Bioorthogonal chemistry illuminates the cell

1 Bertozzi fed cells with a modified sugar with an azide on it. The azide functioned as a type of molecular handle.

2 The modified sugar was incorporated into glycans – special carbohydrates located on the surface of cells.

3 In the next step, Bertozzi used an alkyne that was forced into a ring-shaped molecule. The alkyne clicked with the azide.

4 A fluorescent green molecule sat on the ring-shaped molecule. This allowed Bertozzi to track the glycans on the cell’s surface.

Bertozzi used the strain-promoted click reaction to track glycans. They have a green glow in the picture. The cell nucleus is coloured blue. Thanks to the glycans’ green glow, Bertozzi was able to follow them in the cell.

Image from *Proc Natl Acad Sci USA* (2007) 104:16793–16797

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