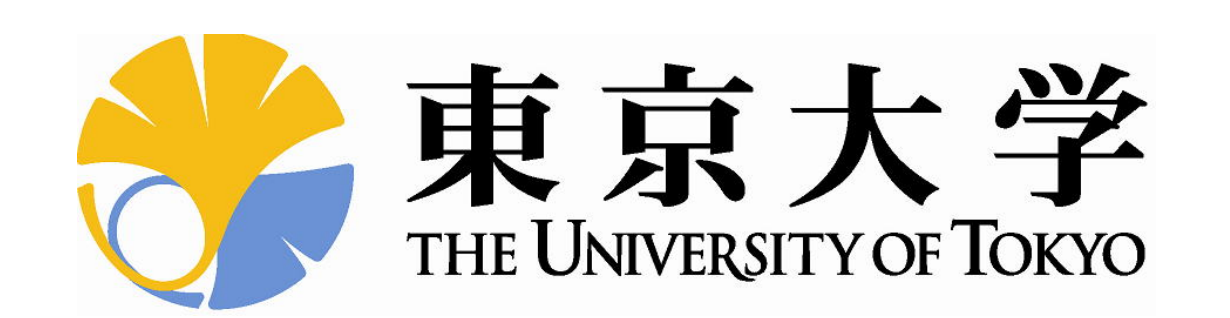


BioNLP Shared Task 2011: Supporting Resources

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Supporting Lexical Analysis

Previous work:

- Supplied for BioNLP Shared Task (ST) 2009 on Event Extraction (EE) to help participants in their efforts
- Resulted subsequent additional analysis and research efforts (Miwa et al. 2010, Buyko and Hahn 2010)

This work:

- Multitude of parsers and models
- Analyses from the supporting tasks to be used for EE
- Standardised and documented parsing pipeline

Parsers and Formats

Name	Format(s)	Model
Berkeley	PTB, SD, SDC, CoNLL-X	News
C&C	CCG, SD	Biomedical
Enju	HPSG, PTB, SD, SDC, CoNLL-X	Biomedical
GDep	CoNLL-X	Biomedical
McCJ	PTB, SD, SDC, CoNLL-X	Biomedical
Pro3Gres	Pro3Gres	Combination
Stanford	PTB, SD, SDC, CoNLL-X	Combination

Table: Parsers and the model and formats used. PTB: PennTreebank-style, SD: Stanford Dependency-style and SDC: Collapsed SD.

Additional Analyses

Task	Provider	Tool
Co-reference	University of Utah	Reconcile
Co-reference	University of Zürich	UZCRS
Co-reference	University of Turku	TEES
Relation Extraction	University of Turku	TEES

Table: Supporting task analyses provided. TEES: Turku Event Extraction System and UZCRS: University of Zürich Coreference Resolution System

Supporting Analyses Availability

Datasets and supporting analyses:

sites.google.com/site/bionlpst/

Parsing pipeline and documentation:

