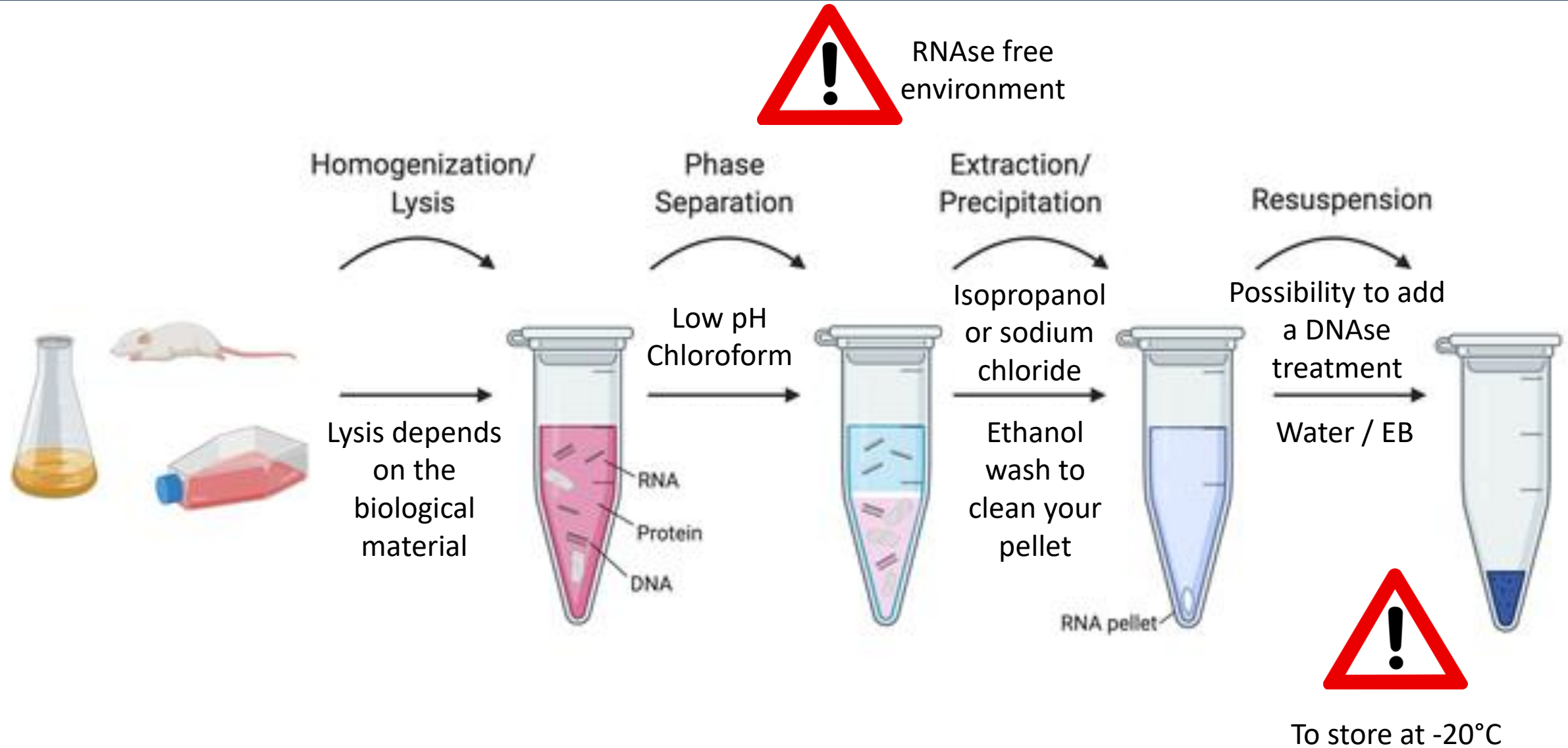


The RNA extraction experiment

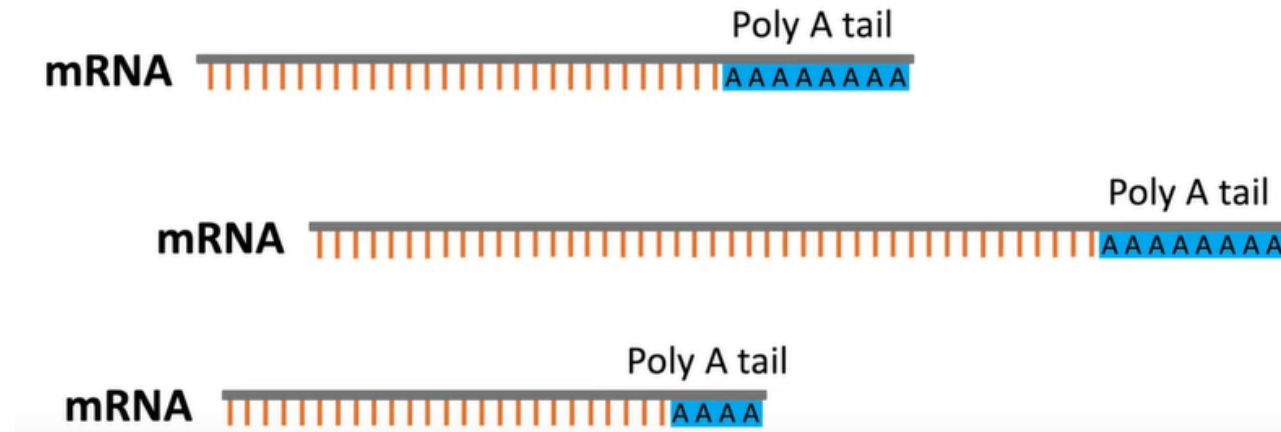
TRANSCRIPTOMICS

BIGNAUD AMAURY
09/03/2023

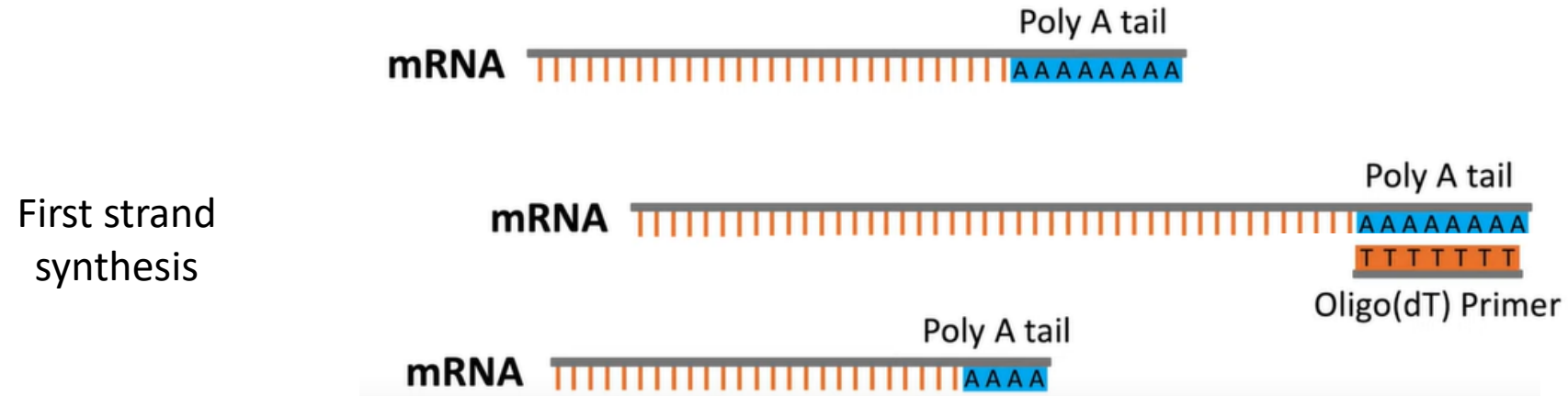
The RNA extraction



