

## RP3 - Extraction of argument structures

### Research question:

- Occurrence of terms not a sufficient criteria for the relevance of a document
- Extraction of argument structures
- Challenges
  - Implicit reasoning [8]
  - Documents in several languages
  - Specific terminology
  - Individual style (shortened, spelling mistakes)

1 Konstante Befunde unter Dabrafenib und Trametinib, daher Fortführung der Therapie.

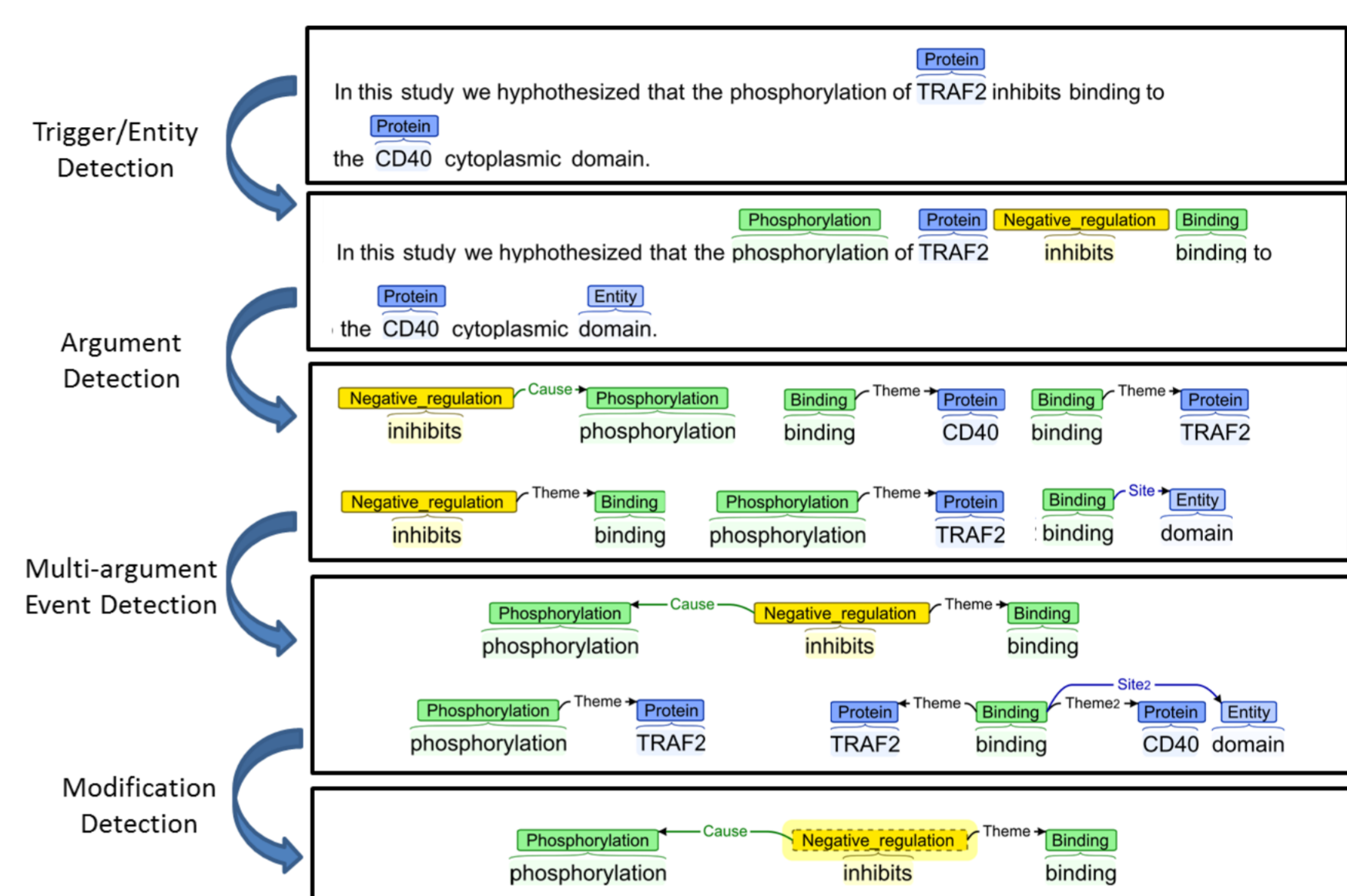
2 Größenzunahme unter Dabrafenib und Trametinib. Therapieabbruch.