github.com/ninjin/

bionlp_st_2011_supporting/

Visualisation Examples

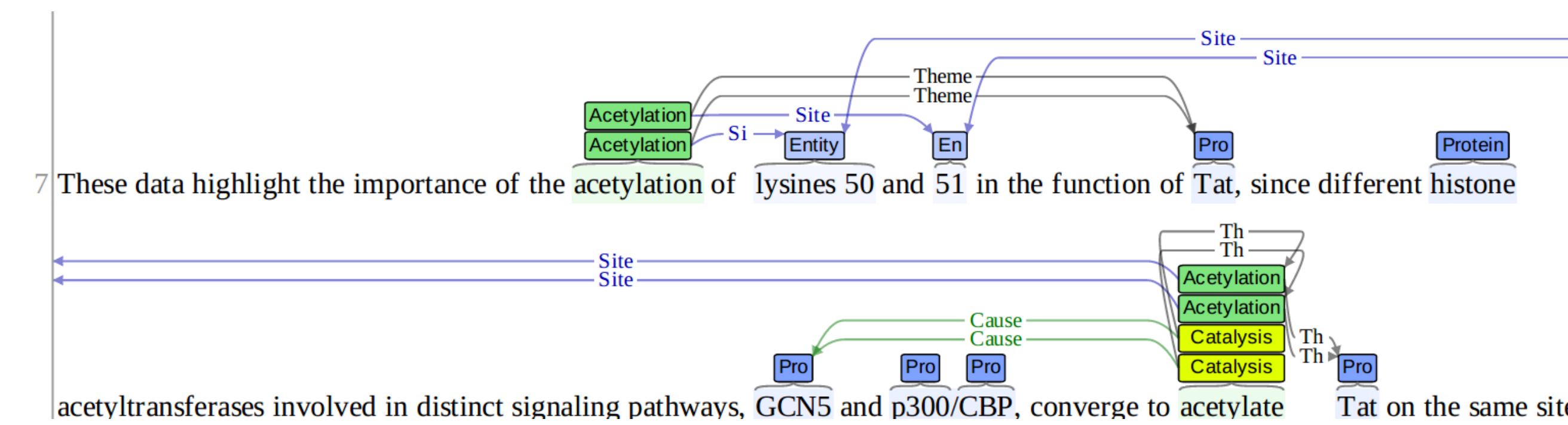


Figure: Visualisation using *stav*

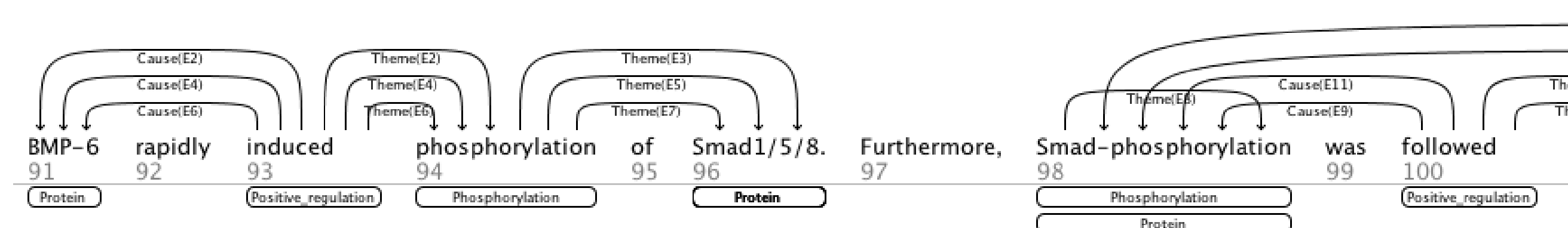


Figure: Visualisation using What's Wrong with My NLP

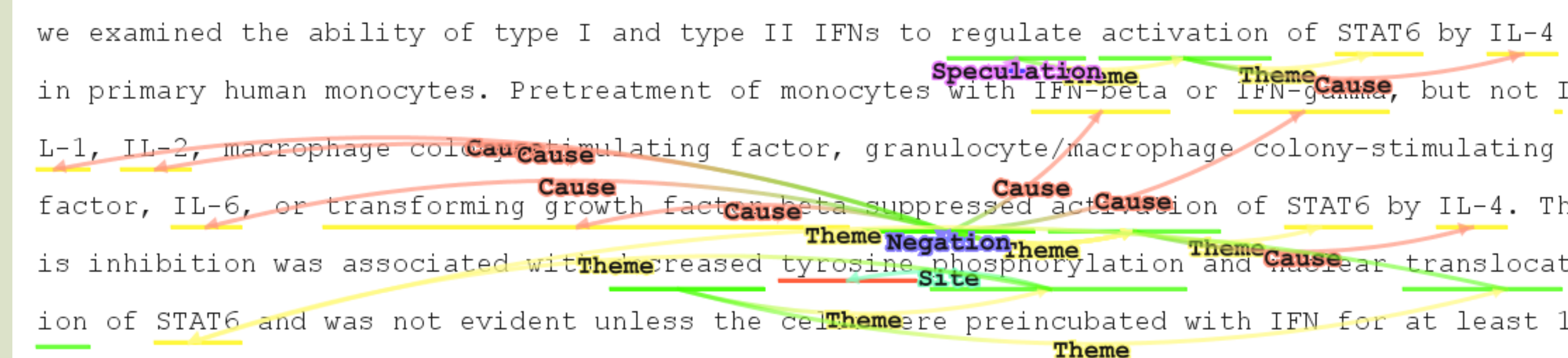


Figure: Visualisation using U-Compare

Evaluation Tools

Previous work:

- Evaluation tools provided for BioNLP 2009 ST
- Used by subsequent independent work (Miwa et al. 2010, Poon and Vanderwende 2010, Björne et al. 2010)

This work:

- Online and downloaded tools for verification to help participants during development
- Online evaluation of submissions
- Online logs used to verify participant progress

stav Text Annotation Visualiser (*stav*)

Goals:

- Graspable at a glance
- Annotations tightly coupled to the text
- Handle distributive readings (Figure below)
- No installation required
- “Publication quality” visualisation to include in publications

