

# Blood reveals origin of toxic substance

Mirjam de Bruin-Hoegée



## Background

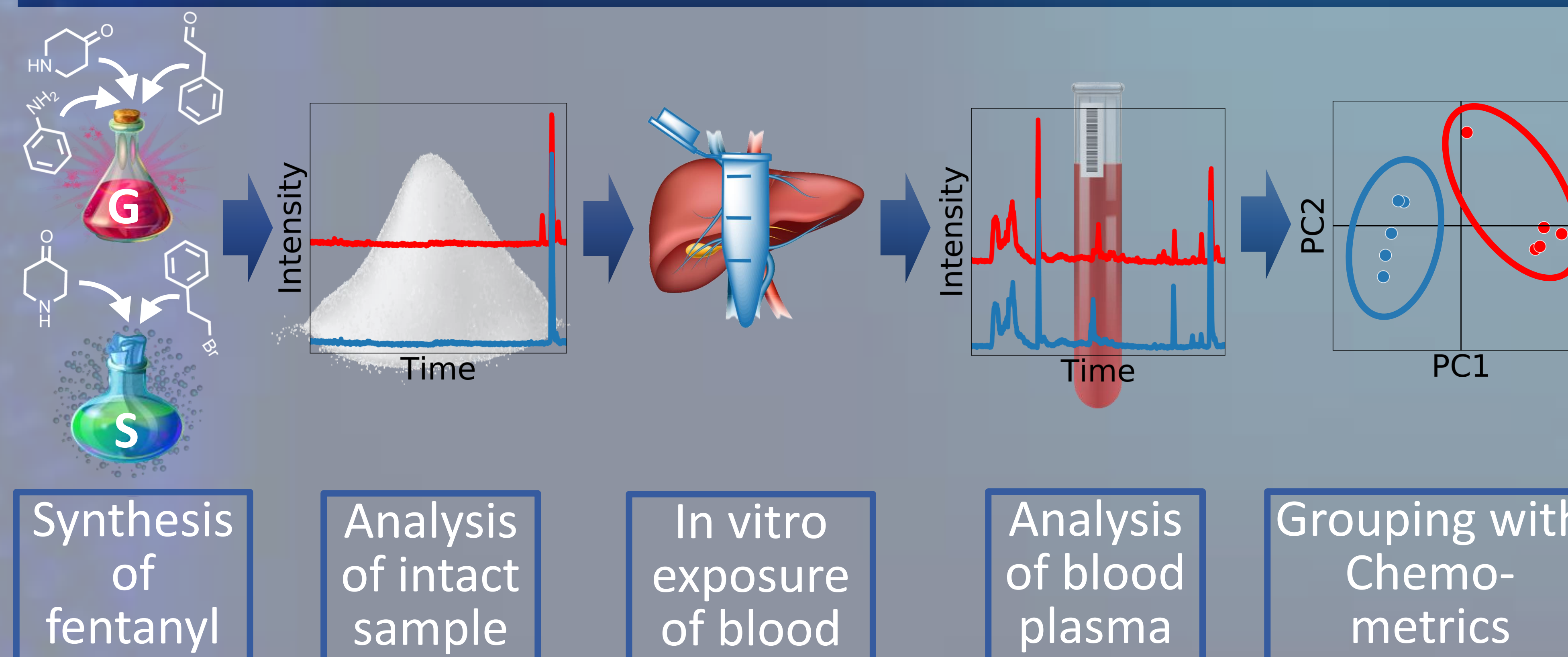
Fentanyl is a pain medication and a popular recreational drug. It is an emerging threat agent, due to its potency and wide availability.

## Approach

**Problem:** At a crime scene, it is often difficult to find intact traces of the chemical that was used.

**Question:** Is it possible to link the blood of a victim with the production route of the toxic chemical?

## Method & Results



## Main findings

- Characteristic marker chemicals of the production routes were found.
- Low levels were still detected.
- Two analysis techniques (GC-MS & LC-HRMS/MS) could be used.

## Conclusion

This work is a first step towards chemical attribution of biomedical samples, which can be used for forensic casework and intelligence purposes.