3 Konstante Befunde unter Dabrafenib/Trametinib. Therapieabbruch wegen Nebenwirkungen.

Example annotations in a medical report

### State of the art:

- Extraction of explicit argumentation structures
- So far mainly in argumentative essays [7], social media [9], and medical diagnostics [6].
- Implicit reasoning still difficult
- Tools: (partial) semantic equivalence of statements [1,4].



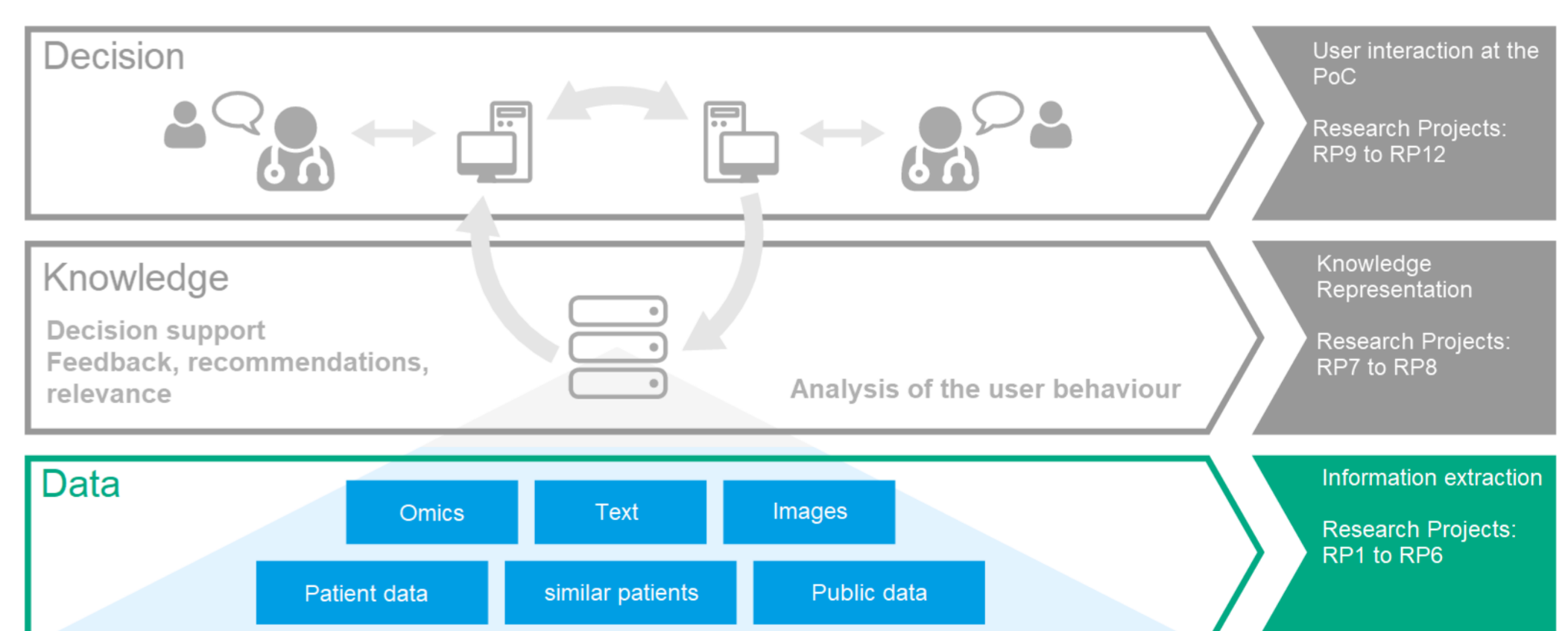
Extraktion von Argumenten in biomedizinischen Artikeln [5]

### Solution approach:

- Cooperation with FP2
  - Access to terminology annotated texts
- Creation of a reference corpus
  - Coverage of all relevant document classes
  - Annotation of argument structures
  - Publish as freely as possible (→ anonymization)
- Development and evaluation of extraction algorithms based on the corpus

### Integration:

- Integration into DKPro/UIMA text analysis architecture [2,3].
- Re-trainable for new data/application areas
- Connection via SHIP APP interface (JVM)



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