

Structural basis for NLP toxicity

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OF CHEMISTRY

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IN

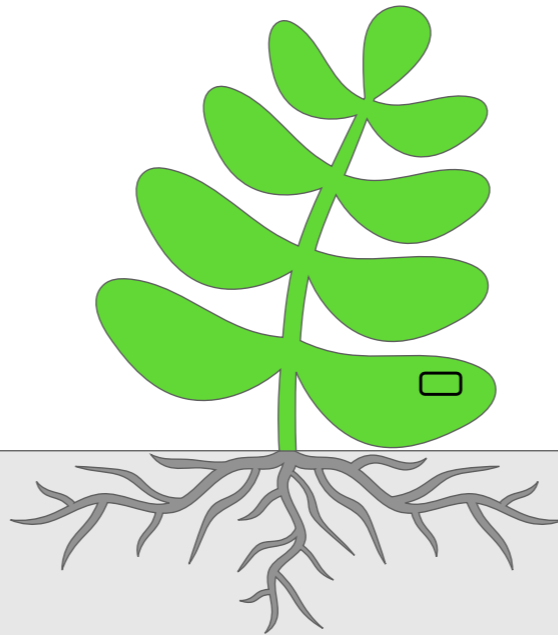


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Plant immune system

Abiotic stress

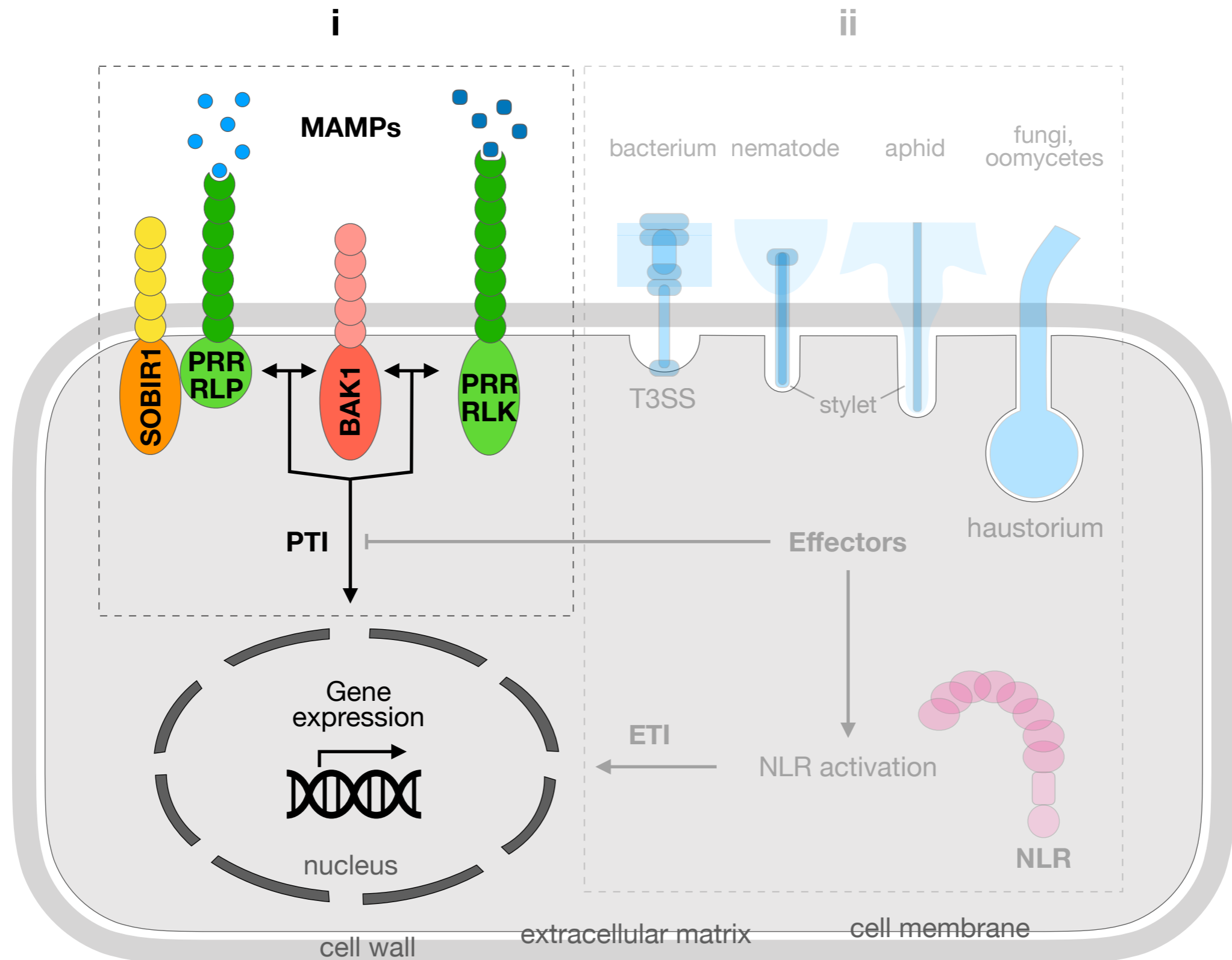
UV radiation
temperature
salt, pH
water stress



