

Dear Colleague,

The reason why I am contacting you is the following:

My colleague Marcos Alcocer here at Nottingham University has developed a sensitive array technology which can be used for the detection of all human Immunoglobulin classes and subclasses to food allergens. The method uses food extracts but can equally well be used with recombinant or purified allergens.

Based on this array platform, Marcos and I have developed a cellular assay which mimics the interaction of IgE, basophils (or mast cells) and allergen which occurs in vivo in sensitised individuals. Allergens (as extracts or recombinant proteins) are spotted onto an array and this is then incubated with a humanised basophil cell line which has been previously sensitised with the patient's serum. Basophil activation is detected by using fluorescent antibodies to CD63, which is upregulated on basophils during degranulation. The technique has been described in *Clinical and Experimental Allergy*, 2007 Dec;37(12):1854-62. The main advantage of this method is that it is not limited to measuring IgE binding as standard technologies are, and it combines the "biological dimension" of allergen/IgE interactions with the power of proteomics. We also think that it may be very sensitive, as the basophil cells work as signal amplifiers, although we are yet to generate the data to prove this.

We would like to extend this diagnostic device to the study of parasite allergens. For this we would need a collection of extracts, E/S antigens and allergens and patients' sera (we need protein concentration of 1 mg/ml or greater if possible and 100-200 ul of serum from each patient/donor). Sera would have to be in good condition for IgE studies (no freeze/thaw cycles if at all possible).

We intend to produce an array with as many protein extracts, E/S or recombinant antigens/allergens as possible which we would first use to study antibody levels to validate the arrays (Phase I). Phase II would be to test sera and protein extracts for allergenic activities using our live basophil array.

My question is whether I could interest you in participating in such a project and whether you would be willing to supply us with some materials, e.g. from your filariasis, schistosomiasis or any other field work. We would also like to include more parasites such as *Angiostrongylus*, *Trichinella*, hookworms and other worms. Materials from protozoan (human parasites) and matching sera are also very welcome.

I would be delighted to hear from you. I am sending a similar request to other colleagues in order to achieve a maximum coverage of parasites. We have 5000 spots on each array, so we can test many different parasites!

Best wishes,

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