Straight to the tumour

A new delivery system that directs cancer drugs to tumours virtually anywhere in the body should start human testing this year. The new delivery technique, which could dramatically reduce the side-effects of chemotherapy, uses fragments of bacteria to target a tumour, avoiding the need to flood the patient's body with toxic drugs.

Himanshu Brahmbhatt and Jennifer MacDiarmid of Engeneic, in Australia, use *Salmonella enterica* and *E. coli*, making them divide at their centres, instead of at their ends. This produces small buds of cytoplasm called ‘Engeneic delivery vehicles' or EDVs. These EDVs are repeatedly washed to remove toxins – they have no chromosomes and are not living, are easy to make and can be loaded with chemicals. They are made target-specific using monoclonal antibodies connected via a linker molecule. One of the antibodies attaches to the EDVs surface, while its partner is specific to a protein on the target tumour. So far results in mice and dogs have been promising and the EDVs can carry multiple drugs, which may be more effective than the usual drug combinations that are used at present.

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