

# AUTOPHAGY IN THE ETIOLOGY OF ACUTE MYELOID LEUKAEMIA WITH NUCLEOPHOSMIN MUTATION

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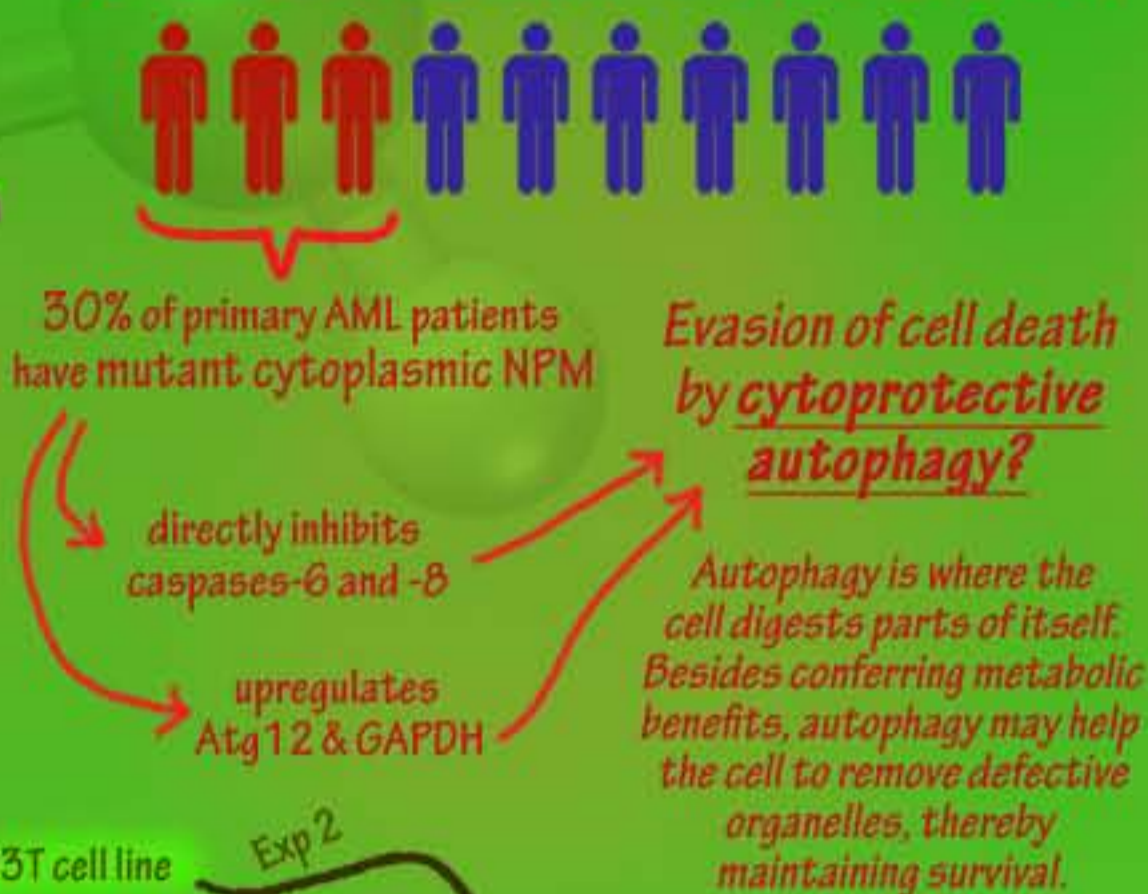
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## WHAT IS ACUTE MYELOID LEUKAEMIA?



