



CRC

for

Premium

Quality

Wool

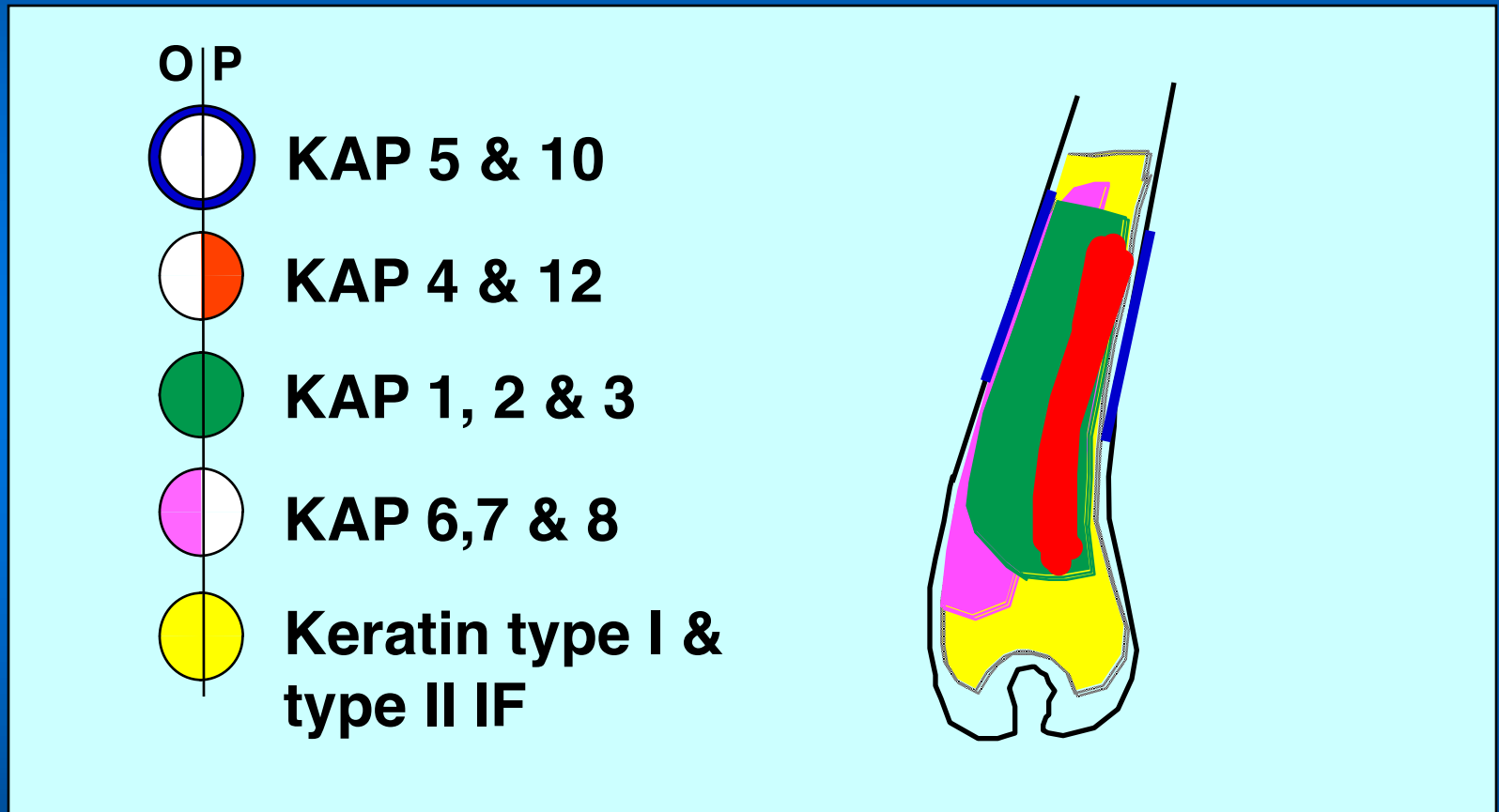
# Expression of Keratin Genes

Produced for the CRC for Premium Quality Wool undergraduate program by;  
Dr. Barry Powell & Dr. C. Simon Bawden, The University of Adelaide.



