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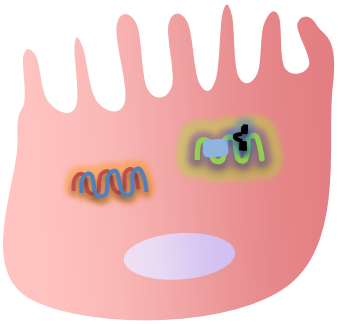
HucMSC-Ex alleviates inflammatory bowel disease via the lnc78583-mediated miR3202/HOXB13 pathway

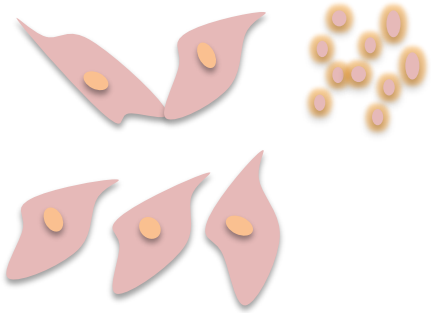
Keywords: **Inflammatory bowel disease, mesenchymal stem cell-derived exosome, long non-coding RNAs, homeobox B13, mir3202**

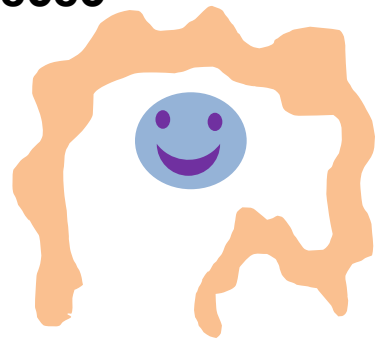
Research Summary

This correspondence mainly focused on a novel lncRNAs involved in inflammatory bowel disease (IBD) and the research was performed from the following parts:



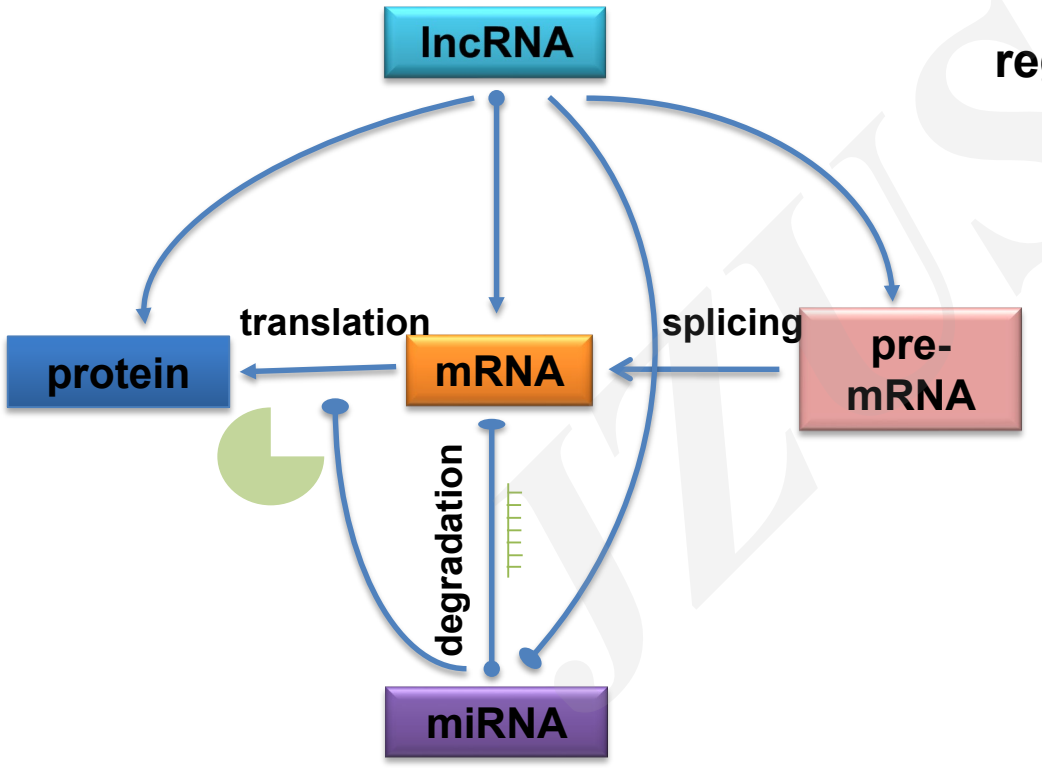
- **Determination of differentially expressed lncRNAs and mRNAs in IBD versus health control tissues**
- **Verification of screened novel lncRNAs**
- **Protective effects of lnc78583 on LPS induced FHC inflammation through targeting HOXB13**
- **HucMSC-Ex alleviated LPS induced FHC inflammation through lnc78583/HOXB13**
- **Sponge function of miR3202 for lnc78583 and HOXB13**