cDNA synthesis



cDNA synthesis



cDNA synthesis

First strand
synthesis



cDNA synthesis

First strand
synthesis



cDNA synthesis

First strand
synthesis



cDNA synthesis

First strand
synthesis



RNase H



RNA nicking



cDNA synthesis

First strand
synthesis



RNase H

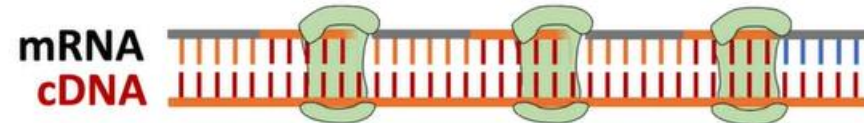


RNA nicking

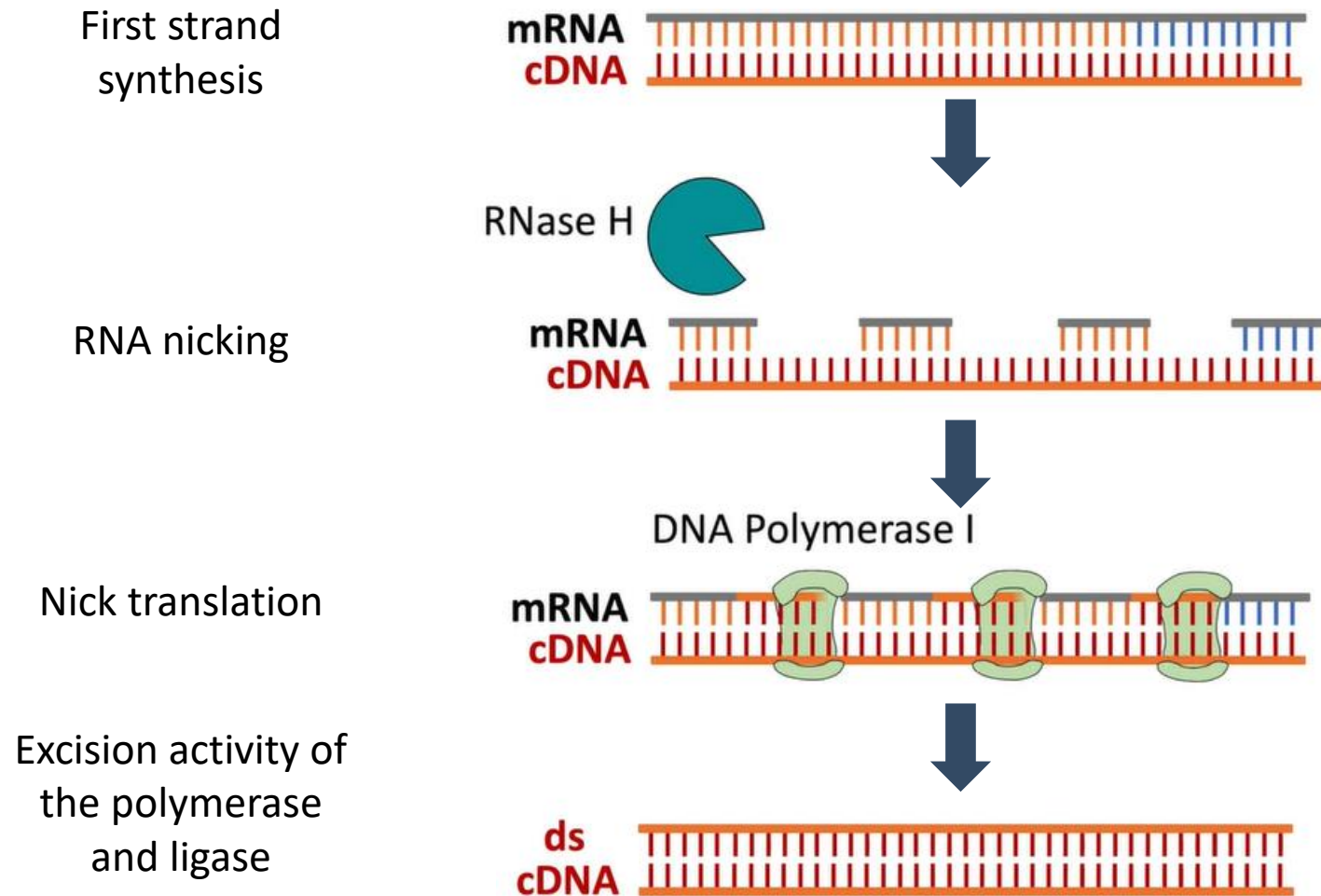


DNA Polymerase I

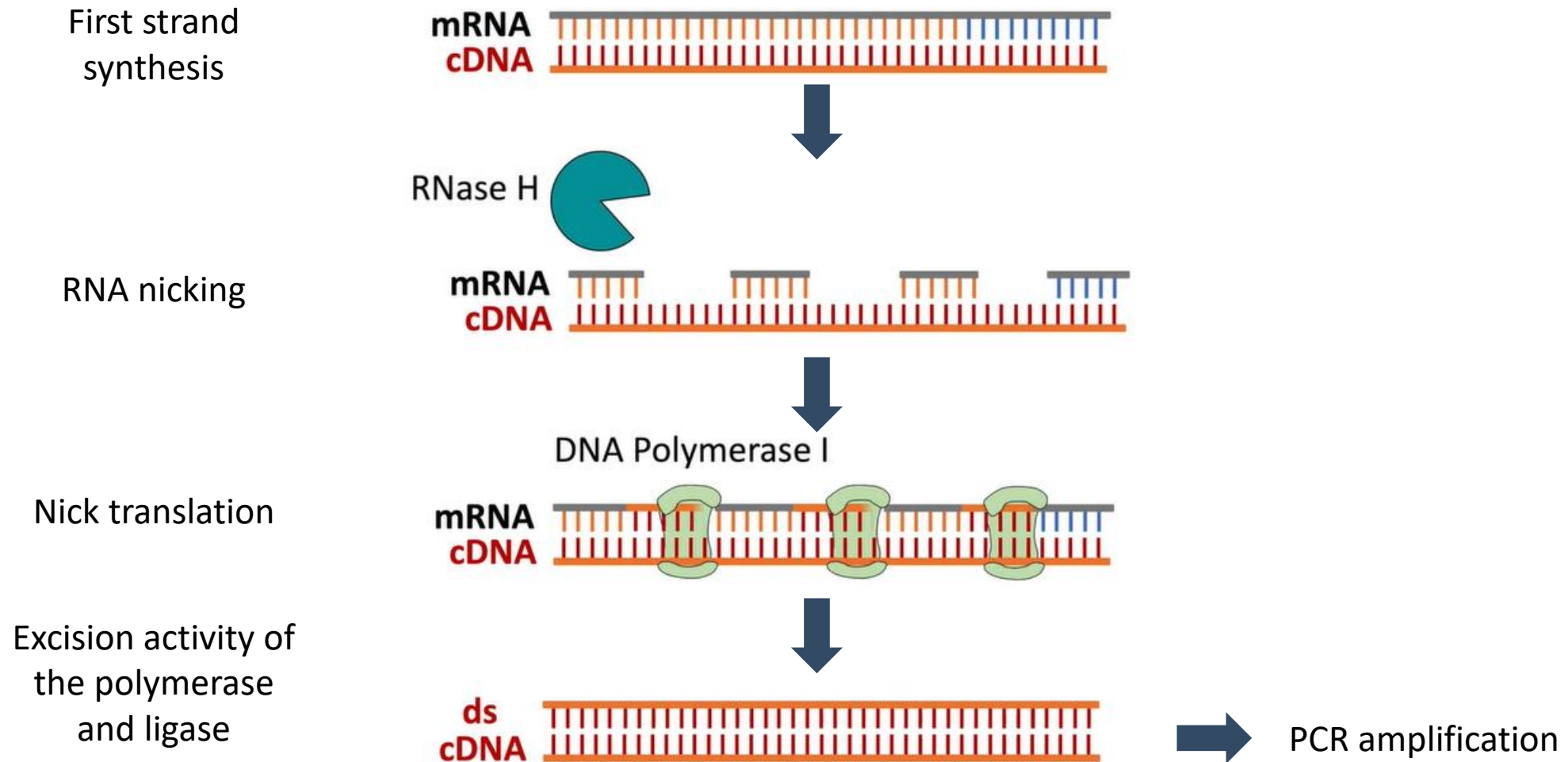
