Top Secret Session

Bled, Jan. 2002

Adaption of a naturally occuring RNA function for Peptide Selex

Part I

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Protein/Peptide Selection and Evolution

What?

How?

Selection - What?

- ligands of any kind
  eg.: agonists/antagonists/inhibitors,
  epitopes,
  antibodies,
  tags for protein purification or tissue-specific drug delivery,
  mimotopes

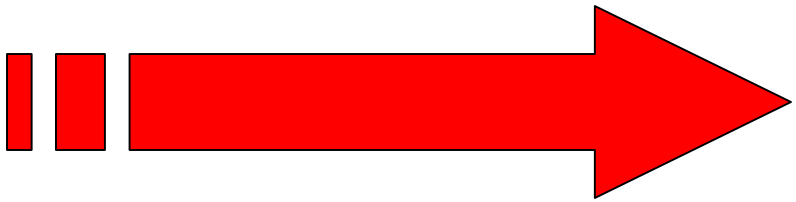
- Modified enzymes
  eg.: improved stability,
  enhanced activity,
  altered substrate specificity

- Enzymatic activities

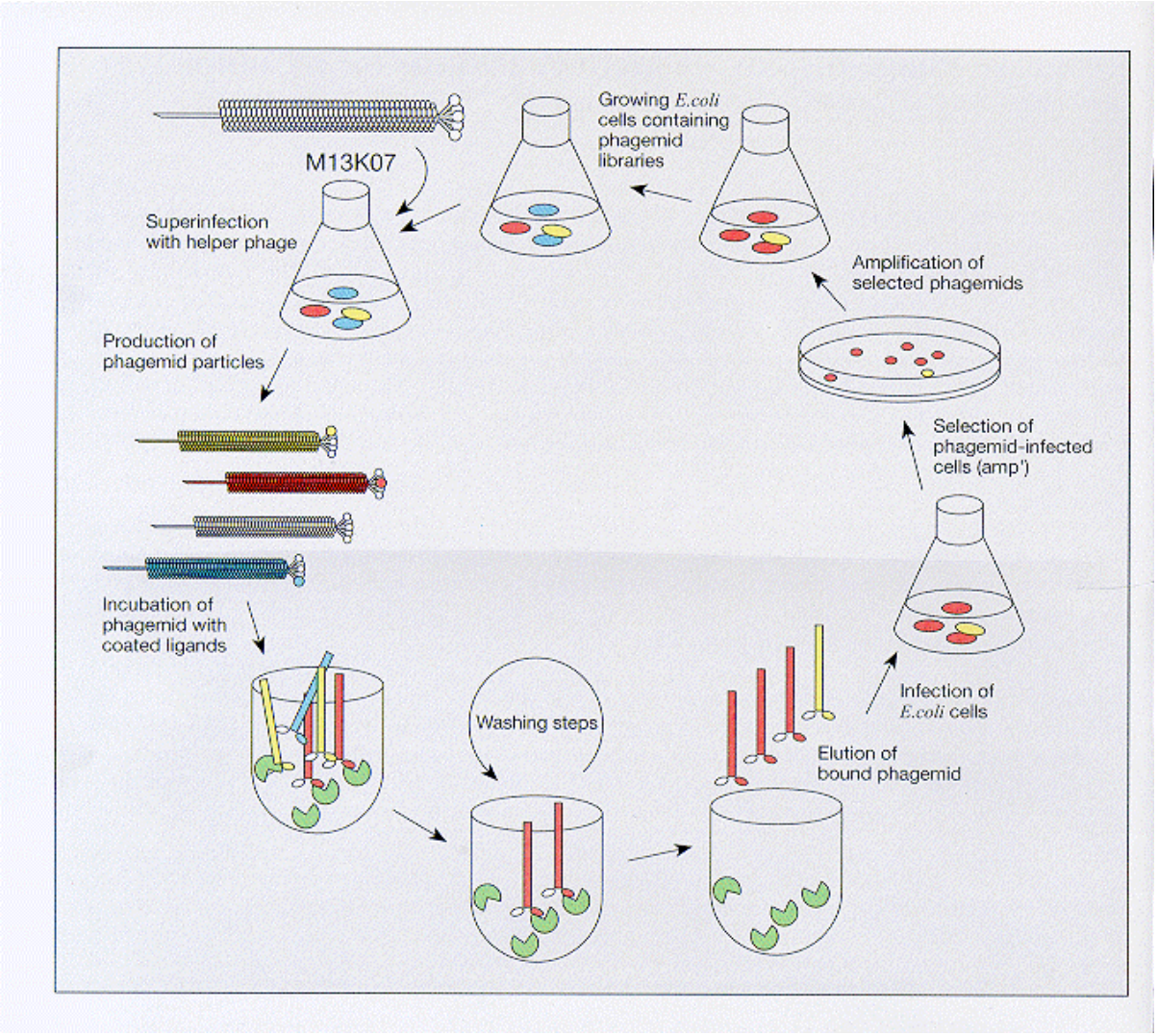
Selection and Evolution - How?

