

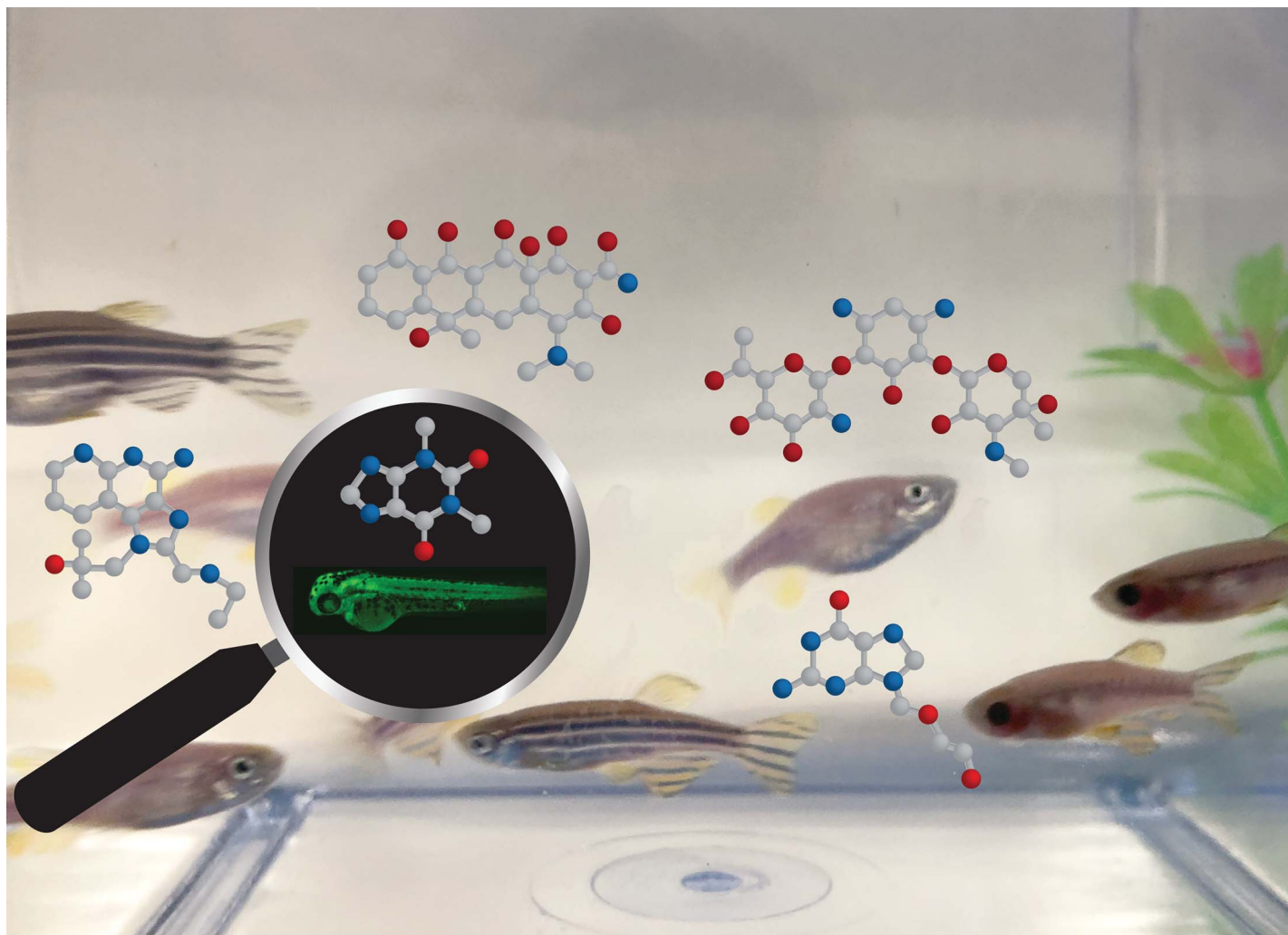
RSC Applied Polymers

**The application of polymers,
both natural and synthetic**

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**Fundamental questions
Elemental answers**

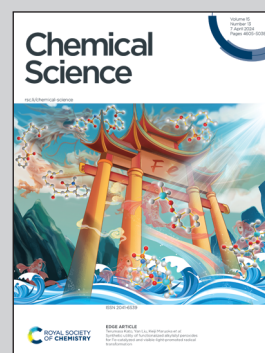


Showcasing research from Professor McKeague's laboratory, McGill University, Canada in collaboration with Professor Mruk's laboratory, East Carolina University, USA.

Non-invasive single cell aptasensing in live cells and animals

The McKeague and Mruk labs developed biosensors for tracking diverse drugs in living cells and animals. The biosensors combine the ability of nucleic acid aptamers to sense specific molecules with the easy-to-image properties of fluorescent proteins. Six highly specific aptasensors were genetically encoded, facilitating the production of the first transgenic vertebrate harboring a genomic aptasensor. These encoded aptasensors enabled sensitive and long-term studies of drug cellular uptake throughout the lifespan of an animal. Artwork by Prof. Karen Mruk.

As featured in:



See Maureen McKeague *et al.*,
Chem. Sci., 2024, **15**, 4770.