

# *Q. rotundifolia* and *P. hybrida* pollen extracts induced basophil degranulation: study using a cell line expressing human FcεRI

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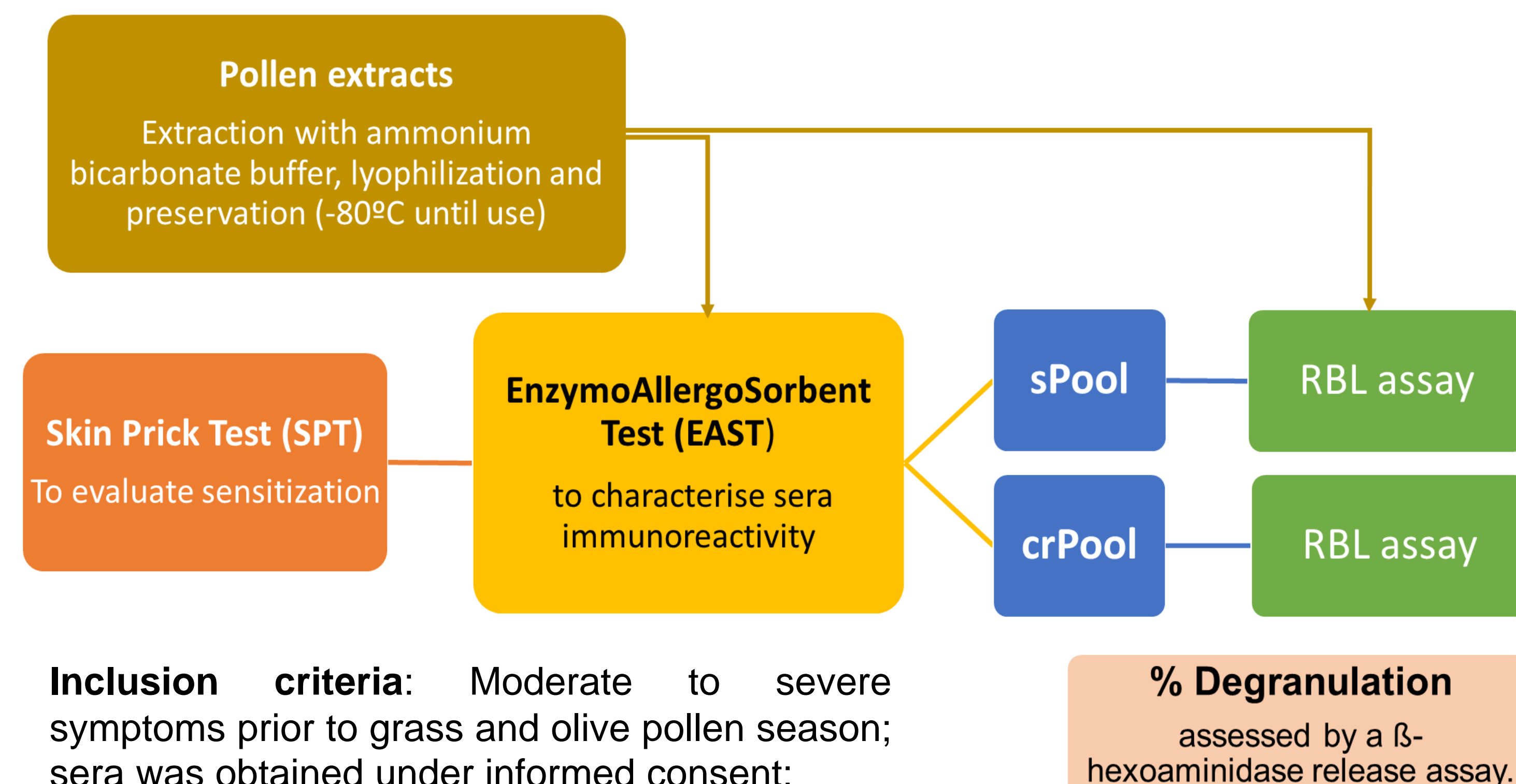
## INTRODUCTION & AIM

Currently skin prick test (SPT) remains the favourite technology in allergy diagnosis to aeroallergens. These tests, however, cause discomfort to the patient.