Biotic stress

patogens
herbivores

Plant immune system



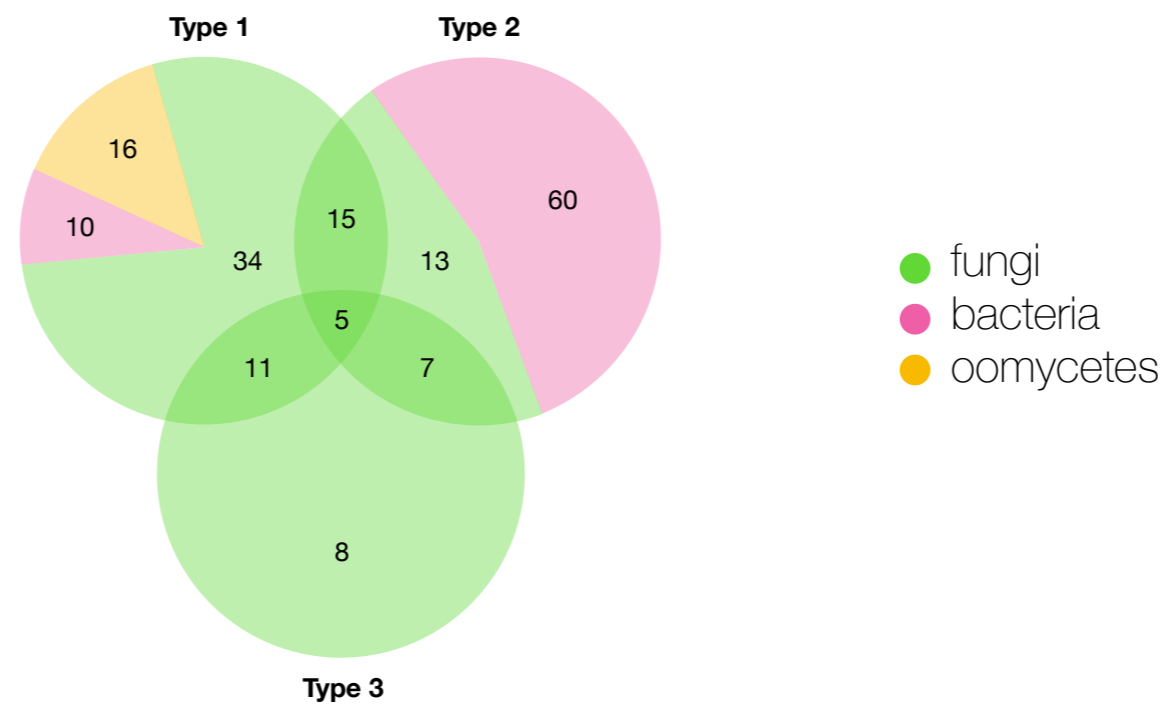
NLP proteins

*N*ecrosis- and ethylene-inducing peptide 1-*l*ike **p**roteins

ACTIVATION OF PLANT IMMUNE SYSTEM **PRR RLP23 SOBIR1 BAK1**

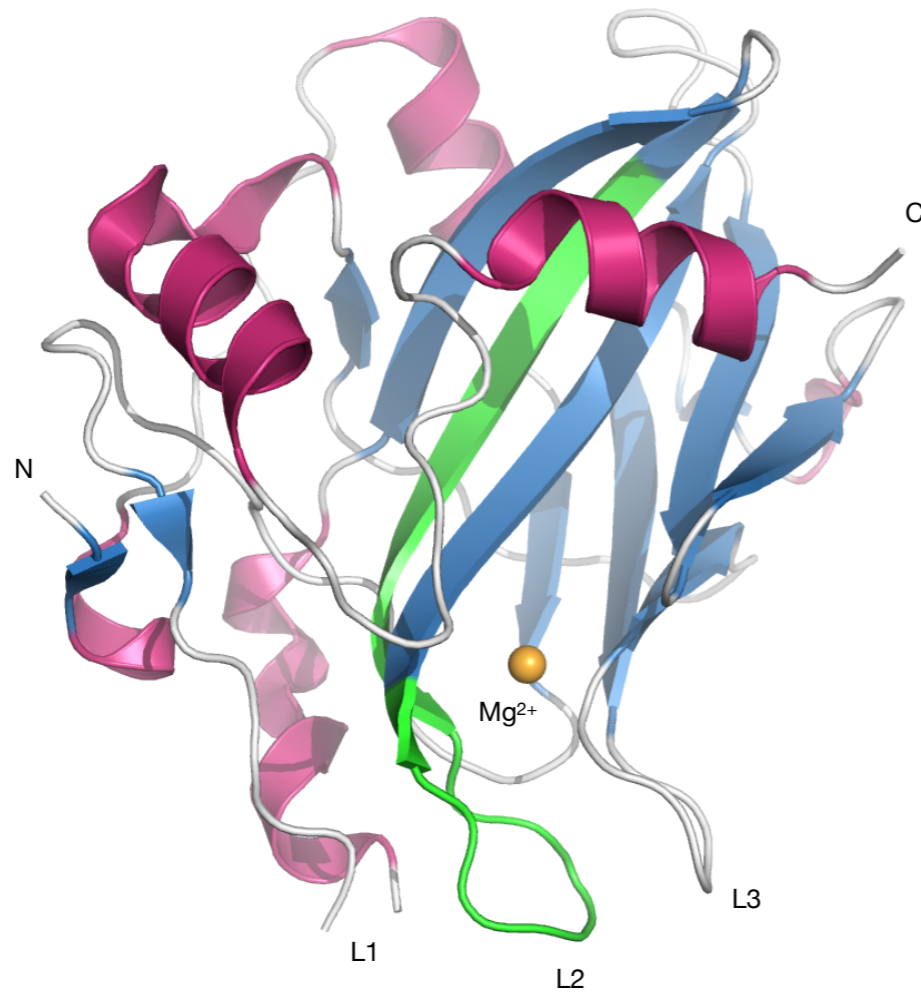
SECRETION **PHYTOPATHOGENIC MICROORGANISMS**

