**APIDOLOGIE**

**Pesticide induced oxidative stress in laboratory and field populations of native honey bees along intensive agricultural landscapes in two Eastern Indian states**

Priyadarshini Chakrabarti, Santanu Rana, Sagartirtha Sarkar, Barbara Smith, Parthiba Basu\*

\* Corresponding author :

Department of Zoology, University of Calcutta, 35, B.C. Road, Kolkata - 700019, India

bparthib@gmail.com

**SUPPLEMENTARY FIGURE LEGENDS:**

**Supplementary figure 1.** Climographs showing rainfall (precipitation) in mm, average high and low temperatures in º C for (A) High intensity cropping site (HIC) in West Bengal; (B) Low intensity cropping site (LIC) in West Bengal; (c) High intensity cropping site (HIC) in Odisha; (D) Low intensity cropping site (LIC) in Odisha.

**Supplementary figure 2.** Flowchart showing experimental design for assessing change in activities of superoxide dismutase and catalase and change in protein expression of xanthine osidase for (A) *Apis dorsata* and (B) *Apis cerana*.

**SUPPLEMENTARY TABLE LEGENDS:**

**Supplementary table 1.** Crops grown by farmers throughout the year in all the field sites are shown in the table.

**Supplementary table 2.** (A) *Apis dorsata* survival table; (B) *Apis dorsata* hazard ratio with 95% confidence interval. Factors are treatmentsD0 (control), D1 (5 % OP + 1.5% SP + 5.5% ES), D2 (12.5% OP + 4 % SP + 15% ES), D3 (20% OP + 6.5% SP + 23.5% ES), D4 (25% OP + 8% SP + 29% ES) and D5 (30% OP + 10% SP + 35 % ES) where OP : organophosphorus pesticide; SP : synthetic pyrethroid; ES : endosulfan pesticide. Kaplan – Meier survival analyses performed using Medcalc (V 13.1.2).

**Supplementary table 3.** (A) *Apis cerana* survival table; (B) *Apis cerana* hazard ratio with 95% confidence interval. Factors are treatmentsD0 (control), D1 (5 % OP + 1.5% SP + 5.5% ES), D2 (12.5% OP + 4 % SP + 15% ES), D3 (20% OP + 6.5% SP + 23.5% ES), D4 (25% OP + 8% SP + 29% ES) and D5 (30% OP + 10% SP + 35 % ES) where OP : organophosphorus pesticide; SP : synthetic pyrethroid; ES : endosulfan pesticide. Kaplan – Meier survival analyses performed using Medcalc (V 13.1.2).