# Expression of Hair Keratin Genes

- Sequential and spatial patterns



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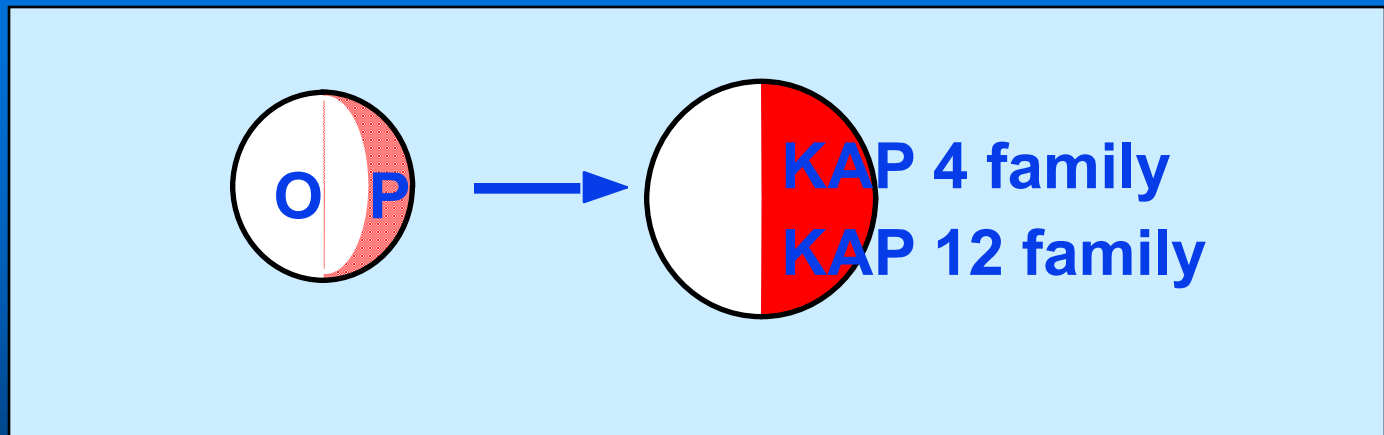
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# The Cysteine Response

- Elevated dietary cysteine increases:
  - wool growth rate
  - fibre diameter
  - amount of paracortex
  - levels of KAP4 and KAP12 cys proteins



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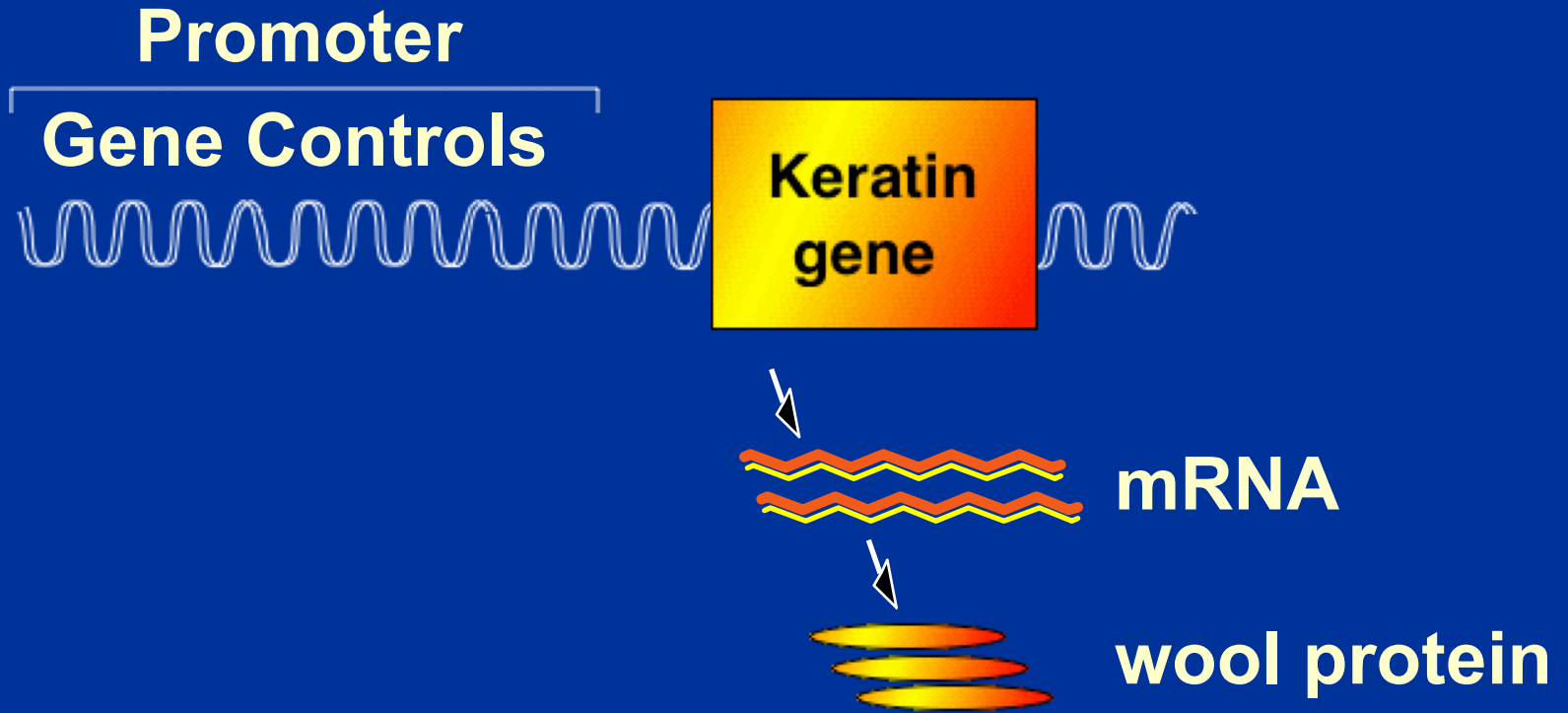
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# Gene Structure and Control