DUAL ROLE **LEAF NECROSIS IN DICOT PLANTS**

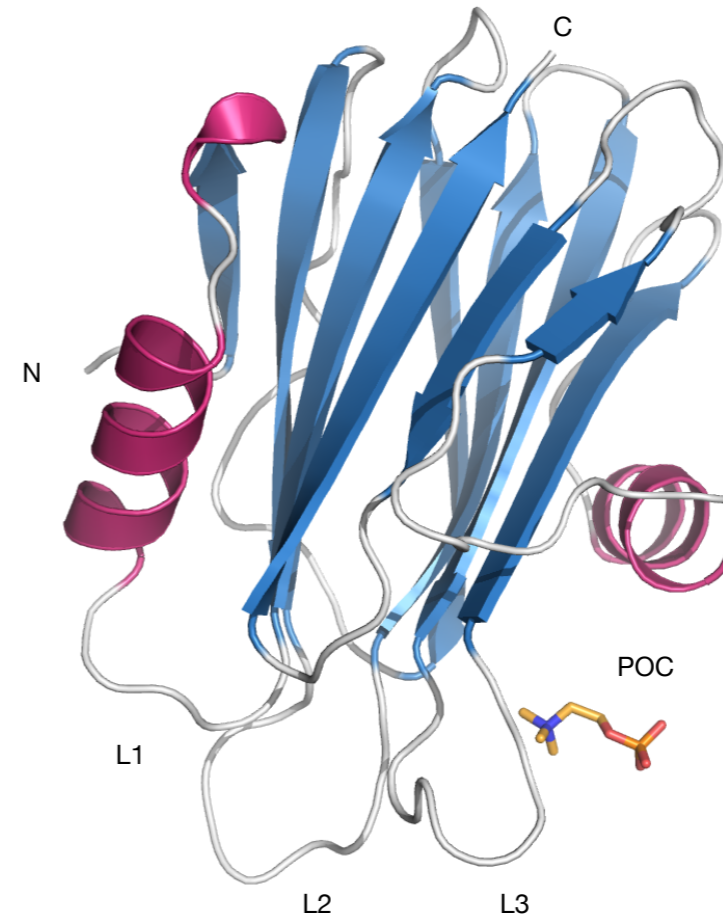


NLP proteins

*N*ecrosis- and ethylene-inducing peptide 1-*l*ike **p**roteins

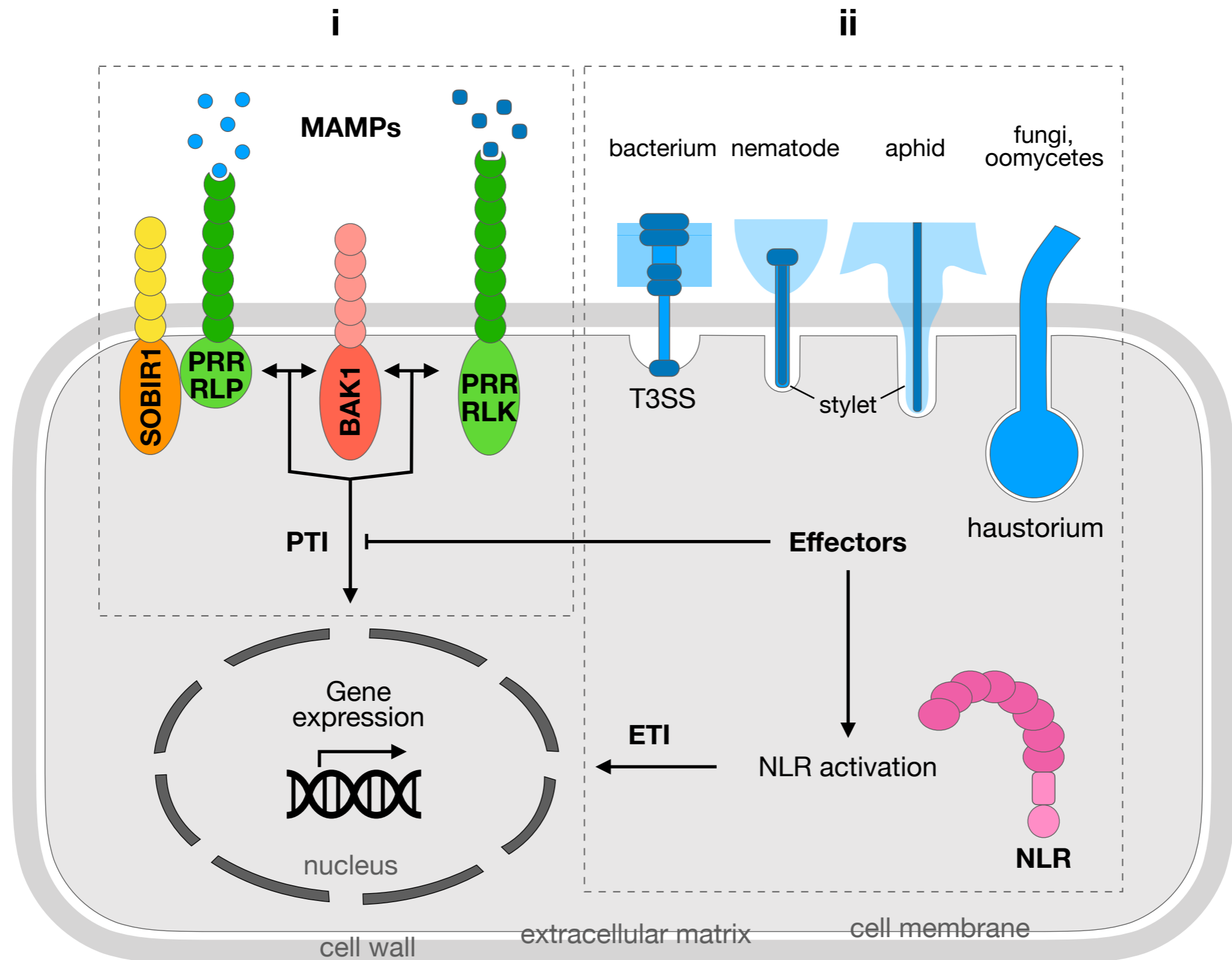


