

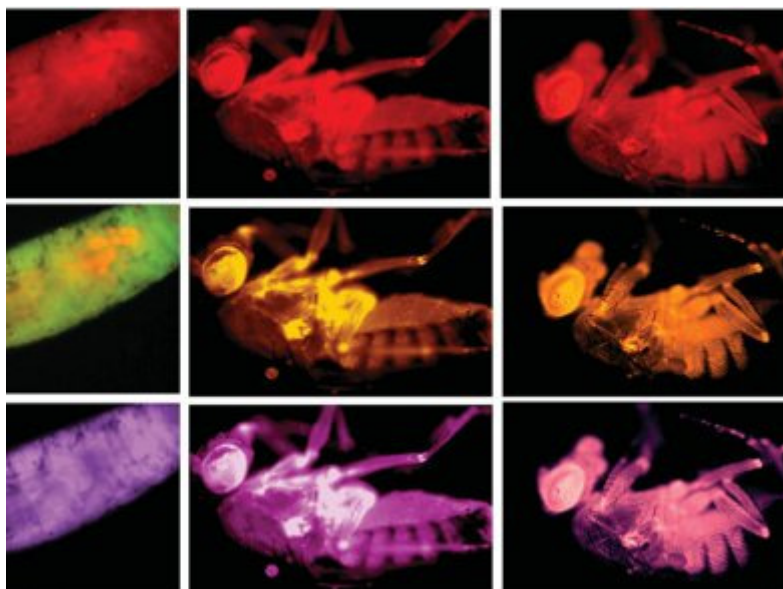
Feeding Fruit Flies So They Fluoresce

Author: ChemistryViews

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The fruit fly, *Drosophila melanogaster*, is one of the most prominent models to study developmental biology.

Bioimaging of flies can be difficult — the handling of flies inside an NMR tube has been described as a very tricky job. Another option is optical imaging using fluorescent nanomaterials as contrast agents. These need to be introduced by intravenous/intramuscular injection or by gene translation, both of which can be difficult and time consuming.

Sabyasachi Sarkar and colleagues, Indian Institute of Technology, Kanpur, have developed a much simpler way to introduce fluorescent nanomaterials into fruit flies. They use water-soluble carbon nano-onions made from wood waste. The nano-onions are added to the fruit flies' food and ingested orally by the flies. Just 4 ppm of nano-onions allowed the optical fluorescence microscopy imaging of all the stages of the fruit fly life cycle. The fluorescent fruit flies showed no toxic effects — upon withdrawal of the nano-onions from the food, they excreted the fluorescing material and continued to proliferate to the next generation, demonstrating a return to their normal lives.

This technique may be used in the easy, noninvasive image-based studies of other animals, and could ultimately be extended to human beings.

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[Carbon Nano-onions for Imaging the Life Cycle of *Drosophila Melanogaster*](#)

M. Ghosh, S. K. Sonkar, M. Saxena, S. Sarkar,
Small 2011.

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