



THE 9TH INTERNATIONAL SYMPOSIUM ON ANTIPHOSPHOLIPID ANTIBODIES

The 9th International Symposium on Antiphospholipid Antibodies was held in Tours, France on September 12-16, 2000. Professors M.C. Boffa and J.C. Piette hosted this scientific event that attracted over 300 researchers from all over the world interested in the most recent developments on antiphospholipid antibodies. The city of Tours, which is located in the Loire Valley (south of Paris), one of the most beautiful regions of France with several majestic castles of the old French monarchy, provided a perfect environment for scientific discussions. A brief summary of the most relevant topics that were discussed is presented below. Review articles outlining the state of the art lectures, and scientific abstracts submitted for presentation at the symposium have been published in the September issue of the *Journal of Autoimmunity* 15(2), 2000.

New information on the role of protein cofactor B2GPI and anti-B2GPI antibodies was discussed by several groups of investigators. P.G. de Groot (The Netherlands) presented results from his studies on the crystal structure and function of the B2GPI molecule. He concluded that the B2GPI molecule has an elongated (J shaped) structure with domain V located at the curved portion of the J. This domain contains a large positive patch and hydrophobic loop responsible for phospholipid (membrane) binding. Domains I and II are positioned away from the phospholipid binding site, representing the likely locations for antibody binding. S.A. Krilis (Australia) also presented data which strongly suggests that autoimmune antibodies to B2GPI bind to domain I of the B2GPI molecule. This data also supports the importance of antigen (B2GPI) density and divalent antibody binding, rather than the formation of a cryptic (new) epitope on the B2GPI molecule when bound to phospholipid. In contrast, T. Koike (Japan) concluded that the cryptic epitopes appear on domain IV (next to the phospholipid binding site) of the B2GPI molecule. Dr. Koike used monoclonal antibodies (mAB) in these experiments which targeted epitopes on domain IV; however, mAB may

behave differently than autoimmune antibodies. These results also recognized the heterogeneous nature of the antibody binding sites on the B2GPI molecule, providing additional evidence, at a molecular level, that antibodies from patients with antiphospholipid syndrome (APS) are indeed heterogeneous. In addition, Dr. Koike's research also supports the importance of the antibody interaction with B2GPI in the pathogenesis of thrombosis.

Several papers were presented on the laboratory diagnosis of APS. N. Harris (USA) discussed the diagnosis of "equivocal" APS – those patients with clinical manifestations and low aCL titers and negative lupus anticoagulant (LA) or medium/high aCL titers (or positive LA) without clinical manifestations. He proposed an "algorithm" for the laboratory evaluation of antiphospholipid antibodies based on the consensus opinion that anti-B2GPI are more specific for APS than aCL antibodies. For example, a patient with negative IgG/IgM aCL (and negative LA) with clinical manifestations should be tested for IgA aCL and anti-B2GPI antibodies to confirm the diagnosis of APS. Similarly, patients with low titers of aCL antibodies should be tested for anti-B2GPI antibodies to confirm APS. The majority of presentations addressing the laboratory diagnosis of APS, in particular a review by L.O. Carreras (Argentina), suggested screening with aCL assays followed by more specific tests such as anti-B2GPI, and including the measurement of IgA antibody isotypes. These presentations support the practical algorithm for the laboratory evaluation of antiphospholipid antibodies published by Corgenix in the October 1999 issue of *THE READER* (Vol 9; No 5).

M. Galli (Italy) discussed the clinical relevance of anti-prothrombin (aPT) antibodies. Although elevated levels of aPT antibodies are frequently found in APS and most studies show a significant association with thrombosis, she cautiously recommended that until its clinical utility as a thrombotic

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THE READER RESPONSE

Q. In our coagulation laboratory, we use the REAADS ELISA Test Kits to measure Protein C, Protein S, and von Willebrand Factor Antigen levels. With our most recent shipment, we noticed that the expiration date for these kits is greater than 12 months. What is the current shelf life for these products, and is the expiration date for the components shortened after opening?

A. All of the Corgenix Hemostasis products, including REAADS Protein C Antigen, REAADS Protein S Antigen, REAADS von Willebrand Factor Antigen, and REAADS Monoclonal Free Protein S Antigen ELISA Test kits currently have a shelf life of eighteen months from date of manufacture. With the exception of the Reference Plasma (which is stable in the refrigerator for 8 hours after reconstitution), the stability of the kit components is not compromised by opening. The expiration date printed on the component label applies to opened, as well as unopened reagents.

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marker is better understood and further defined, aPT testing not be included in the routine laboratory evaluation of APS. However, Dr. Galli and other experts recommended the determination of aPT antibodies in some patients, as it adds valuable serologic information.

An overview on the standardization efforts of the aCL ELISA by a European group was presented by A. Tincani (Italy). Significant variability was observed in the results reported by participating laboratories on the same samples. Only 6 of 24 participating laboratories reported concordant results for all 10 samples, even when a "semi-quantitative" classification of the results was employed i.e. low, medium and high positive results. ACL standardization continues to be elusive in spite of the intense efforts by this and other groups.

In addition, detailed reviews of other "intriguing" antiphospholipid antibody associations (i.e. with atherosclerosis, oxidized-LDL, tissue factor, etc.), and updates on treatment of the different clinical varieties of APS were discussed. More information can be found in the September issue of the *Journal of Autoimmunity* 15(2), 2000.

REAADER PRODUCT FEATURE

REAADS Protein C Antigen Test Kit

For *In Vitro* Diagnostic Use

Assay format -	96-well microtiter plate (8 x 12 strips) with breakaway wells
Sample matrix -	Citrated human plasma
Sample dilution -	1:51
Capture antibody -	Rabbit anti-human Protein C
Detection antibody -	Horseradish peroxidase (HRP) conjugated rabbit anti-human Protein C
Chromogenic substrate -	TMB (single component)
Stopping solution -	0.36 N Sulfuric acid
Assay incubations	
Sample -	40 min @ room temperature
Conjugate -	10 min @ room temperature
Substrate -	10 min @ room temperature
Wavelength -	450 nm
Assay calibration -	Six point reference curve prepared from Reference Plasma included in kit
Assay sensitivity -	≤ 5% or normal
Product number -	035-001

REAADER ANNOUNCEMENTS

- MEDICA 2000, one of Europe's largest annual medical expositions, will be held in Dusseldorf, Germany, on November 22 – 25, 2000. We invite you to visit the **Corgenix** exhibit with the British Trade Exhibition in Hall 1, F2-5, where our International representatives will be available to meet with you.
- With the recent development and FDA Clearance of the REAADS IgA Anti-Phosphatidylserine Test Kit, **Corgenix** has revised our Technical Update, *Anti-Phosphatidylserine: Proposal for Interpretive Ranges*, to include ranges for the IgA aPS assay. For your convenience, a copy of the revised document has been included as a supplement to this edition of *THE REAADER*.

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