Type 1
NLP_{Pya}
Pythium aphanidermatum

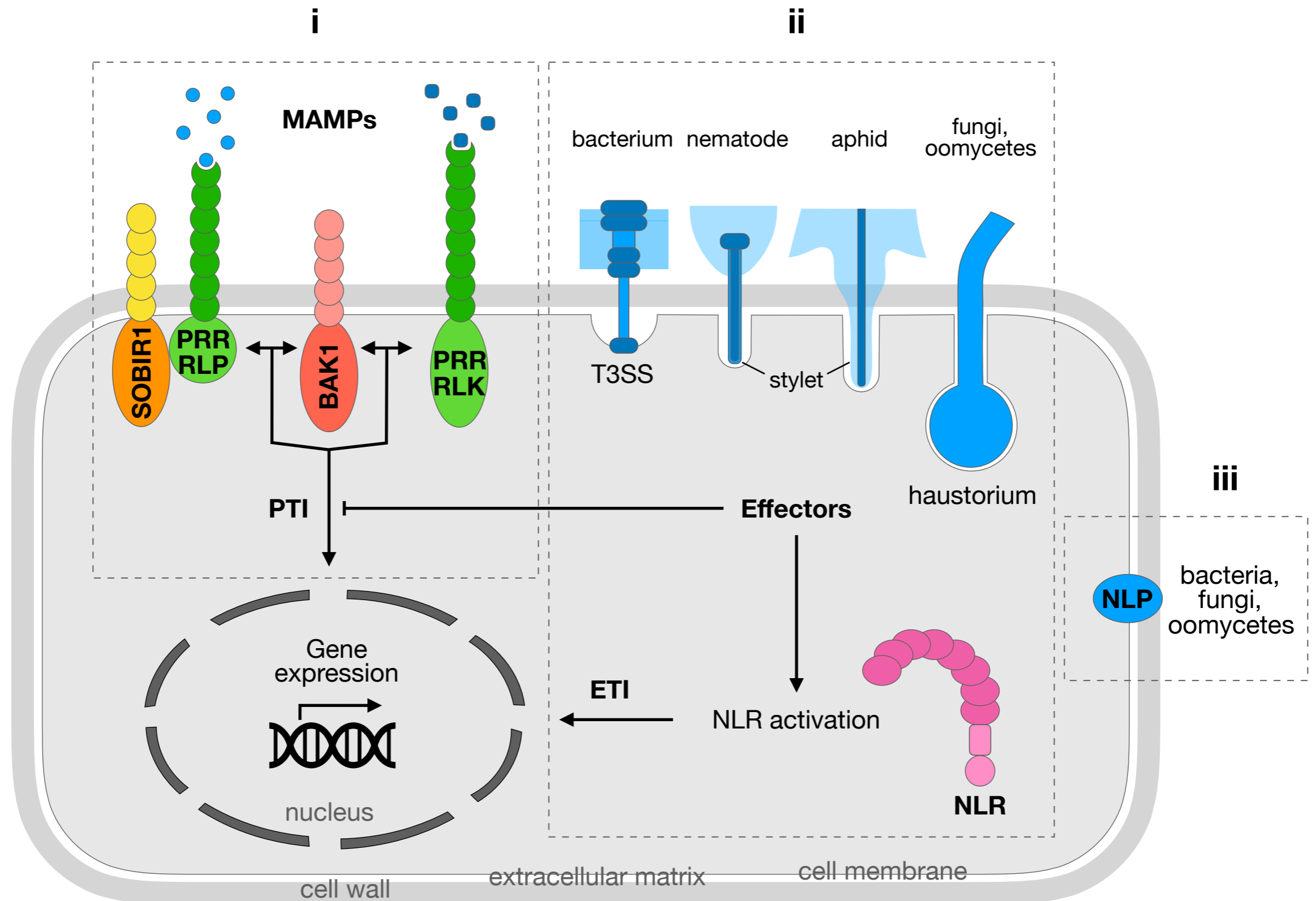


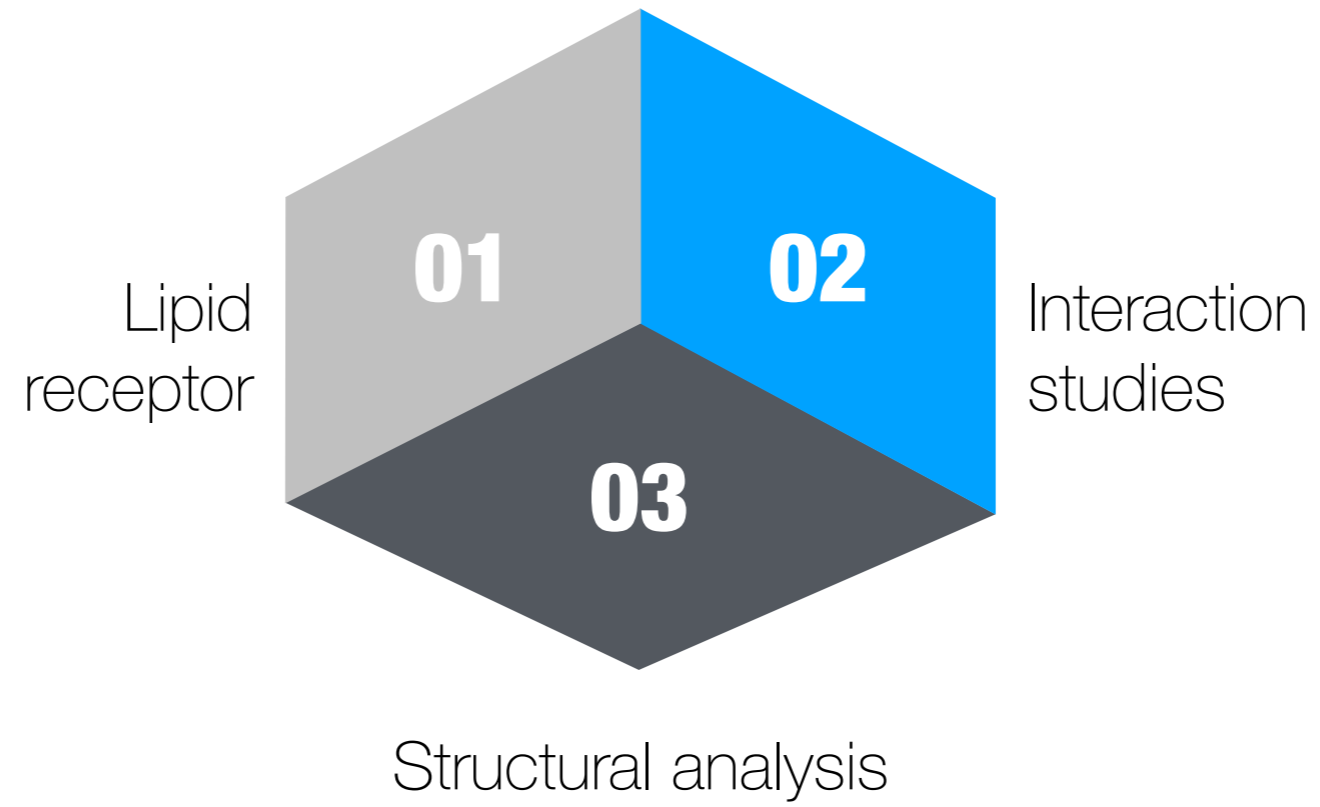
Actinoporin
Stycholysin II
Stichodactyla helianthus