## NUCLEOPHOSMIN & AUTOPHAGY



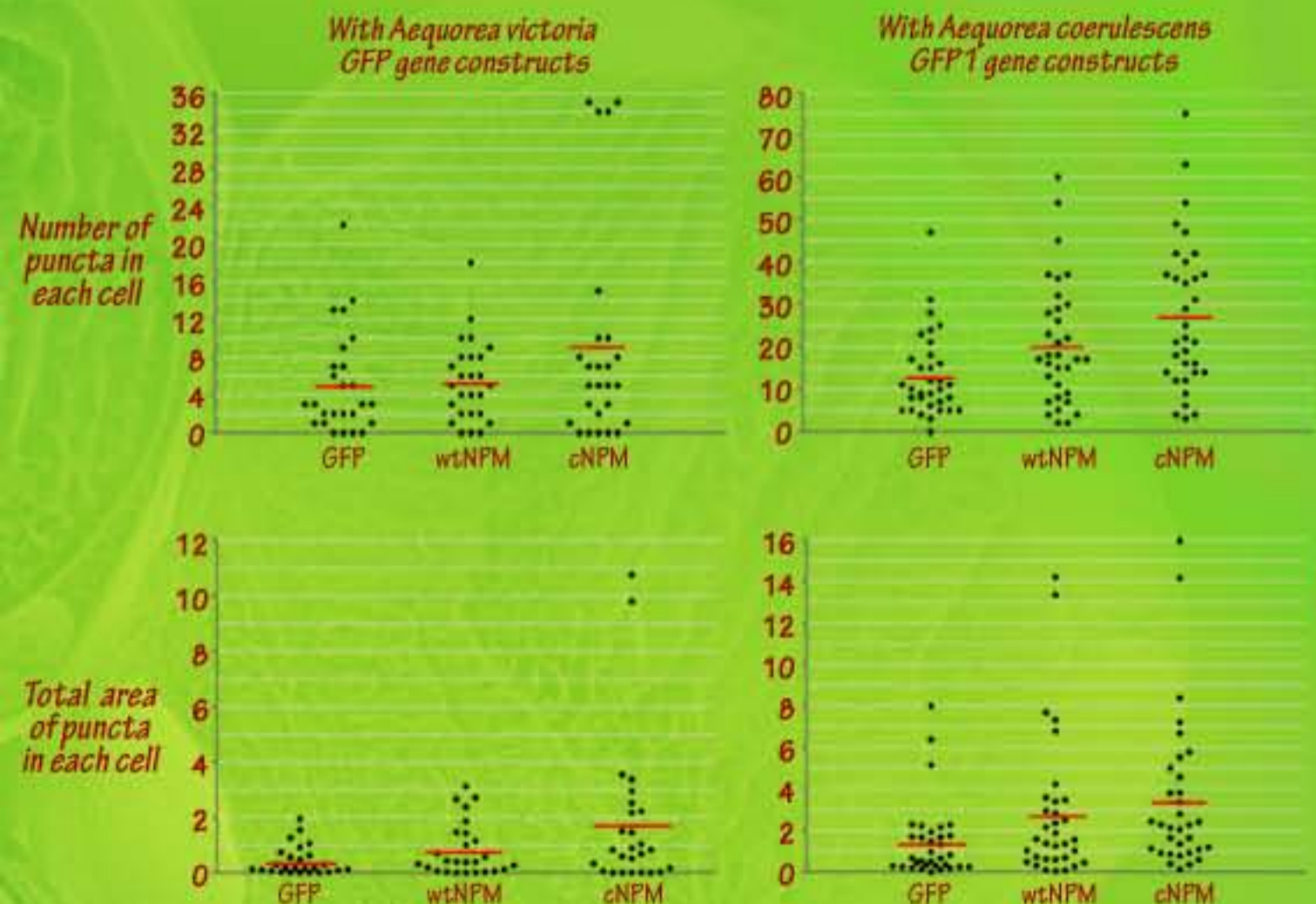
