Allergy, dubbed the “plague of the 21st century,” has long been a disease on the rise. In the western world, between 1% and 8% of young children suffer from food allergy, between 5 and 30% of adolescents from asthma and approximately twice that number from allergic rhinitis [1], with numbers overall still rising rapidly especially in the young age group [2]. Therefore, the necessity to reevaluate, reconsider and reframe our concepts, our research and ultimately our clinical practices is an imperative. This theme accompanies numerous presentations and discussions at the international meeting hosted by the Israel Association of Allergy and Clinical Immunology (IAACI) in conjunction with the American College of Allergy Asthma and Immunology (ACAAI) and Allergists for Israel (AFI), in Jerusalem, December 2008.

Also in this vein, the review of Weissler and colleagues, which looks at mast cells outside their traditional role as allergic effector cells and reevaluates their wider function in inflammatory processes [3], redefines our perception of these cells as one of the most important players in both the innate and the adaptive arms of the immune system. Understanding the biology of mast cells and other cells in the immune system can be a powerful tool in designing new drugs and new approaches for the treatment of allergic disease. Exploring such a new approach in the treatment of severe asthma is Alan Wanderer’s article on the possible role of interleukin-1-beta and IL-1 pathways in the pathogenesis of severe asthma [4], and, from the pulmonary center in Denver, Colorado, Richard Martin’s contribution on the treatment modalities designed to reach the distal airways of asthmatics [5].

Revamping our understanding of the true function of the inhibitor of complement component 1 (C1-INH) in the fibrinolytic system and the involvement of bradykinin in the pathogenesis of tissue edema has been the basis for the development and clinical trials of new therapeutic modalities in the treatment of the orphan disease hereditary angioneurotic edema, described in the excellent review in this issue by Reshef and colleagues [6] from the Angioedema Center at Tel Hashomer.

Allergy is also an environmental disease and vigilance is constantly required in monitoring the environment for the presence of allergenic pollens. We know from published research that minuscule amounts (1–2 ppm) of an allergen present in the air are enough to cause allergic symptoms in a sensitized individual [7]. Waisel and colleagues [8] from the Department of Aerobiology at Tel Aviv University describe the newly arrived, highly allergenic Ambrosia plant, very likely to cause significant distress for allergic individuals in Israel in the near future.

For a long time, the concept of Th1 and Th2 as opposing cells in the immune system’s milieu – with Th1 cells predominantly involved in cellular immunity and antibacterial defense, while Th2 cells seemed responsible for allergic reactions and defense against helminths and parasites – has dominated our understanding of the immune system, augmented by the spreading popularity of the “hygiene hypothesis” [9]. In the past few years epidemiological data have shown that classically “Th1” driven diseases such as insulin-dependent diabetes mellitus are “on the rise” just as much if not more than the classically “Th2” dependent, such as food allergy and allergic rhinitis. Gazit and co-authors’ article showing that children with IDDM while having an increased risk of suffering from additional autoimmune problems do not have a decreased risk of atopy (the tendency for developing immunoglobulin-E-mediated, Th2-mediated allergic inflammation) clearly demonstrates that the classical Th1/Th2 dichotomy is a severe oversimplification of an incredibly complex system [10].

Not forsaking the classical issues, in the attempt to refine our understanding of the natural course of allergic disease, Rottem and collaborators are pushing to improve our ability to predict the resolution of milk allergy in milk-allergic children by using the serum levels of milk-specific IgE. In their current work they found that a high level of msIgE is a reliable predictor of non-
Also, in an effort to develop new tools for the difficult diagnosis
of adverse drug reactions, specifically in multidrug exposure
situations, Halevy et al. [12] take a new look at the secretion of
interferon-gamma from peripheral blood lymphocytes activated
by incubation with suspected drugs. With a negative predictive
value of 89%, the test may be a valuable additional tool in the
investigation of patients with multiple adverse drug reactions.

Finally, taking a sober “real life” approach to the classical tools
of the trade, Zeldin et al. [13] formally document the efficacy of
subcutaneous immunotherapy in the treatment of allergic rhinitis
and asthma in Israeli adults. Keeping in mind that because of
the perceived problems of side effects and compliance, immu-
notherapy is usually not the first line of treatment but actually
a last resort for patients in whom medications have failed, an
overall success rate of 74% with significant improvement (in the
intention-to-treat analysis) and relatively few immediate systemic
reactions, all successfully treated in the allergists office, is a
major success, potentially altering the medical community’s at-
titudes and perceptions of this time-tried treatment deserving of
a new appreciation.

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Capsule

ANA in primary biliary cirrhosis

Primary biliary cirrhosis (PBC) is a chronic progressive autoim-
mune liver disease, characterized by inflammatory destruction
of intrahepatic small bile ducts. The diagnosis of PBC requires
clinical, biochemical and histological characteristics, as well
as the presence of antimitochondrial antibodies (AMAs). In
addition to AMAs, antinuclear antibodies (ANAs) are also found
in about a third of patients. During the last decade several
nuclear structures were recognized as specific targets of ANAs
in PBC, mainly gp210 and sp100. Both can be detected in
approximately 25% of patients, and have been used in recent
years for improving serological diagnosis of PBC. Moreover,
several reports implied an association between the presence
of specific ANAs and PBC severity. Gao and co-workers studied
the role of anti-gp-210 and anticientromere antibodies (ACAs)
in 140 patients with PBC by ELISA and indirect immunofluo-
rescence. Anti-gp-210 was documented in 30.5% and ACA in
29.2% of PBC patients. Anti-gp-210 correlated with disease
severity evaluated by the Mayo risk score, albumin levels and
hepatic failure. The presence of ACA correlated with the pres-
ence of portal hypertension as well as with concurrent Sjogren
syndrome. ACA-positive patients with Sjogren syndrome rarely
had positive anti-SSB and only 15.8% had anti-SSA, implying
secondary Sjogren syndrome. It might be concluded that both
of these specific ANAs are associated with poor outcome of
PBC patients, and that ACA positivity in PBC might be associ-
ated with the presence of Sjogren syndrome.

Clin Exp Med 2008;8:9
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