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SARS virus entry into cells involves lipid rafts

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Lipid rafts have a key role when host cells are invaded by the SARS virus, suggests a paper published online in *Cell Research* this week. The rafts – cholesterol-enriched sections of the cell membrane – could be a potential target for treating SARS by blocking virus entry into cells.

Recent studies have disagreed about how the SARS virus enters host cells. Chengyu Jiang and colleagues use a different approach to show that it infiltrates cells through receptor-dependent, pH-sensitive endocytosis – a process whereby the cell membrane folds inwards and engulfs substances in order to take them into the cell. They show that the specific endocytic pathway used to do this is independent of the protein clathrin and the small vesicles of the plasma membrane known as caveolae, but rather it involves lipid rafts.

SARS emerged as a global epidemic in winter 2002–2003, leading to more than 700 deaths and 8,000 probable diagnoses. Re-emergence of SARS remains a global threat, and many pathological aspects of this virus are still uncharacterized. These new insights point to a potential way of treating SARS by inhibiting virus entry.

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