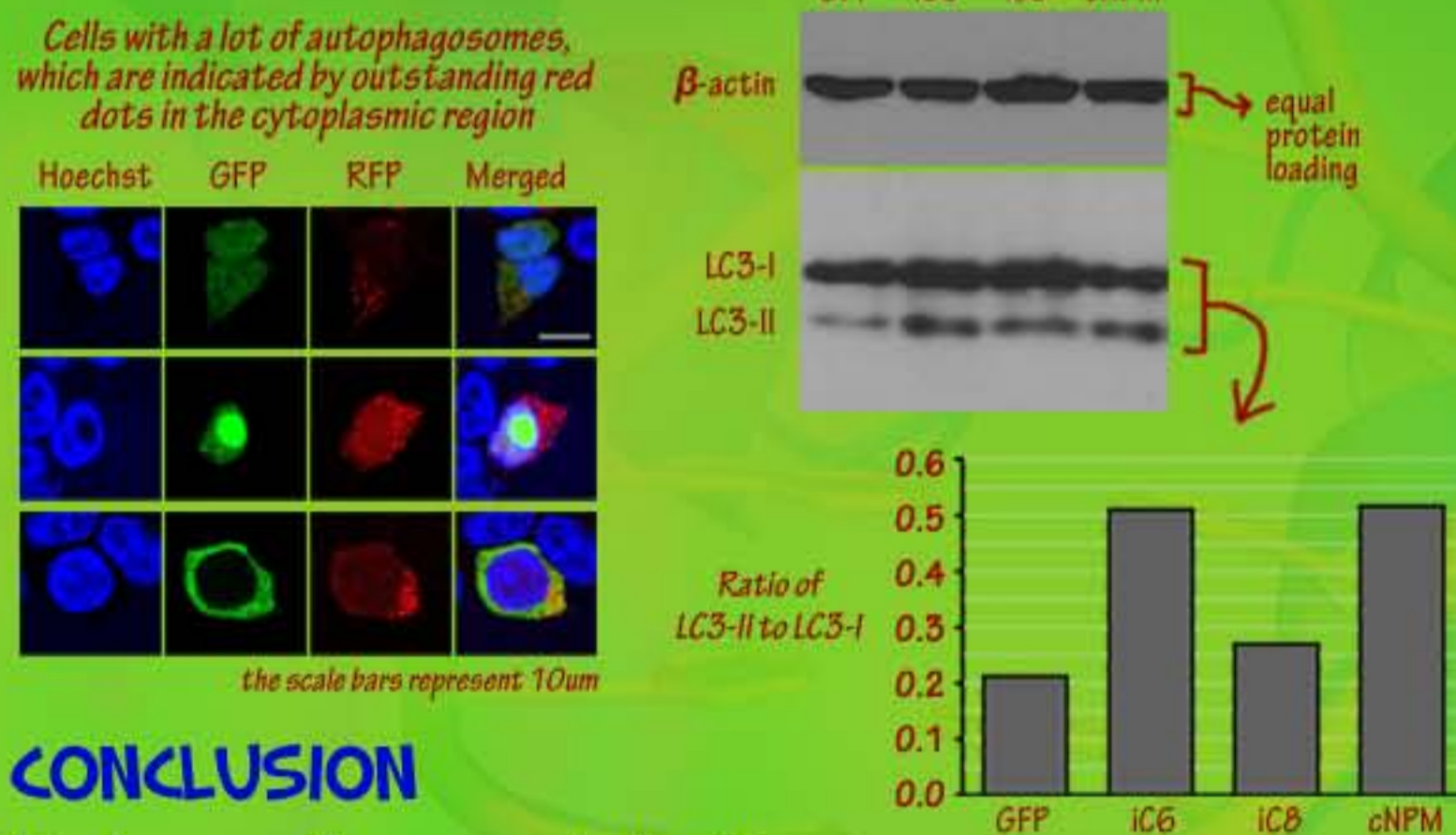