Plant immune system



Plant immune system

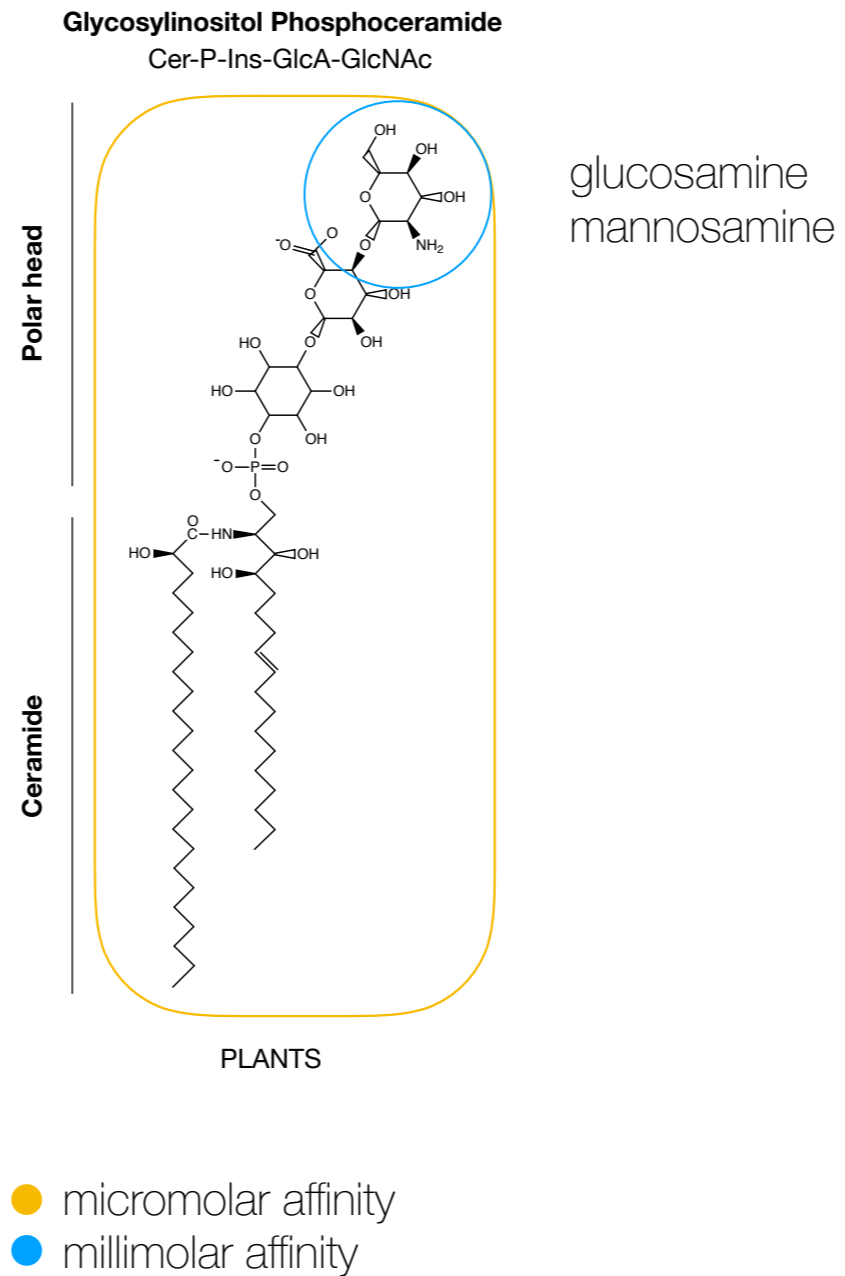




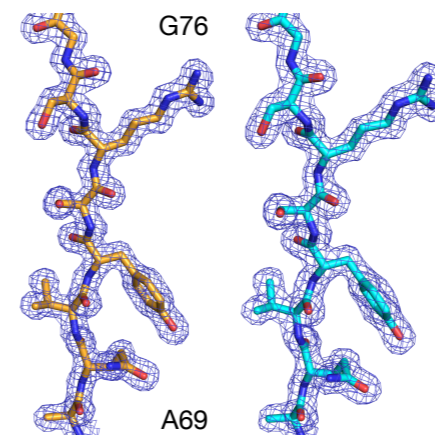
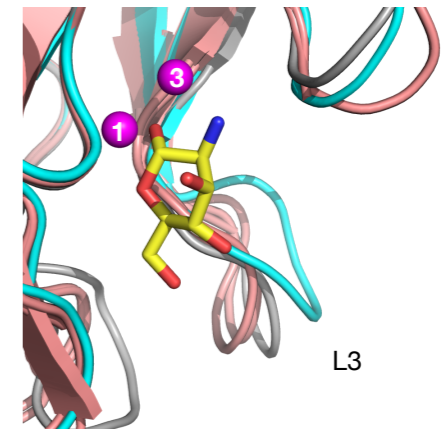
