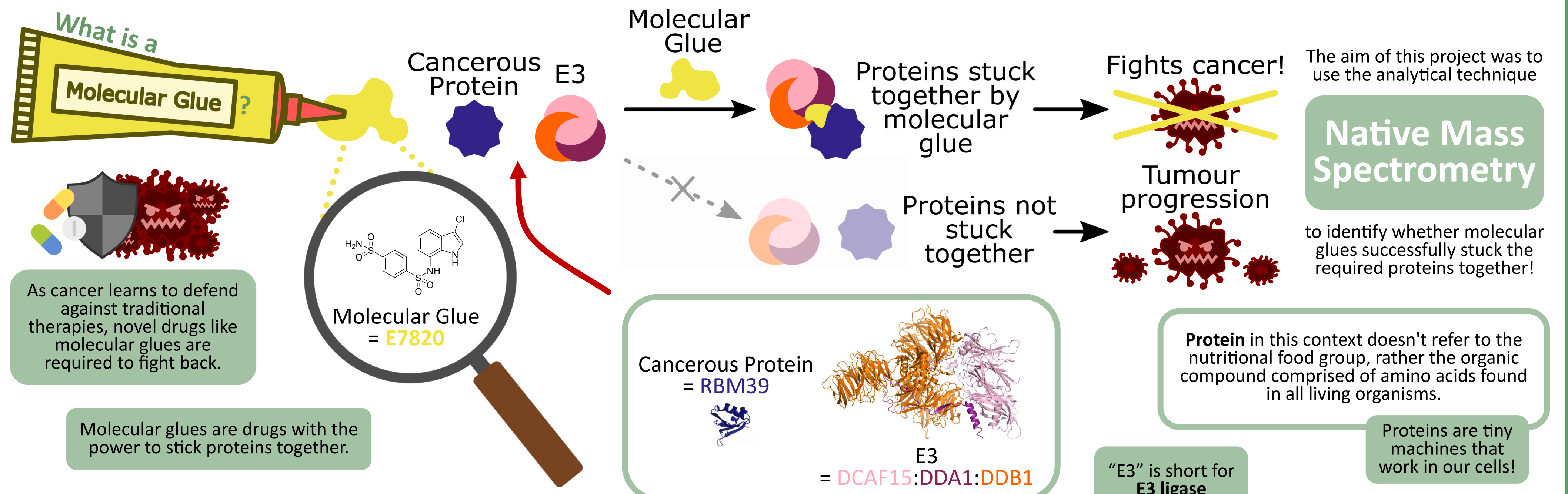
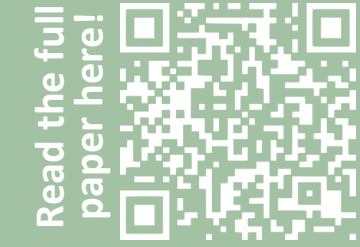


# Cancerous Proteins Find Themselves in a Sticky Situation – Investigating Molecular Glues as Cancer Therapies

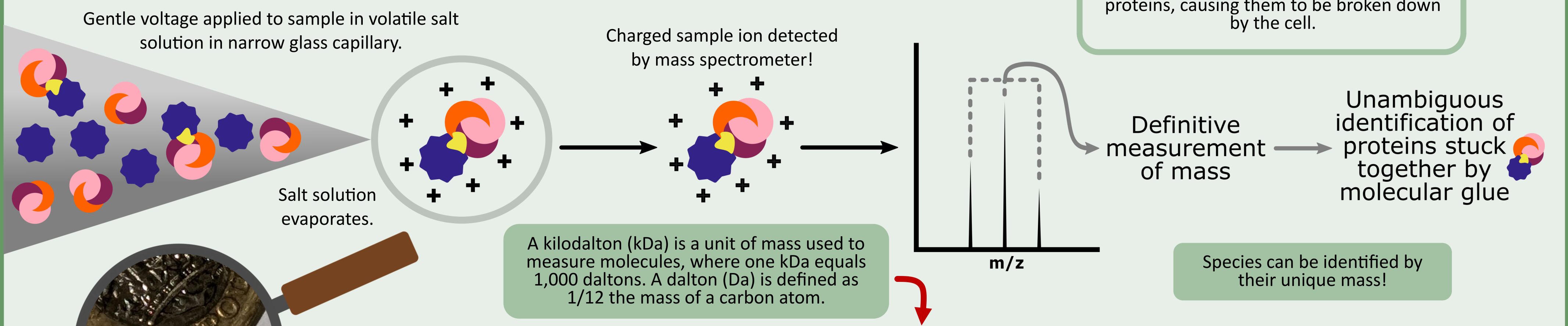
Cara Jackson<sup>1</sup>, Rebecca Beveridge<sup>1</sup>

<sup>1</sup>Department of Pure and Applied Chemistry, University of Strathclyde, Glasgow