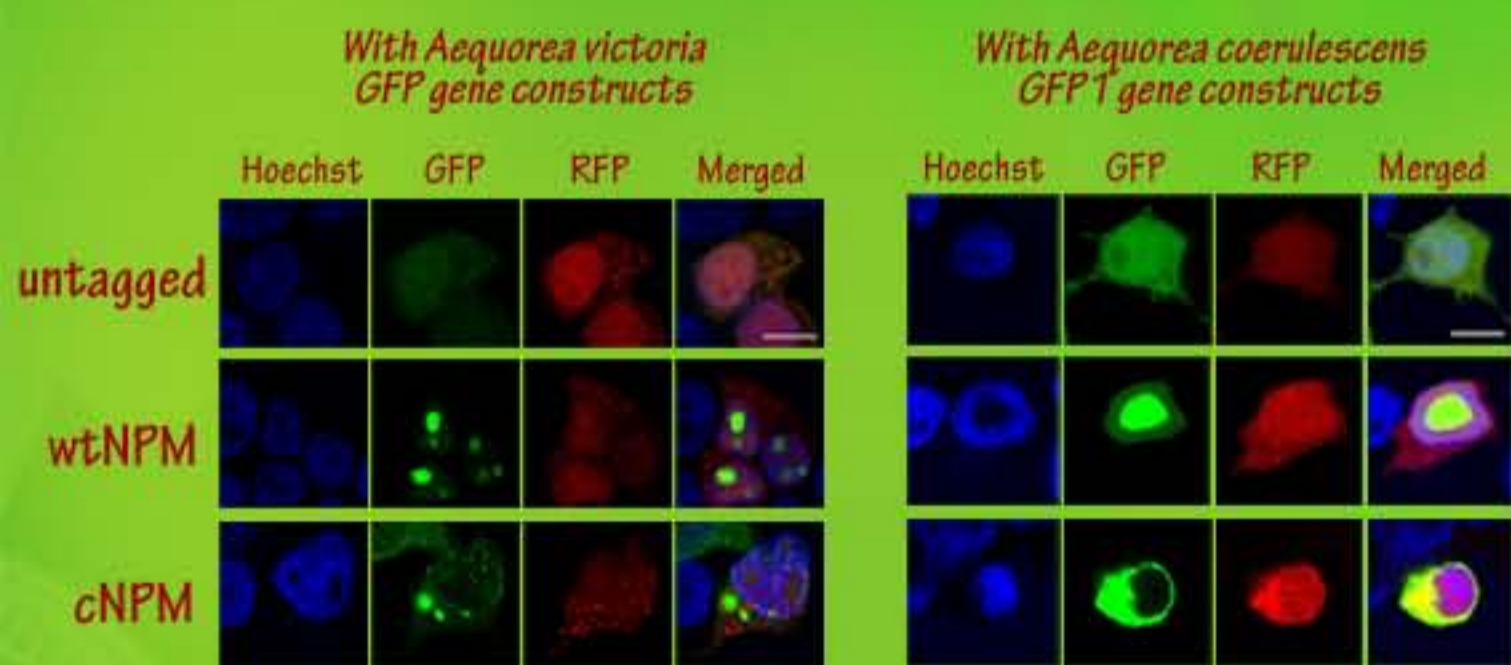
## HYPOTHESES