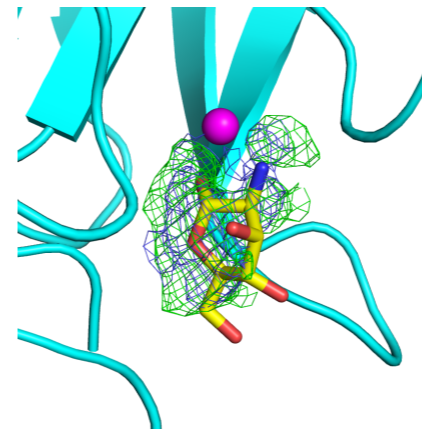
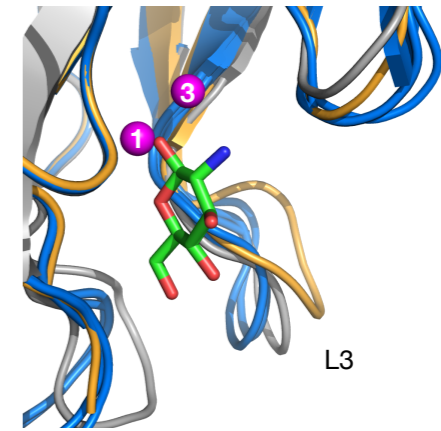
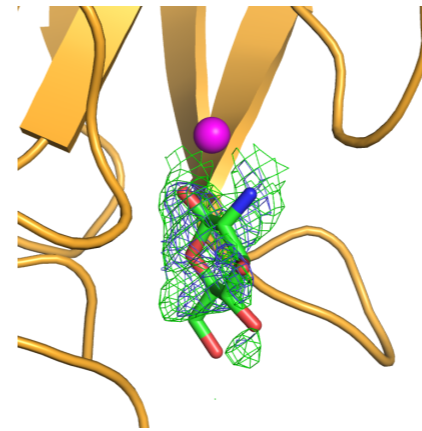
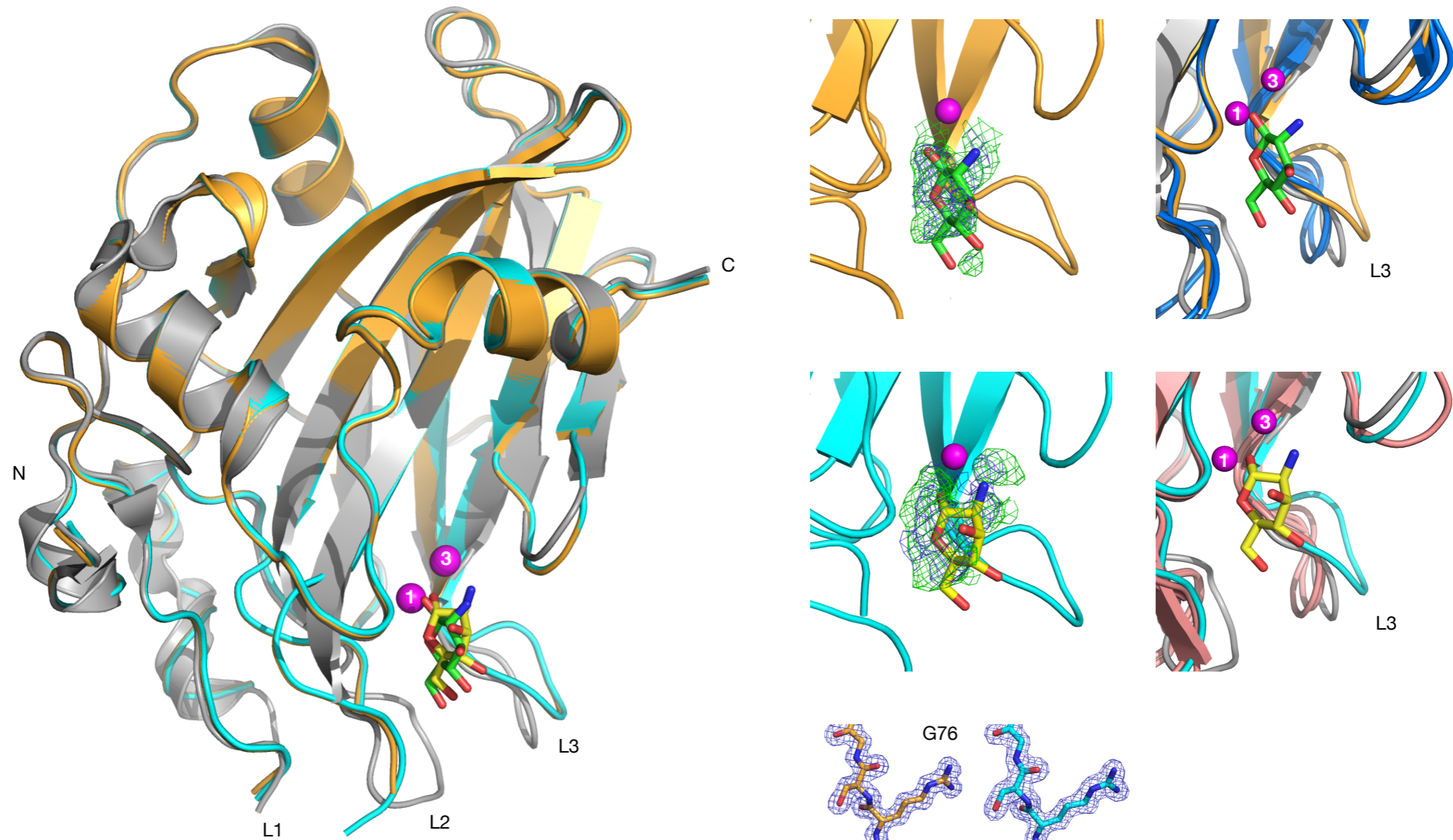


