

The Sea Star Anti-horseradish Peroxidase Primitive Antibody: Transmission Electron Microscope Observations

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ABSTRACT

When injected by the antigen horseradish peroxidase, the sea star *Asterina gibbosa* produces a primitive antibody invertebrate primitive antibody which reacts specifically with this antigen.

Key words: Asterids, invertebrate primitive antibody, invertebrates

INTRODUCTION

It is obvious to recall the following main points: In 1974 Leclerc, (Ref. 1) immunizes the sea star *Asterina gibbosa* (asterids) with HRP (4 injections of 0,1 µg/ml HRP in saline solution were performed in 1 month) Then Immunocytochemical reactions were realized by first

- Incubation in the antigenic solution of the axial organ (the primitive lymphoid organ of asterids (Ref. 1)
- Revelation of the obtained precipitate by diaminobenzidine
- Observations of the *Asterina gibbosa* plasmolymphocytes in T.E.M.

IT IS OBVIOUS TO RECALL THE FOLLOWING MAIN POINTS

In 1974, Leclerc^[1] immunizes the sea star *Asterina gibbosa* (asterids) with horseradish peroxidase (HRP) (four injections of 0.1 µg/ml HRP in saline solution were performed in 1 month). Then, immunocytochemical reactions were realized by first.

- Incubation in the antigenic solution of the axial organ (the primitive lymphoid organ of asterids)^[1]

- Revelation of the obtained precipitate by diaminobenzidine
- Observations of the *A. gibbosa* plasma-lymphocytes in transmission electron microscope.

RESULTS

We have observed sea star lymphocytes in 1974^[1] so invertebrate ones and plasma-lymphocytes which were labeled

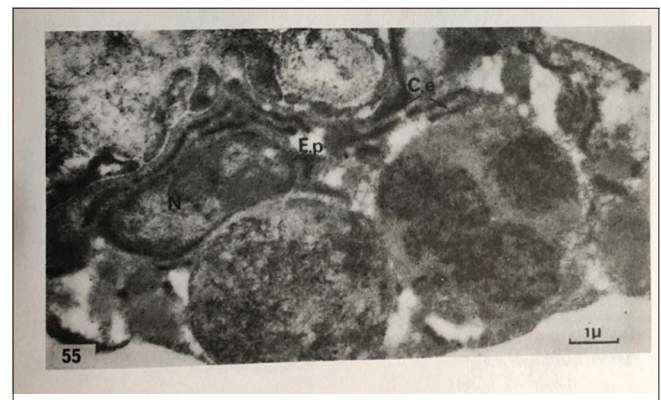


Figure 1: Sea star «anti-HRP antibody». Note the nucleus (N), the perinuclear space (EP) the rough ergastoplasm which are labelled

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(immunoprecipitates revealed by diaminobenzidine) specifically: The anti-HRP [Figure 1] labeling occurs at the level of perinuclear space, rough reticulum ergastoplasm, and Golgi apparatus.

In 2011–2019, genomic studies assert the evidence of the anti-HRP: Invertebrate primitive antibody.^[2,3] It seems fundamental to recall that data.

CONCLUSION

In 2011-2019 genomic studies assert the evidence of the anti-HRP:IPA (Invertebrate Primitive Antibody). We may conclude Adaptive immunity exists in Invertebrates. (Ref. 2 and 3): It seems fundamental to recall that data.

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