- #1 More autophagosomes will be observed in cells overexpressed with cNPM than wtNPM
- #2 Inhibition of caspases-6 and -8 is involved in autophagosome formation

## METHODS

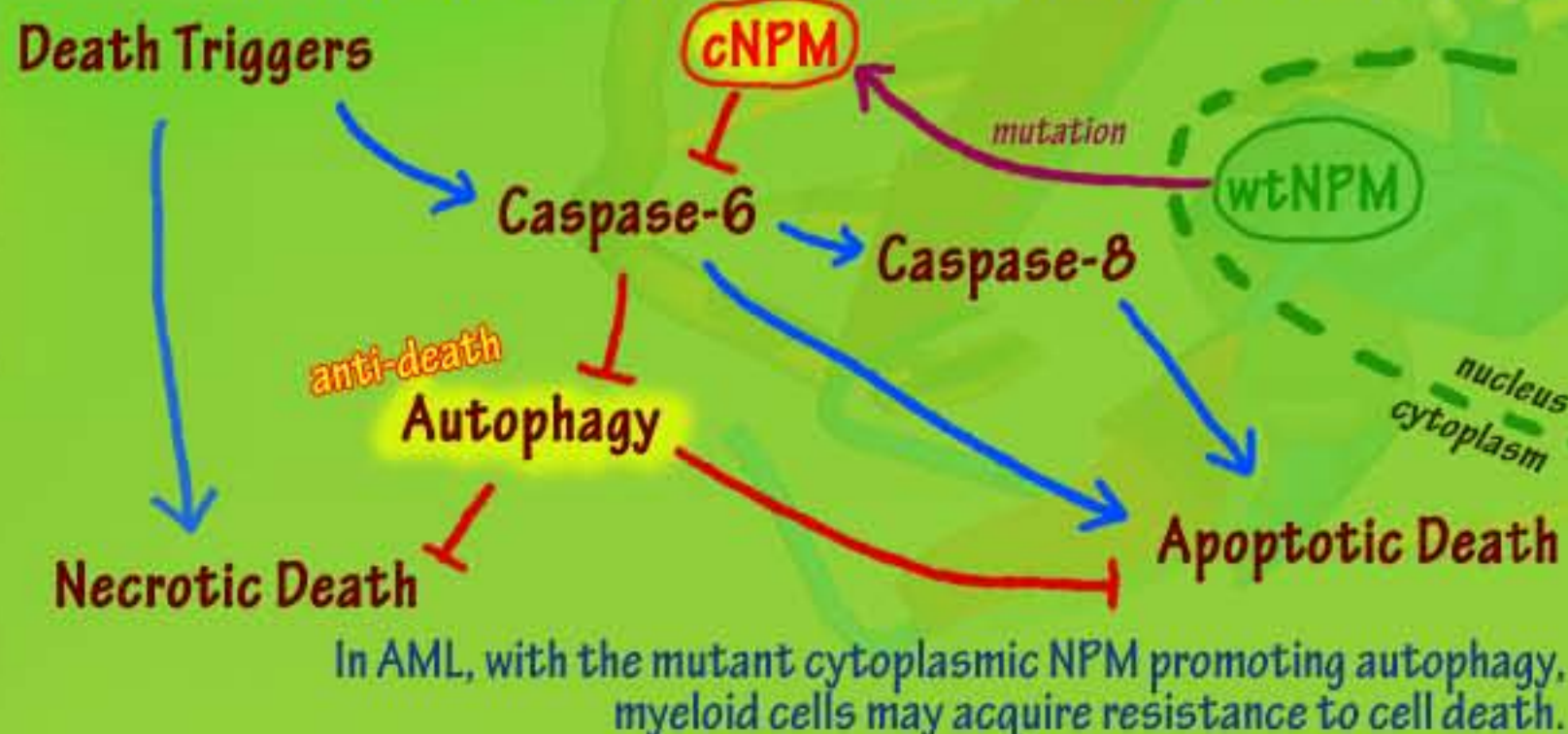


## RESULTS



## CONCLUSION

- Higher frequency of occurrence of cells with a lot of autophagosomes in cNPM set
- mutant cells are more likely to eventually develop resistance to cell death through protective autophagy
- Increased autophagosome formation seen with inhibition of caspase-6, but not caspase-8
- while caspase-8 has been hailed as the critical death-survival regulator, this study shows that caspase-6 may have a relatively greater role in autophagy than caspase-8



## DIRECTIONS FOR FUTURE RESEARCH

- Innovate better autophagy assessment techniques that show the complete autophagic flux
- Emulate actual AML conditions by using patient samples or human AML cell lines