RESULTS

NLP protein toxicity mechanism

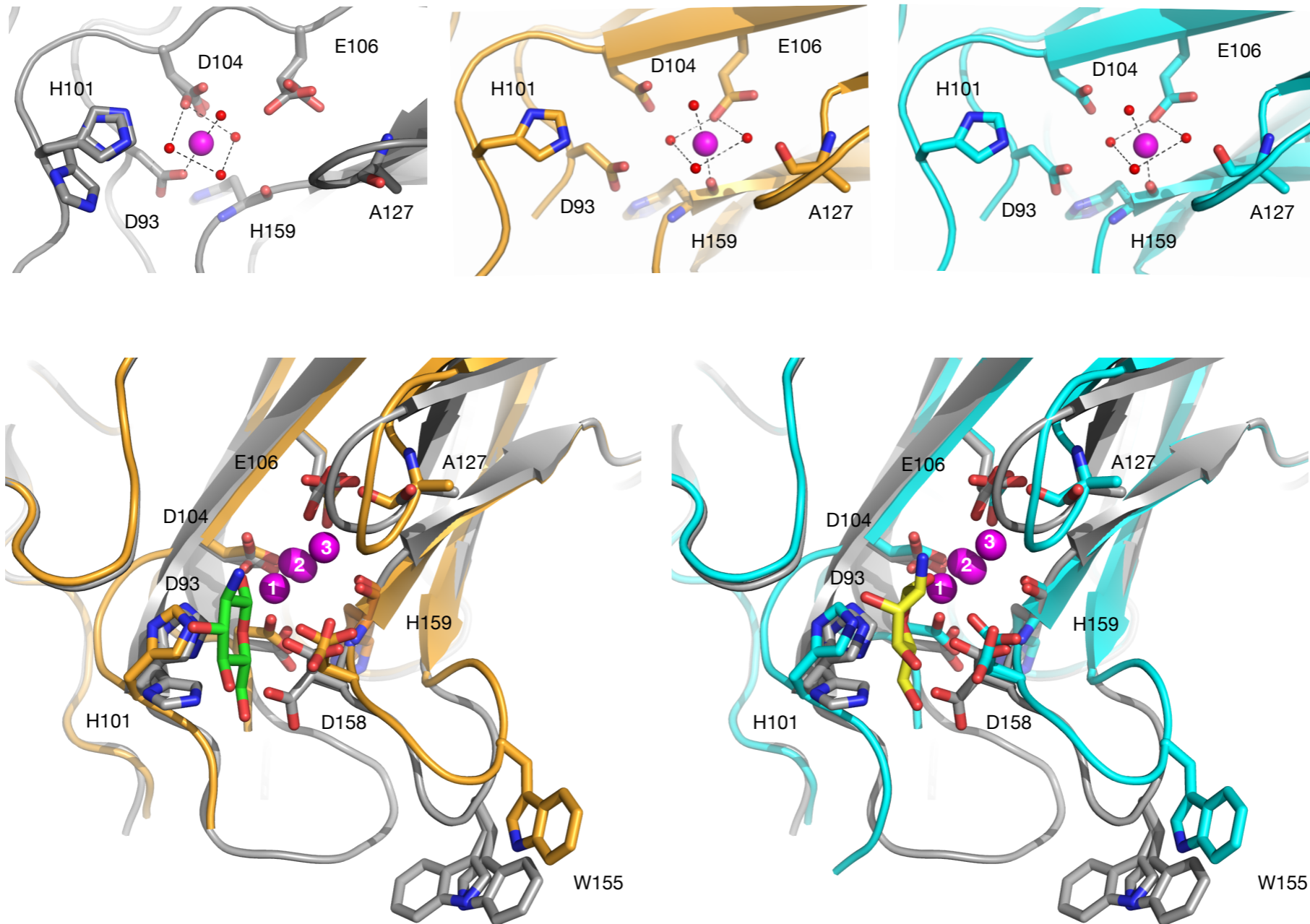


NLP protein toxicity mechanism



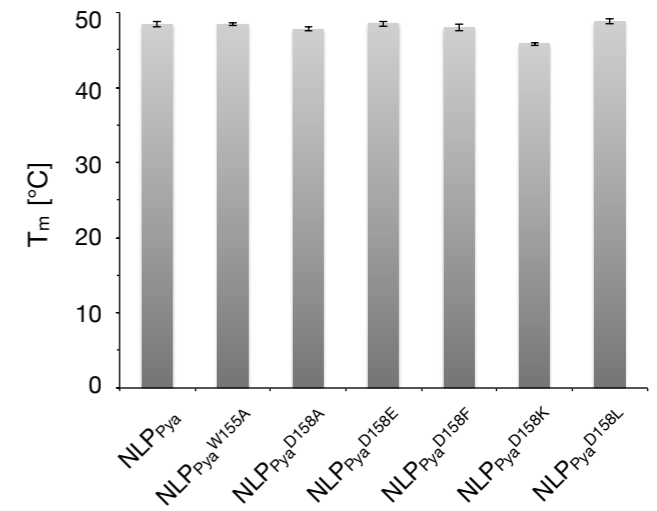
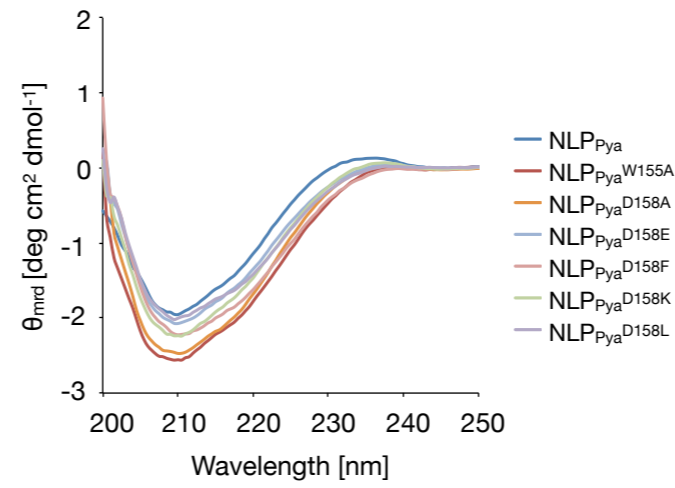
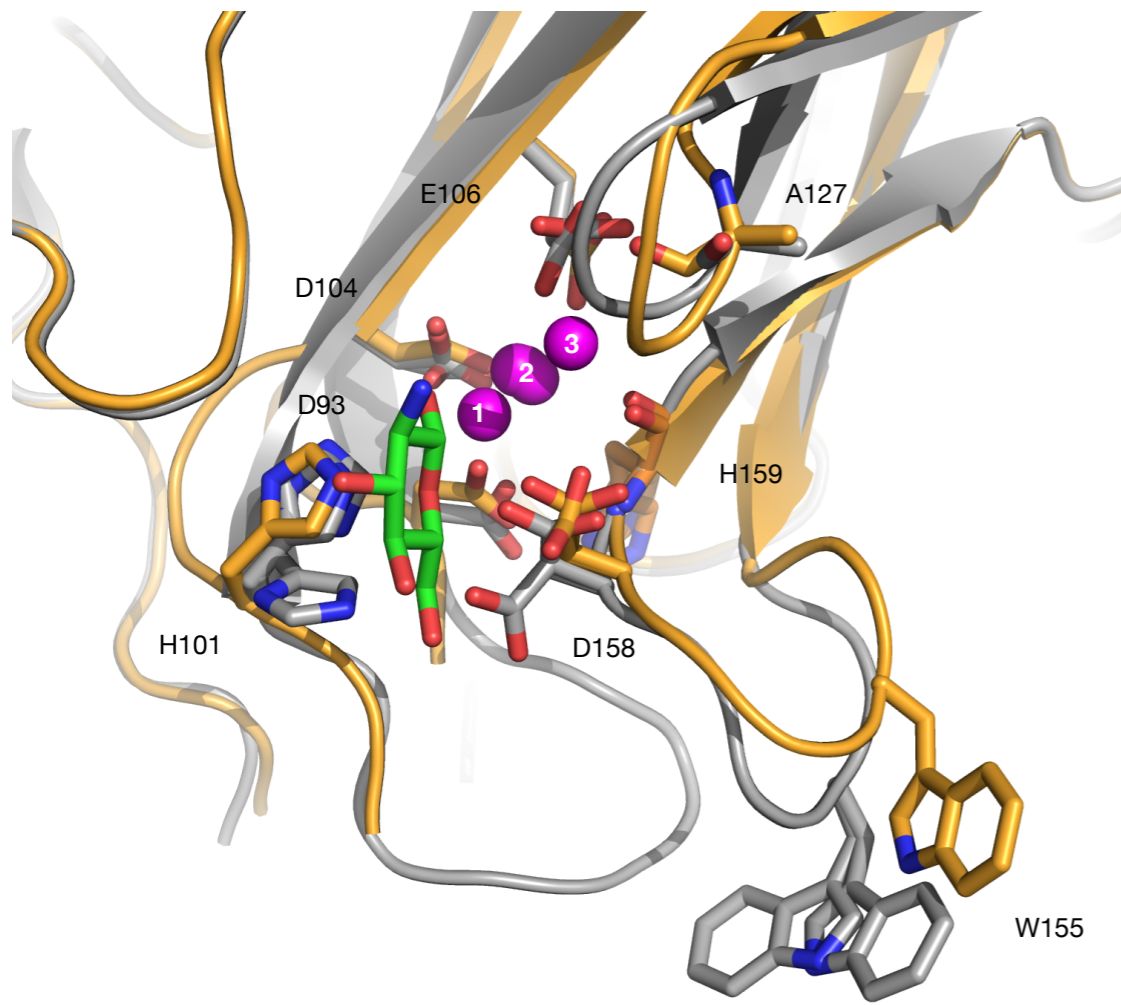
- apoNLP_{PyA}
- NLP_{PyA}-glucosamine
- NLP_{PyA}-mannosamine