Several biochemical methods based on IgE analysis are available; Although allowing quantitative and qualitative analysis of specific and/or total IgE, these methods have limited diagnostic power, since biological response, hence elicitation of allergic reaction, is not predicted by these tests.

**The aim** of this work was to investigate whether a basophil cell line expressing human high affinity IgE receptor (FcεRI) is useful as a complementary tool for the evaluation of potential allergic reaction elicited by novel allergenic species.

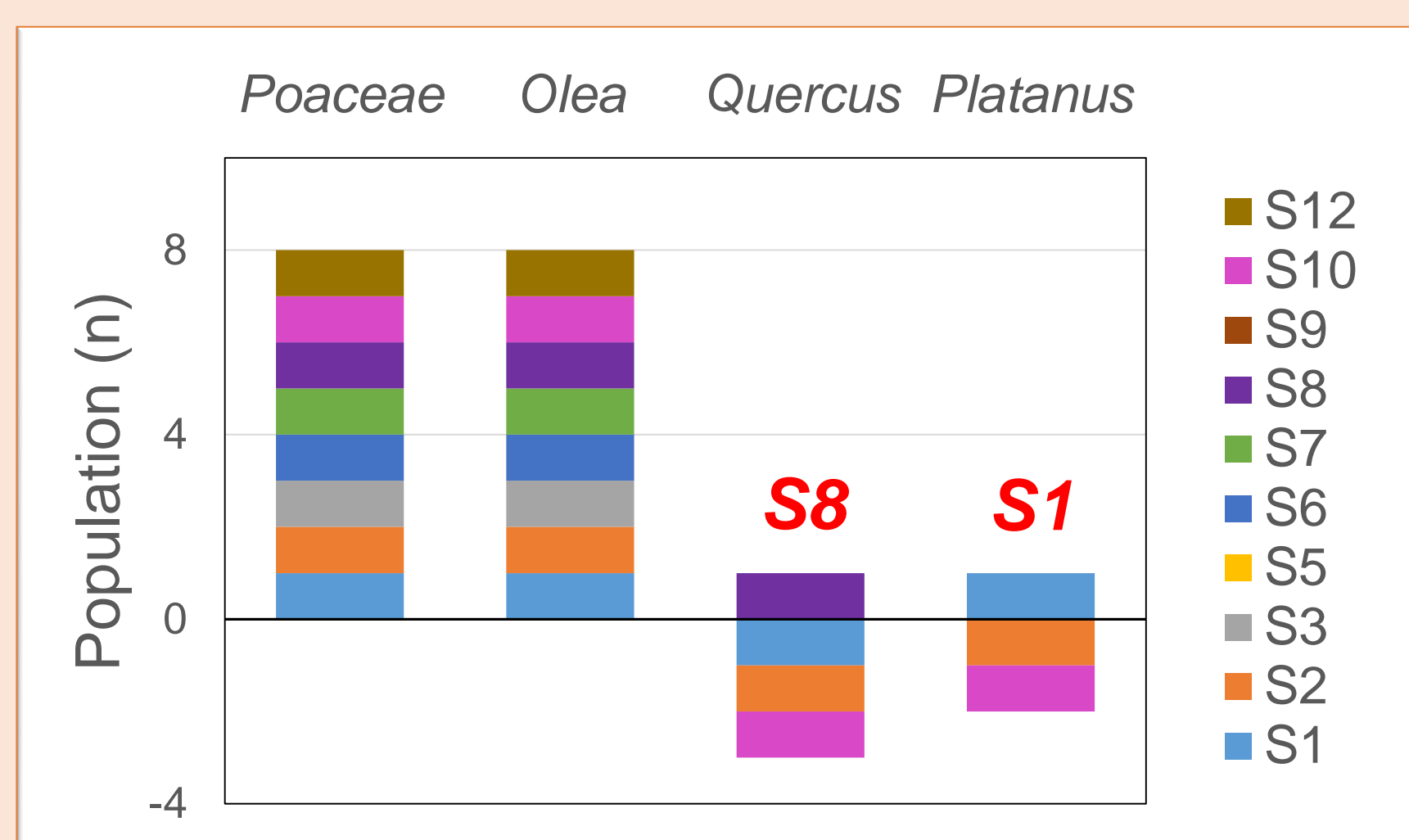
## METHODS



## RESULTS

In relation to this presentation, I declare that there are no conflicts of interest.

### 1. Sensitization of the group of patients

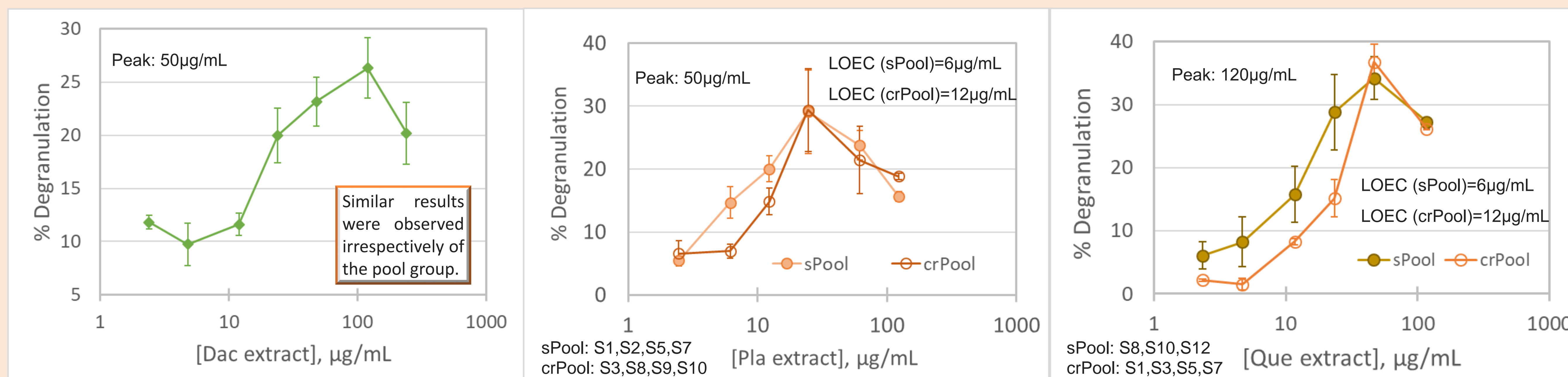


- All patients exhibited sensitization to *Poaceae* & *Olea*;
- S8 and S1 exhibited positive skin prick test to *Quercus* and *Platanus*, respectively;

### 2. Differential pattern of immunoreactivity and cross-reactivity with *D. Glomerata* was measured by EAST



### 3. Pollen extracts induced dose-dependente degranulation of RBL-h21 cells



RBL-h21 cells, sensitized with pooled sera (sPool or crPool) were challenged with pollen extracts in the range of 2-200µg/mL.

**sPool** – pooled sera exhibiting specific immunoreactivity;  
**crPool** – pooled sera that showed cross-reactivity with *D. glomerata*;

## CONCLUSIONS

- ✓ All sera exhibited immunoreactivity against the species tested;
- ✓ Cross-reactivity of *Q. rotundifolia* (7/10) and *P. hybrida* (5/10) with *D. glomerata* was observed;
- ✓ Specific and dose-dependent degranulation was observed (sPool curves shifted toward lower concentration compared to crPool);

These results suggest that a bioassay based on RBL-h21 cells, upon incubation with human sera, may constitute an useful tool to evaluate potential elicitation of allergic reactions in both research or diagnostics.

## REFERENCES

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## ACKNOWLEDGEMENTS

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