Innovation points

LncRNAs are tissue-specific and organ-specific, which can regulate gene expression at multiple levels.



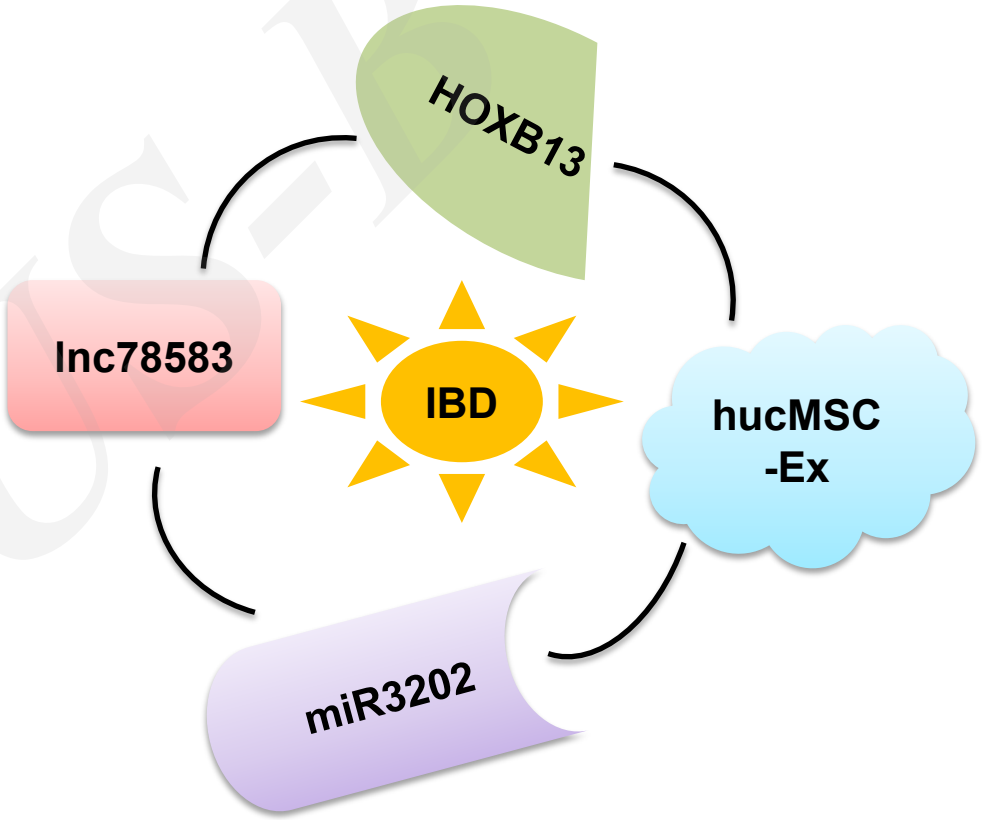
The potential functions of lncRNA in regulating IBD:

- **Function as lncRNA-miRNA-mRNA network**
- **Form lncRNA-protein complex to regulate gene transcription**
- **Interfere mRNA splicing**
- **Interfere adjacent protein-coding gene expressions**
- **Inhibits RNA polymerase II**

Innovation points

Key findings in our research

- **Lnc78583 protects IBD through negtively mediating HOXB13**
- **HucMSC-Ex regulates lnc78583/HOXB13 pathway**
- **MiR3202 plays functional role between lnc78583 and HOXB13**



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