NLP protein toxicity mechanism

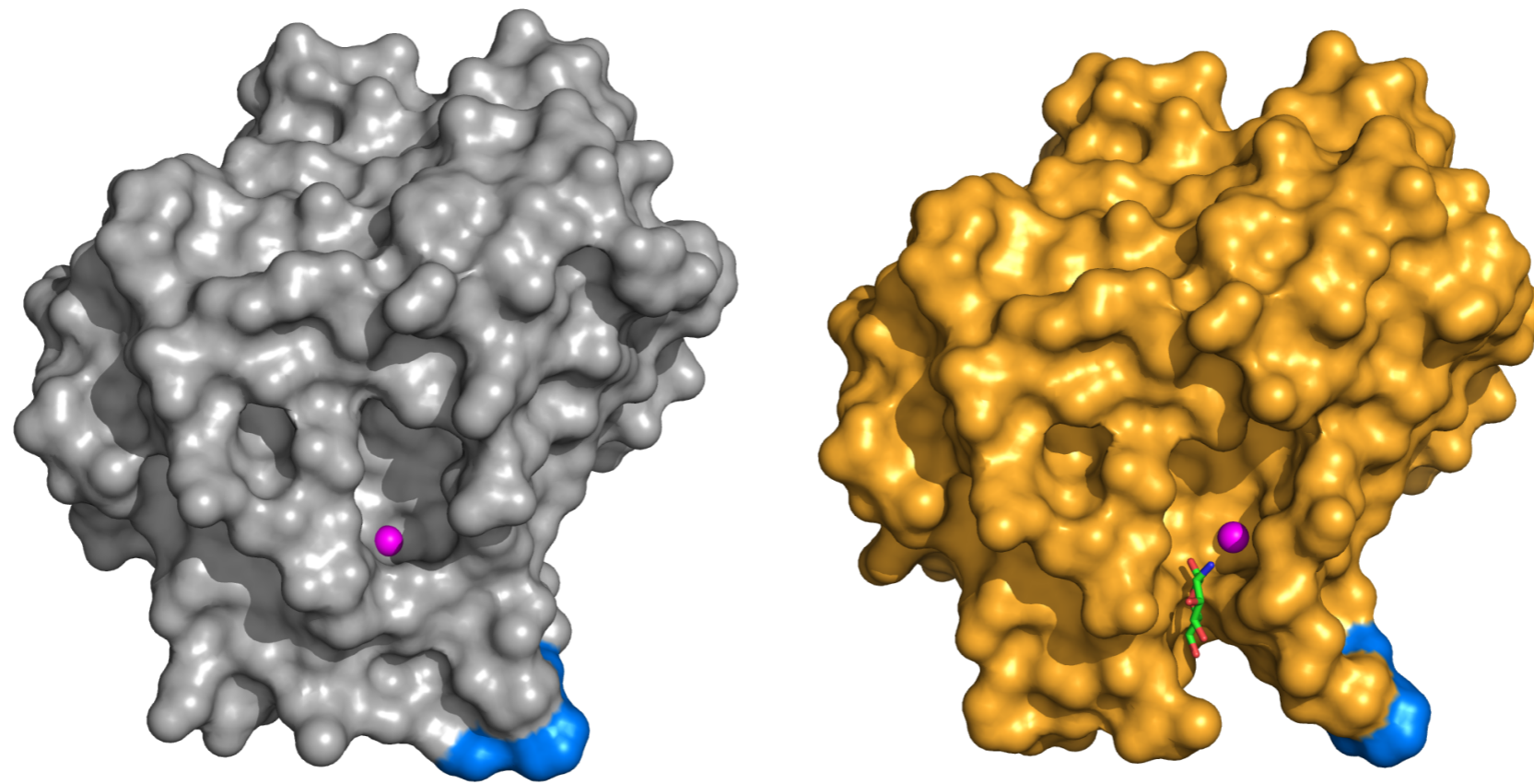


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NLP protein toxicity mechanism

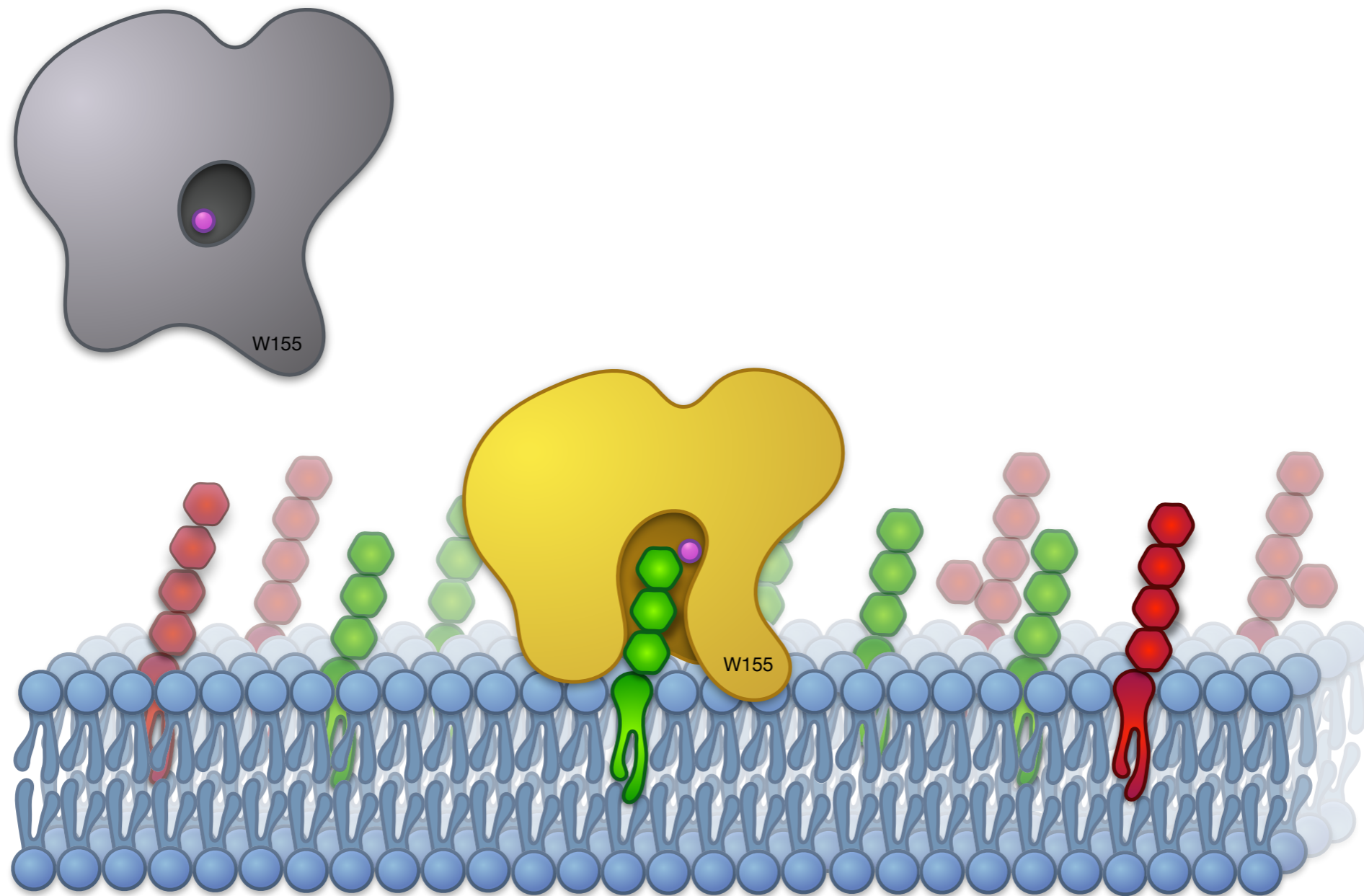


NLP protein toxicity mechanism



- apoNLP_{Pya}
- NLP_{Pya}-glucosamine

NLP protein toxicity mechanism



- apoNLP_{Pya}
- NLP_{Pya}-glucosamine



CONCLUSIONS

Natural killers of plant cells

Structural basis for NLP - plant membrane interaction.

#1

Explanation of NLP dicot plant selectivity.

#2

Phytopharmaceutical development.

#3

Acknowledgements

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