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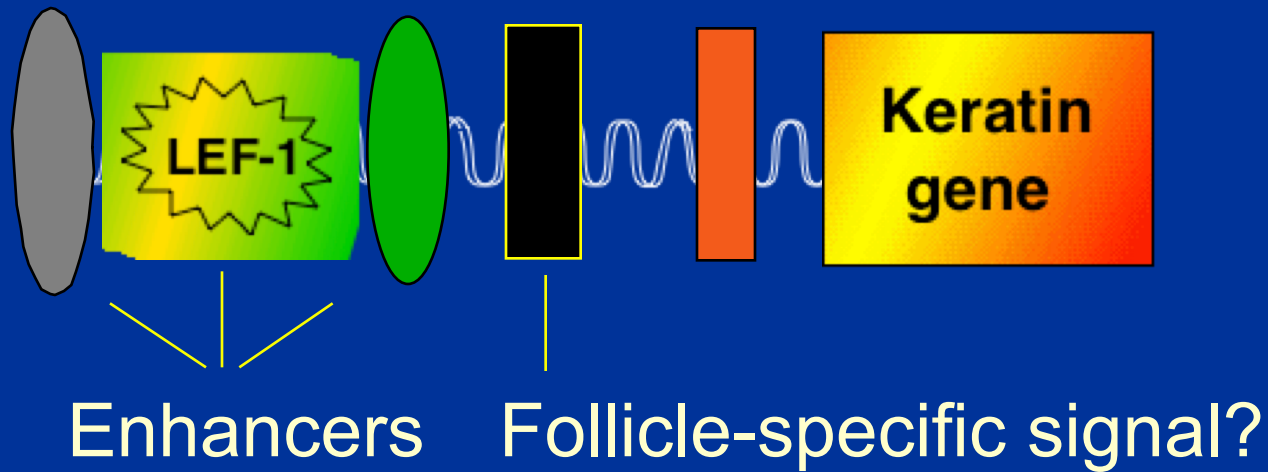
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# Hair Keratin Gene Regulation



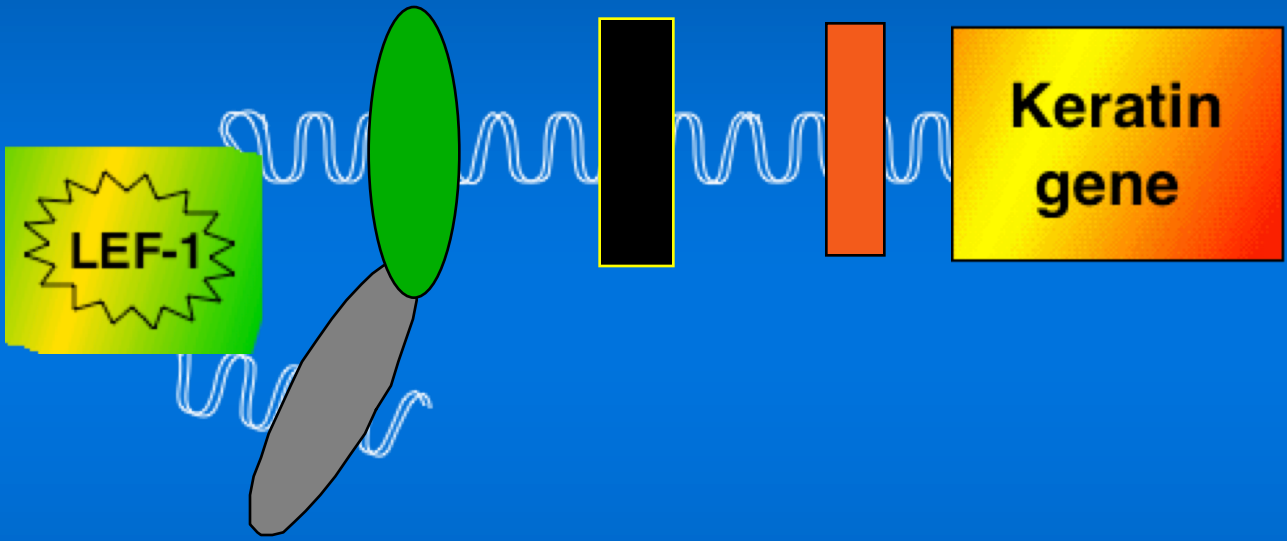
Multiple controls determine specificity

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# Role of LEF-1 in Hair Keratin Gene Regulation