✉ cara.jackson.2017@uni.strath.ac.uk



## How does a native mass spectrometry experiment work?

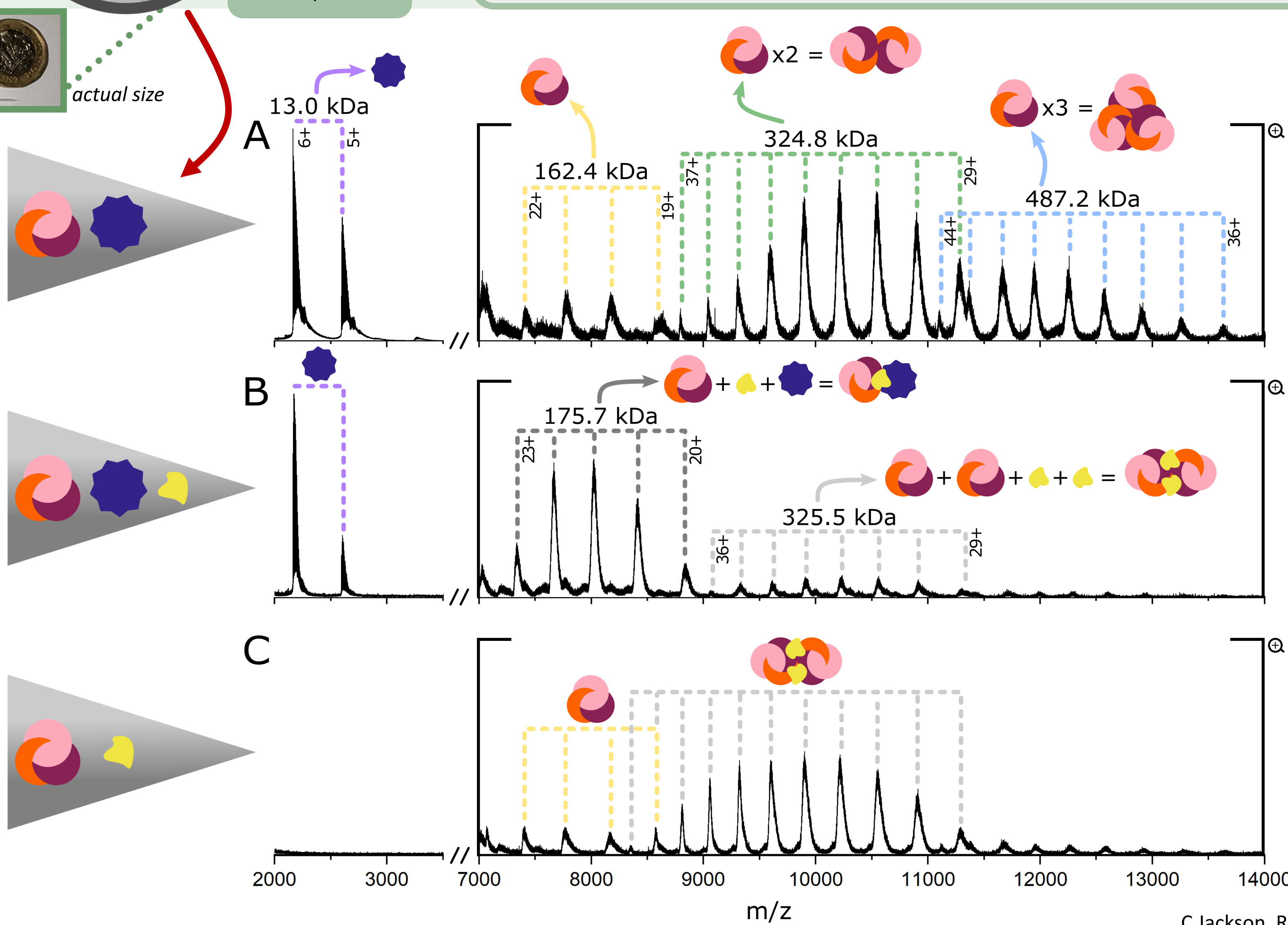


**What masses are present?**

- 162.4 kDa
- 13.0 kDa
- 336.4 Da (~0.3 kDa)

The glue is **much smaller** than the proteins!

What is in each sample?



## Our Findings:

Without molecular glue present, the two proteins **do not interact**. The E3 exists mainly as a **dimer** (two copies bound together) which was **not previously known**.

When molecular glue is present, the cancerous protein, E3, and glue can all be observed **sticking together**. The E3 mainly exists as a **monomer** (one copy). Native mass spectrometry is **sensitive** enough to determine when two copies of the E3 bind to two molecular glues too!

Without the cancerous protein present, the E3 exists mainly as a **dimer** bound to molecular glue, which was **also not previously known**.

C Jackson, R Beveridge. *Analyst*, 2024, **149**, 3178-3185