Nick translation



cDNA synthesis



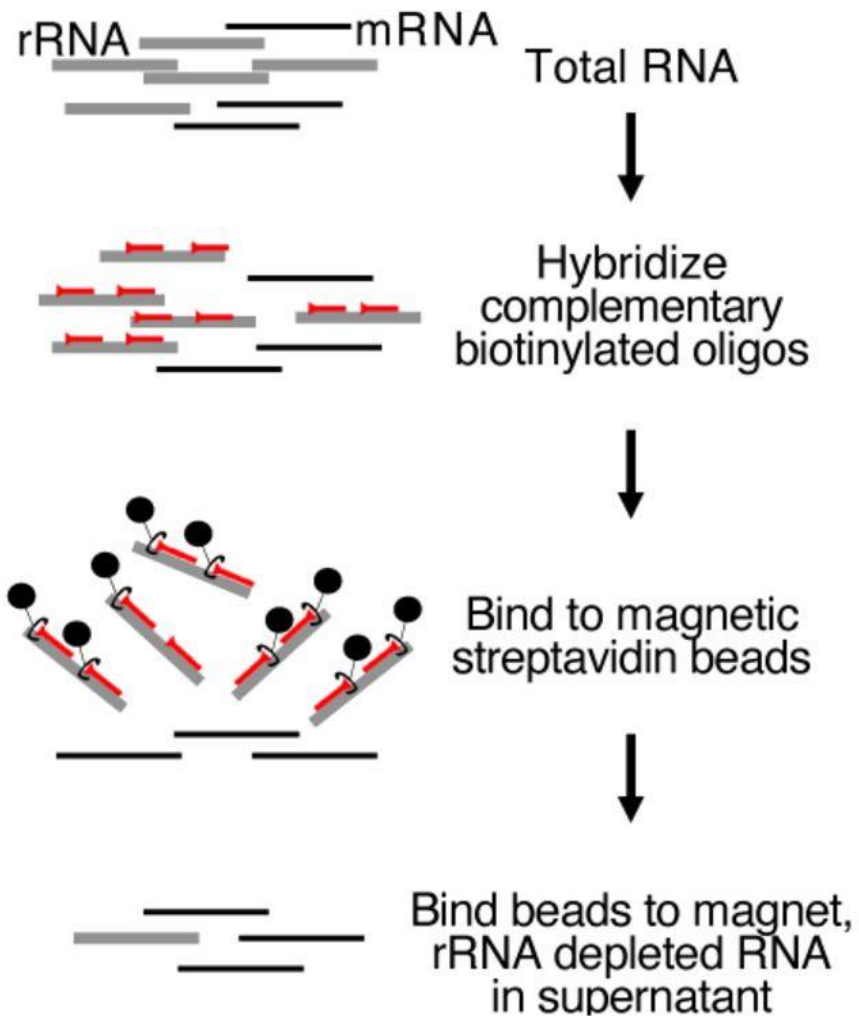
cDNA synthesis



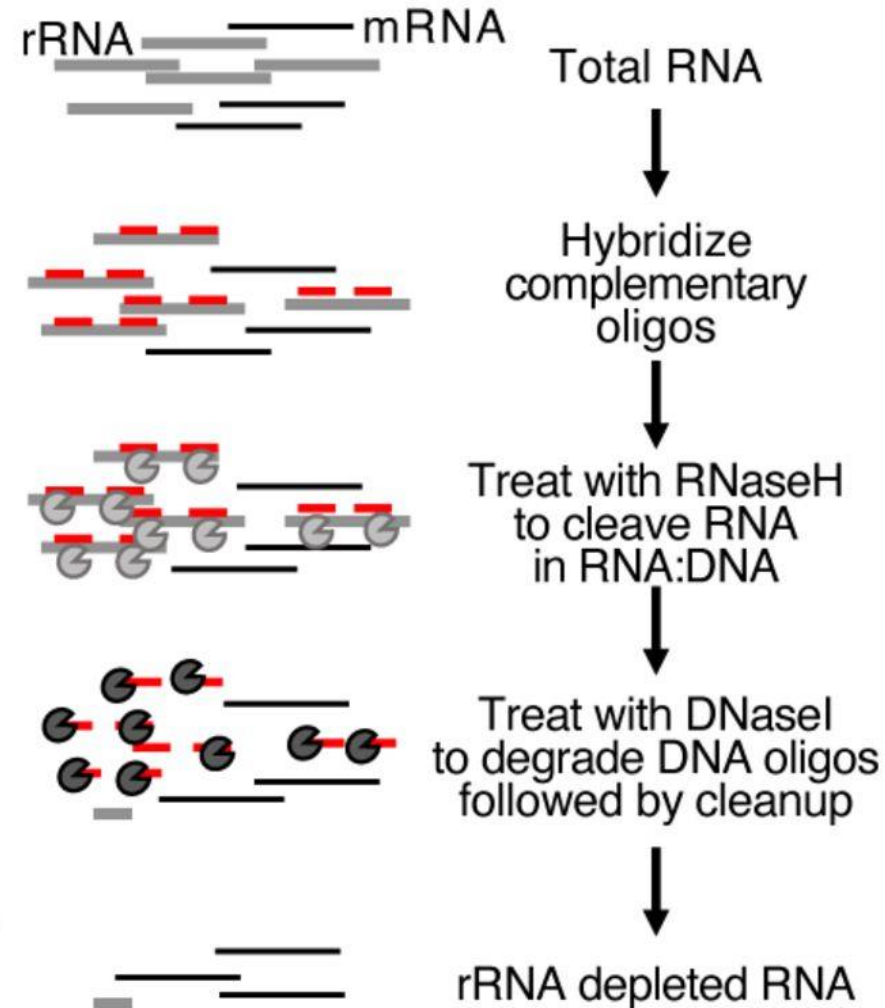
The rRNA depletion

You can work on cDNA which are more stable

A Subtractive Hybridization

