

A field-based quantitative analysis of sublethal effects of air pollution on pollinators

Dr. Dhandapany Perundurai from the Centre for Cardiovascular Biology and Disease (CCBD) and a Wellcome Trust DBT India Alliance intermediate Fellowship awardee, at DBT- Institute for Stem Cell Science & Regenerative Medicine (inStem), Bengaluru has made measurements on the cardiac functions of bees as part of a collaborative endeavour with lead author Shannon Olsson (National Centre for Biological Sciences, TIFR Bangalore), Axel Brockman (NCBS) and others to study air pollution in honey bees, especially in highly polluted areas. Bees from more polluted areas showed significant differences in heart rhythmicity, blood cell count, and the expression of genes coding for stress, immunity, and metabolism. Repeating these experiments with lab-reared *Drosophila*, author found similar effects, suggesting that the impact of air pollution is not species-specific nor likely the result of other environmental factors.

The research findings '*A field-based quantitative analysis of sublethal effects of air pollution on pollinators*' were recently published in *Proceedings of the National Academy of Sciences (PNAS)*. This work has been further featured in various newspapers last week like The Hindustan Times, The Times of India, and The Bangalore Mirror.

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