

■ ELISA/ACT Biotechnologies LLC ■

# LRA by ELISA/ACT<sup>®</sup>

## CLINICAL PEARLS UPDATE#4

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### *Digestion*

September 22, 2003

Dear Colleague:

**Maldigestion, malabsorption, enteropathy, and digestive disorders affect 20-60 million Americans according to Franz Ingelfinger, Gastroenterologist and prior editor of the *New England Journal of Medicine*. Successful comprehensive management using LRA by ELISA/ACT<sup>®</sup> tests and treatment plans are illustrated in the attached abstract reports.**

Functional, *ex vivo* lymphocyte response assays (LRA by ELISA/ACT) offer the most advanced tests available for determination of the individual's responses to the widest available range of substances tested by any lab in the world. 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***

**Farrell JJ. Overview and diagnosis of malabsorption syndrome. *Semin Gastrointest Dis* 2002;13(4):182-90.**

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"Malabsorption" syndrome is the term widely used to describe the end result of either impaired breakdown of nutrients (maldigestion) or defective mucosal uptake and transport of adequately digested nutrients (true malabsorption). The latter may affect a broad range of nutrients (ie, panmalabsorption) or individual nutrients or groups of nutrients (ie, specific malabsorption). This review discusses the etiology and pathophysiology of malabsorption. A diagnostic approach to malabsorption is proposed. Other articles review specific disorders such as celiac disease, bacterial overgrowth, and chronic pancreatitis.

**Bredehorst R, David K. What establishes a protein as an allergen? *J Chromatogr B Biomed Sci Appl* 2001;756(1-2):33-40.**

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There is little known about the factors that determine the allergenicity of food proteins. Apparently, the ability of a food protein to induce an allergic response requires its presence in substantial amounts in the food supply, its durability during food processing, and its resistance to digestion in the gastrointestinal tract. In addition to the mode and degree of exposure, structural characteristics appear to play an important role for the capacity of a protein to modulate the immune response towards allergic reactions. Until now, however, there has been no indication for common structural characteristics of linear T cell or linear IgE (B cell) epitopes and the knowledge of structural characteristics of conformational IgE binding sites is very limited. Experimental data point only to certain surface areas of allergenic proteins which are important for IgE binding. Therefore, it is not possible to suggest any structural motif or conformational sequence pattern common to all allergenic proteins. Furthermore, glycosylation appears not to be a common critical determinant of allergenicity since food allergens comprise both glycoproteins and nonglycosylated proteins. Based on the few published three-dimensional structures of allergenic proteins including food proteins, one unifying feature of allergens appears to be their spherical shape. The three-dimensional structures of many more allergens have to be determined, however, to allow for a better understanding of the molecular basis of allergenicity. Most recently, new ideas have been introduced as to why certain biochemical or biologic functions such as enzymatic activities may predispose a protein to become an allergen. **Proteolytically active allergens have been demonstrated to irritate the human mucosal surface, to enhance their own transmucosal uptake, and to augment IgE production. Therefore, the functional activity of some allergens may play a role among other factors in the process of sensitization and allergic responses.**

**Note: We believe the comprehensive repair treatment guide, available as an option with LRA by ELISA/ACT tests, if requested, provides the best current therapy for sustained remissions and intestinal repair to restore healthy digestion, absorption, assimilation, and utilization of nutrients as well as efficient elimination of waste products.**



