune disease of the linking elements between cells.. Weakened intercellular links are associated with the induction of autoimmune, immune dysfunction, and chronic inflammatory conditions. B and T lymphocyte activations and inductions are observed in pemphigus.** Knowing an individual's reactive immune burden of delayed hypersensitivities / delayed allergies opens new clinical and therapeutic possibilities. **Functional lymphocyte response assays are the clinical 'gold standard' for measuring delayed hypersensitivity reactions. With LRA by ELISA/ACT® tests and plans, an even larger number of items can be tested in a shorter time and with greater precision. This improves outcomes and, with your inspiration and encouragement to comply along with our nutrition and program counseling staff, as an extension of your office, can achieve consistently outstanding results. We are grateful for the opportunity to serve. The studies by Ishii, Lindstrom and Zillikens are supportive of our research combining comprehensive, *ex vivo* functional delayed allergy detection by lymphocyte response with specific Alkaline Way diet, targeted supplementation, and healing actions to reset the body to healthy tolerance, homeostasis, energetic resilience and sustained remission.**

We encourage you to share this valuable clinical update newsletter with your colleagues and staff so they can learn more about how our comprehensive approach can be applied to their practice with beneficial results. Please also let us know if any of your colleagues or staff would like to be added to our email distribution list. We are grateful for the opportunities to be of service to you and your patients.

Sincerely,

***Russ Jaffe, MD, Ph.D., CCN, NACB***  
***Lab Director***

**Oiso N, Yamashita C, Yoshioka K, Amagai M, Komai A, Nagata Y, Hashimoto T, Ishii M. IgG/IgA pemphigus with IgG and IgA antidesmoglein 1 antibodies detected by enzyme-linked immunosorbent assay. *Br J Dermatol* 2002 Nov;147(5):1012-7.**

**Department of Dermatology, Osaka City University Graduate School of Medicine,  
1-4-3 Asahimachi, Abeno, Osaka 545-8585, Japan. Naoki.Oiso@UCHSC.edu**

Pemphigus is an autoimmune mucocutaneous bullous disease characterized by autoantibodies against the cell surfaces of epidermal keratinocytes. Six cases with deposition of both IgG and IgA on keratinocyte cell surfaces have been reported in the recent literature. We provisionally termed these cases IgG/IgA pemphigus. We describe a 42-year-old Japanese woman with clinical and histopathological features resembling herpetiform pemphigus who demonstrated in vivo bound and circulating anticell surface autoantibodies of both IgG and IgA classes on immunofluorescence examination. Enzyme-linked immunosorbent assay using baculovirus-expressed recombinant desmoglein (Dsg) 1 and Dsg 3 showed that both IgG and IgA antibodies reacted with Dsg1. The reactivity was completely adsorbed with preincubation of serum with Dsg1 baculoprotein, further confirming the exclusive reactivity of both IgG and IgA antibodies with Dsg1. This is the second case of IgG/IgA pemphigus in which the human target antigens for both IgG and IgA antibodies have been unequivocally identified. This study provides further evidence that IgG/IgA pemphigus is a distinct disease entity.

**Lindstrom J. Autoimmune diseases involving nicotinic receptors. *J Neurobiol* 2002 Dec;53(4):656-65.**

**Department of Neuroscience, Medical School of the University of Pennsylvania,  
217 Stemmler Hall, Philadelphia, Pennsylvania 19104-6074, USA.  
jslkk@mail.med.upenn.edu**

The antibody-mediated autoimmune response to alpha1 muscle nicotinic acetylcholine receptors that causes myasthenia gravis is one of the best characterized autoimmune diseases. Antibody-mediated autoimmune responses to neuronal nicotinic receptors are just beginning to be discovered and characterized. One of these causes dysautonomia through antibodies to alpha 3 nicotinic receptors of autonomic ganglia. Another causes pemphigus through antibodies to alpha 9 nicotinic receptors in skin. Other autoimmune responses to nicotinic receptors may be discovered as the many functional roles of nicotinic receptors are revealed.

**Oostingh GJ, Sitaru C, Kromminga A, Dormann D, Zillikens D. Autoreactive T cell responses in pemphigus and pemphigoid. *Autoimmun Rev* 2002 Oct;1(5):267-72.**

**Department of Dermatology, University of Wurzburg, Josef-Schneider Str. 2, 97080 Wurzburg, Germany.**

Pemphigus and pemphigoid are cutaneous autoimmune diseases characterised by autoantibodies directed against specific adhesion proteins of the epidermis and dermal-epidermal junction. These proteins are usually associated with desmosomes or hemidesmosomes. Binding of antibodies to their targets leads to the loss of cell-cell or cell-matrix adhesion and subsequently to blister formation. The humoral aspects of the autoimmune responses in pemphigus and pemphigoid have been extensively studied in the past. More recently, the cellular interactions resulting in the formation of autoantibodies and the involvement of autoreactive T cells in these diseases have attracted increased interest. In this review, the current knowledge on T cell involvement in pemphigus and pemphigoid is summarised.