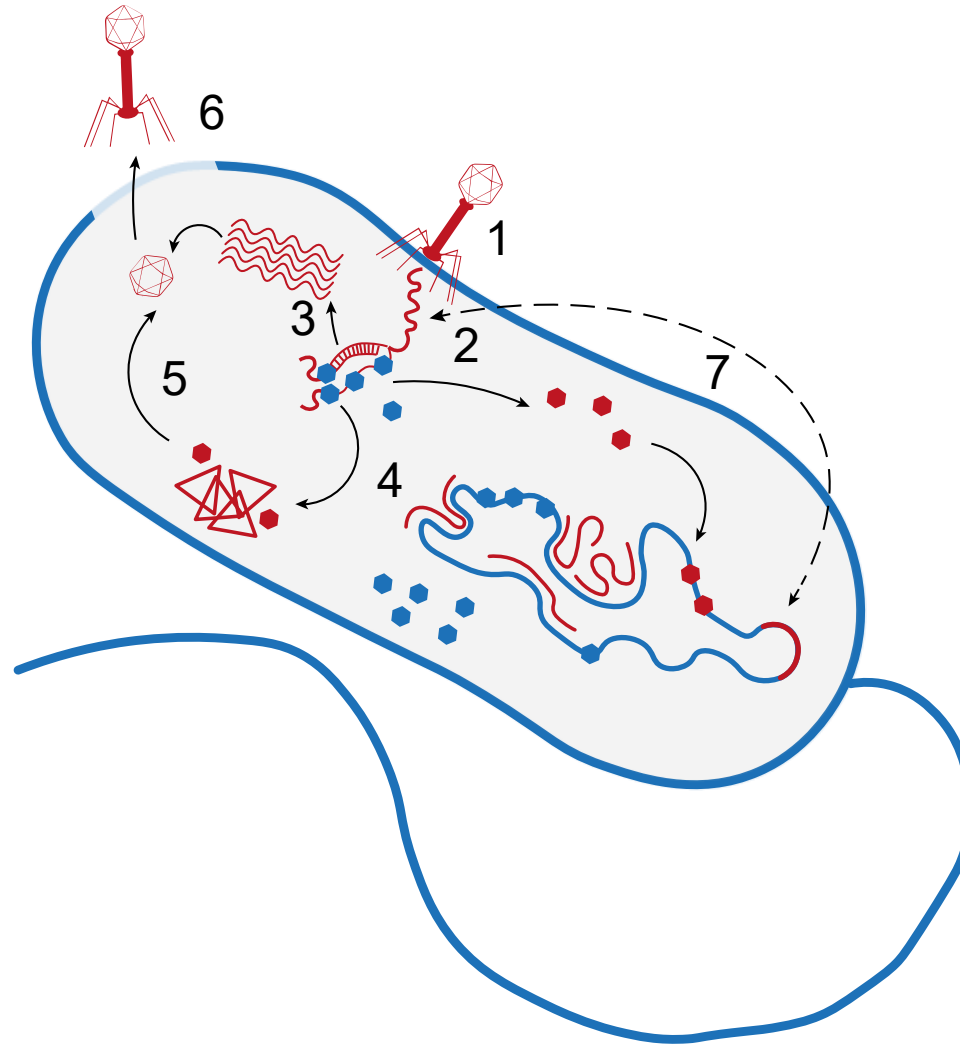
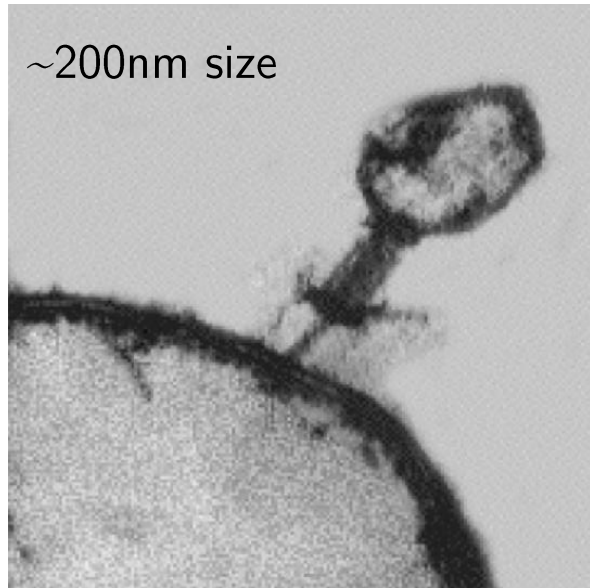


B RNaseH Degradation



Alternative using CRISPRcas9 technology

The actual experiment – bacterial phage infection



Lytic cycle

1. Phage absorption.
2. Recruitment of host proteins and phage early proteins interfering with host metabolism.
3. Phage DNA replication.
4. Phage structural protein synthesis.
5. Phage virion assembly.
6. Host lysis and liberation of new virions in the media.

Lysogenic cycle

7. Phage integration in the host genome
- 7'. Prophage activation

Kutter et al., *T. of Nat. Med.*, 2012

The actual experiment – bacterial phage infection

