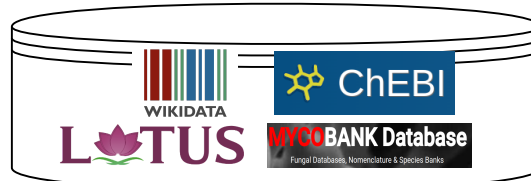


Structured
databases



Dataset

N = 246 Biological Relations

most bibliographic
references

< Chemical compound > is produced by < fungus >
< Entity 1 > is produced by < Entity 2 >

Evaluation dataset

$n_{\text{relations}} = 23$
 $n_{\text{entity}_1} = 10$

Task 1: Chemical compound definition generation

Task 2: Chemical-fungus relation determination via entity
generation

Prompt
engineering

Simple prompts

< Chemical compound > < generated text >

Context-based prompts

< Chemical compound > is a substance < generated text >

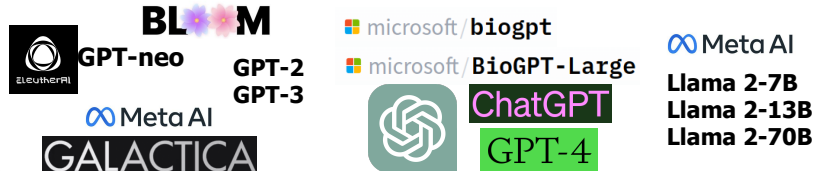
Simple prompts

< Chemical compound > is produced by < generated text >

Context-based prompts

< Chemical compound > is produced by fungus < generated text >

Large Language Models



Qualitative Evaluation

Fluency

Is the generated text syntactically
correct and scientifically styled?

Prompt-alignment

Is the generated text consistent
with input prompt?

Semantic Coherence

Is the generated text semantically
coherent?

Factuality

Is the generated text true,
supported by scientific literature or
trusted sources?

Specificity

Is the generated text aligned with
the prompt's abstraction level?