- Bacterial surface display
- Phage display
- in-vitro compartmentalisation
- Ribosome display
- mRNA-peptide-fusion

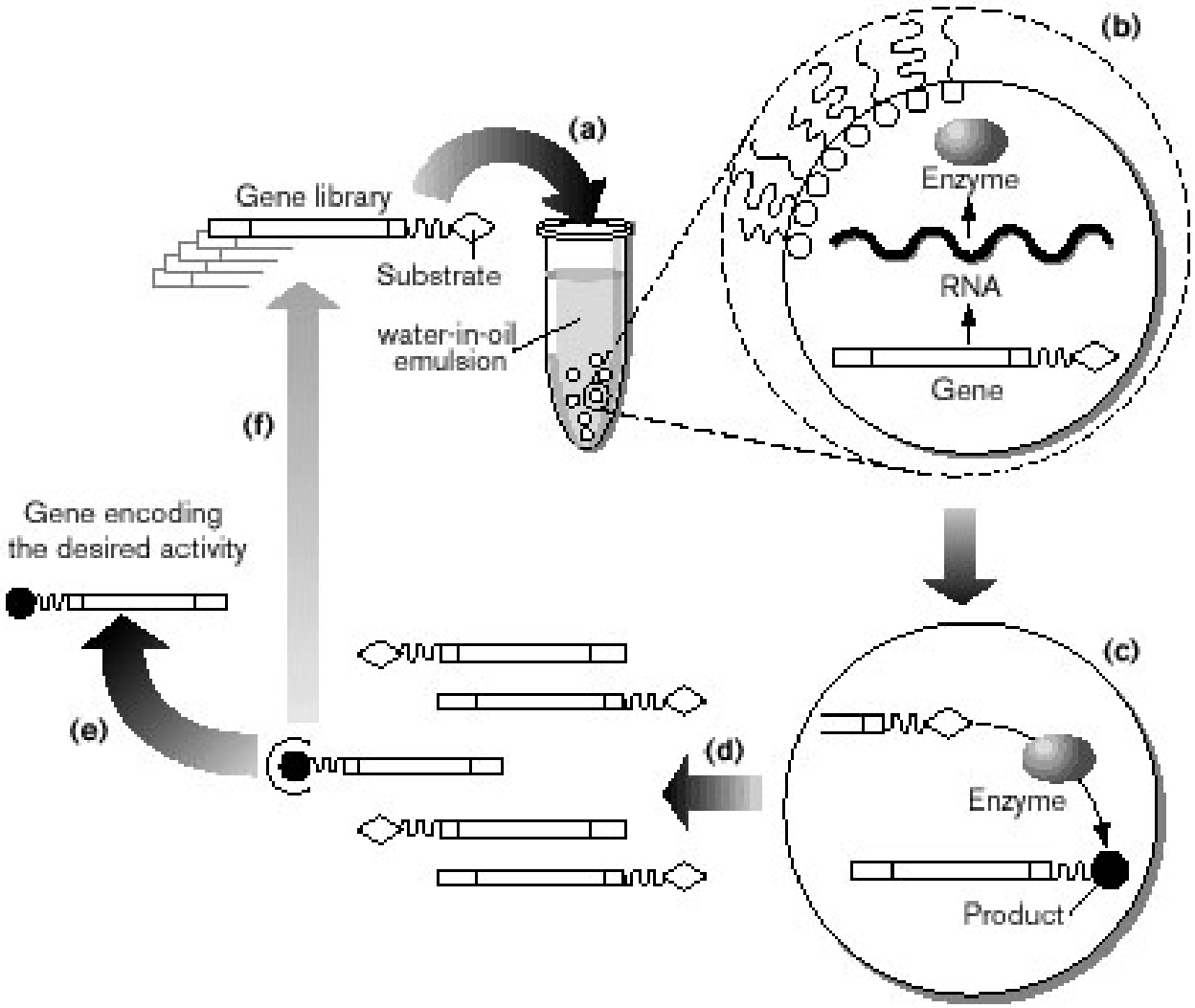
Bacterial surface display



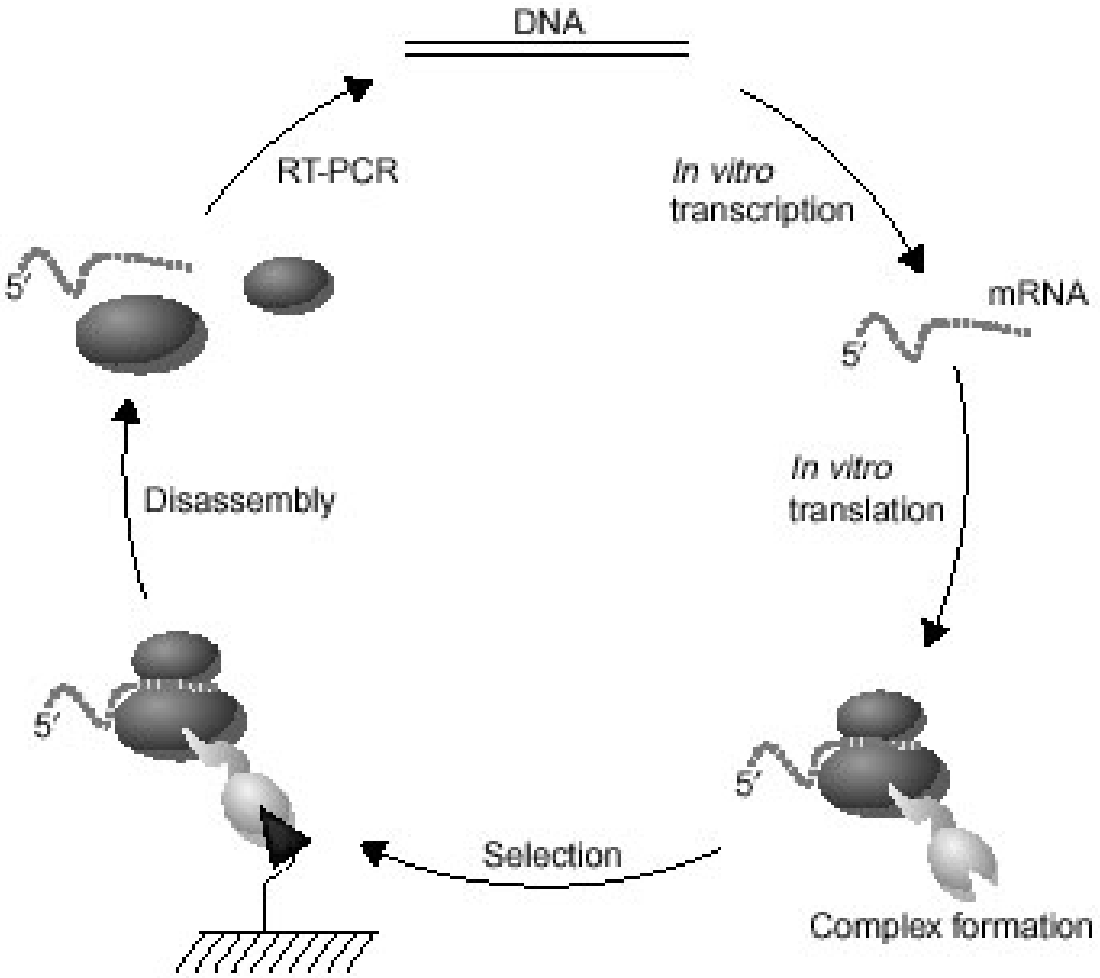
Phage display



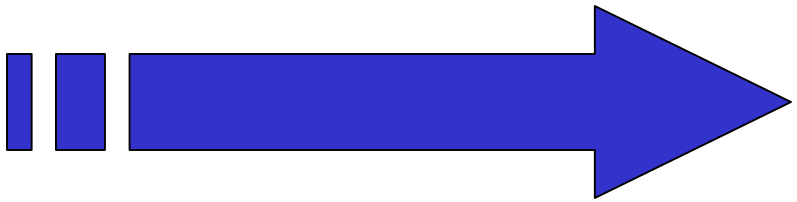
in-vitro compartmentalisation



Ribosome display



mRNA-peptide-fusion



Protein/Peptide Selection and Evolution

What?

How?

Alternatives???

Developing an Alternative -
Desired features

- Covalent (or other stable) link between phenotype and genotype
- Variable selection conditions
- Library complexity for selection as high as for the existing in-vitro selection techniques (or better...)