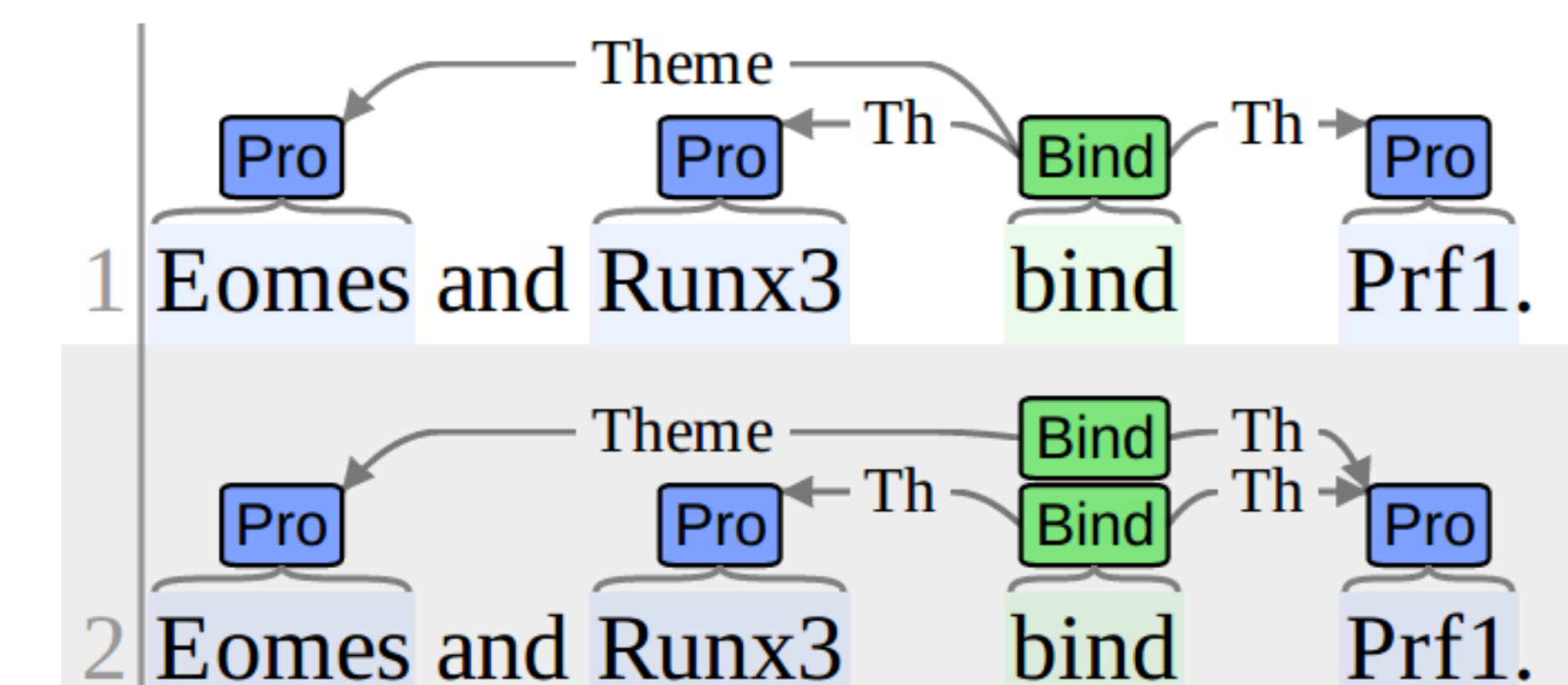


Figure: An illustration of collective (sentence 1) and distributive reading (sentence 2). “Theme” is abbreviated as “Th” and “Protein” as “Pro” when there is a lack of space

Technology used:

- JavaScript for interactivity
- jQuery Scalable Vector Graphics (SVG)
- Browser-based, supported by modern browsers such as Firefox and Chrome

Error Analysis Using *stav*

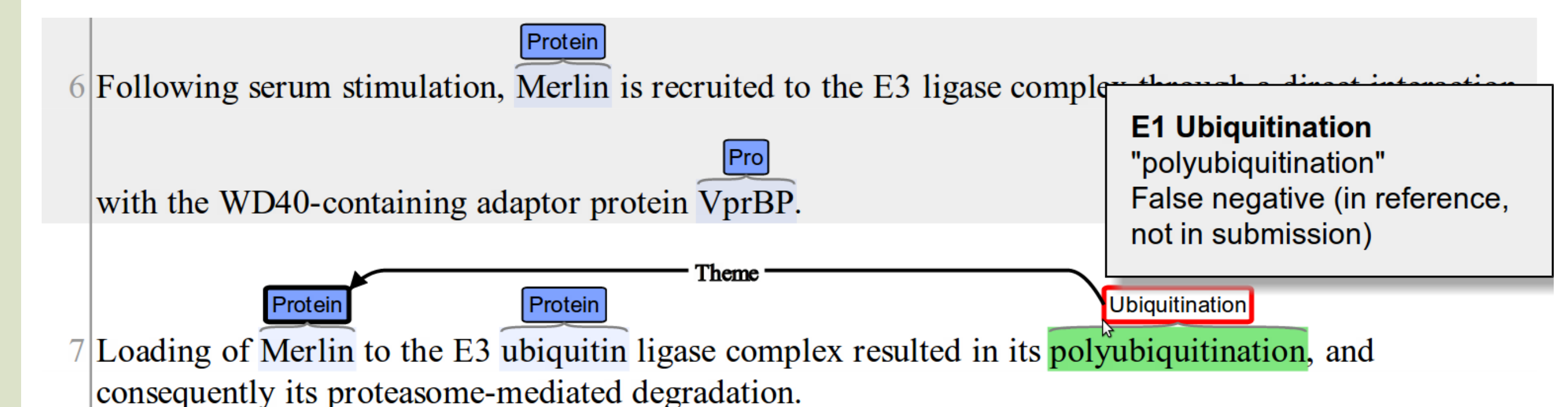


Figure: An example of a false negative illustrated by the evaluation tools in co-ordination with *stav*

Availability

stav software:

github.com/TsujiLaboratory/stav/