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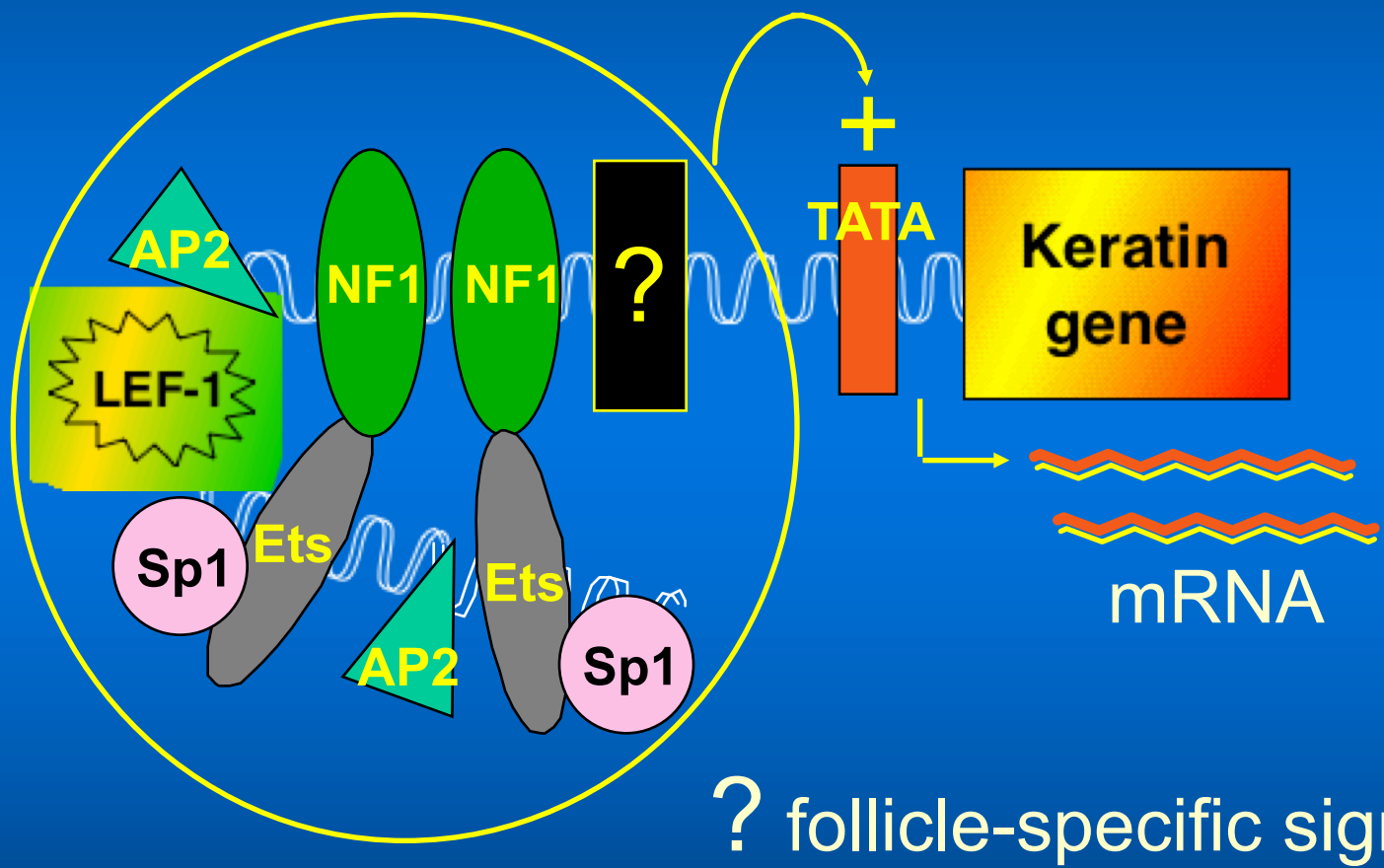


LEF1 bends DNA, enabling cooperative interactions between proteins



# Regulation of the Wool K2.10 Gene

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? follicle-specific signal