Next Generation Sequencing

Ho-Ryun Chung

the functional genomics toolbox

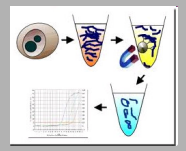
Sequence alignment

PCR

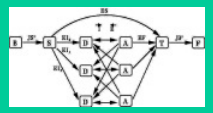
Sequencing

Microarray

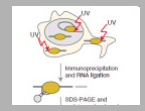
Pattern recognition



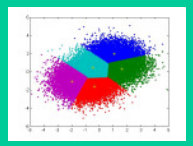
Chromatin immunoprecipitation



Gene prediction



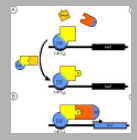
RNA immunoprecipitation



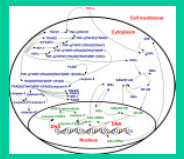
Clustering

Mass spectrometry

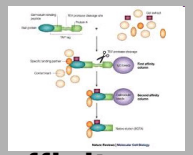
Network inference



Yeast two hybrid

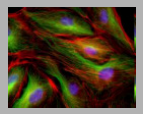


Modeling and simulation



Tandem affinity purification

In situ hybridization



Immunofluorescence

... platforms

Ilumina/Solexa

454

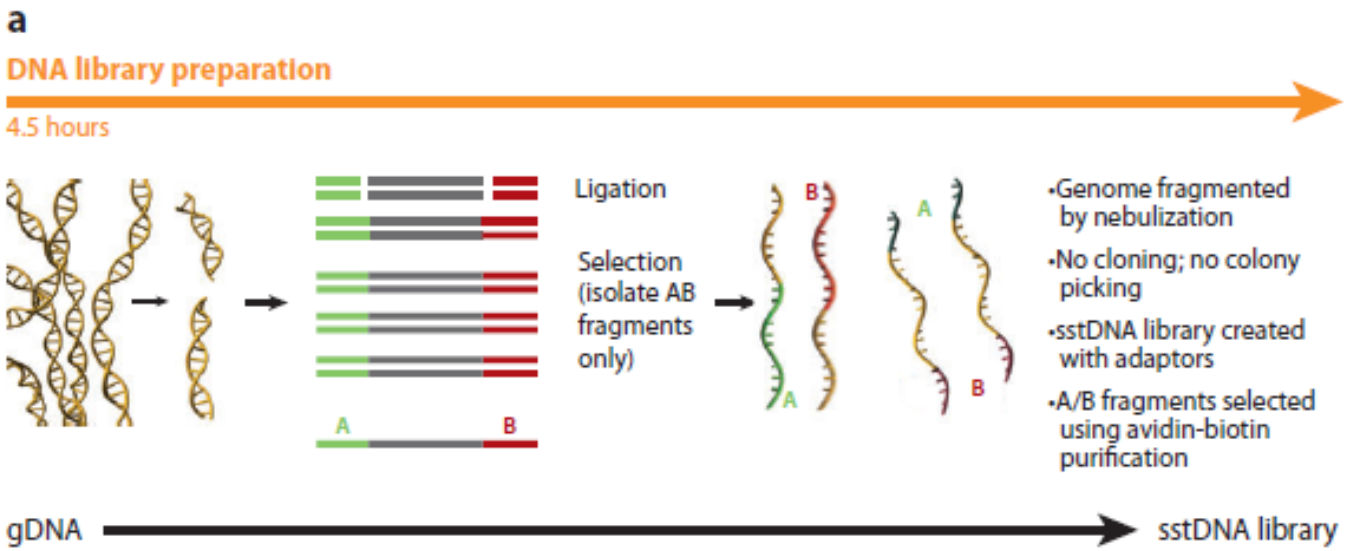
Helioscope

ABI - Solid

Pacific Biosciences

... principles - 454

454



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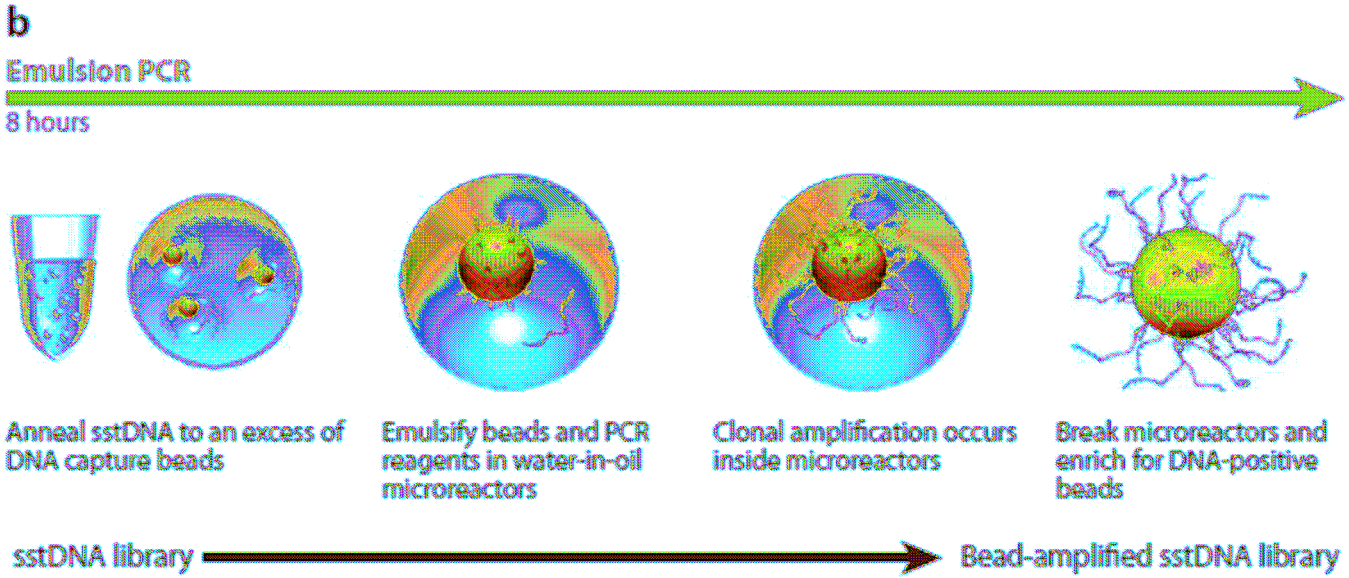
... principles - 454

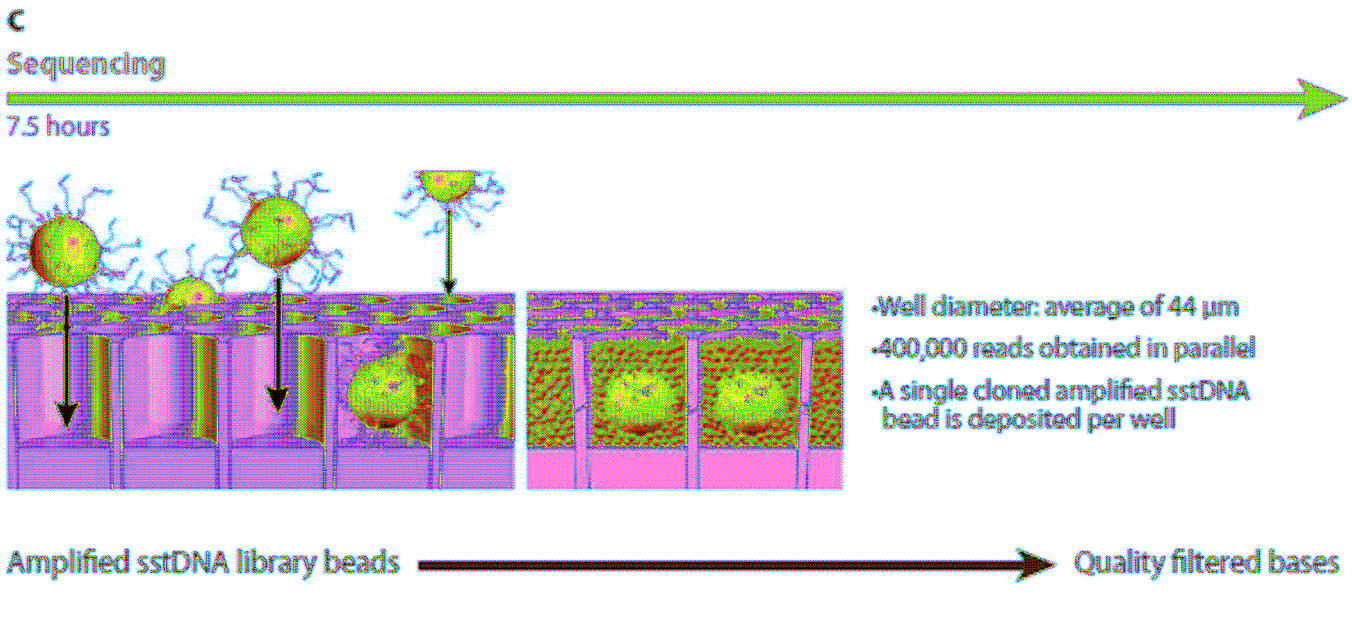
454



Mardis ER (2008), Annu Rev Genomics Hum Genet 9:387-402

... principles - 454

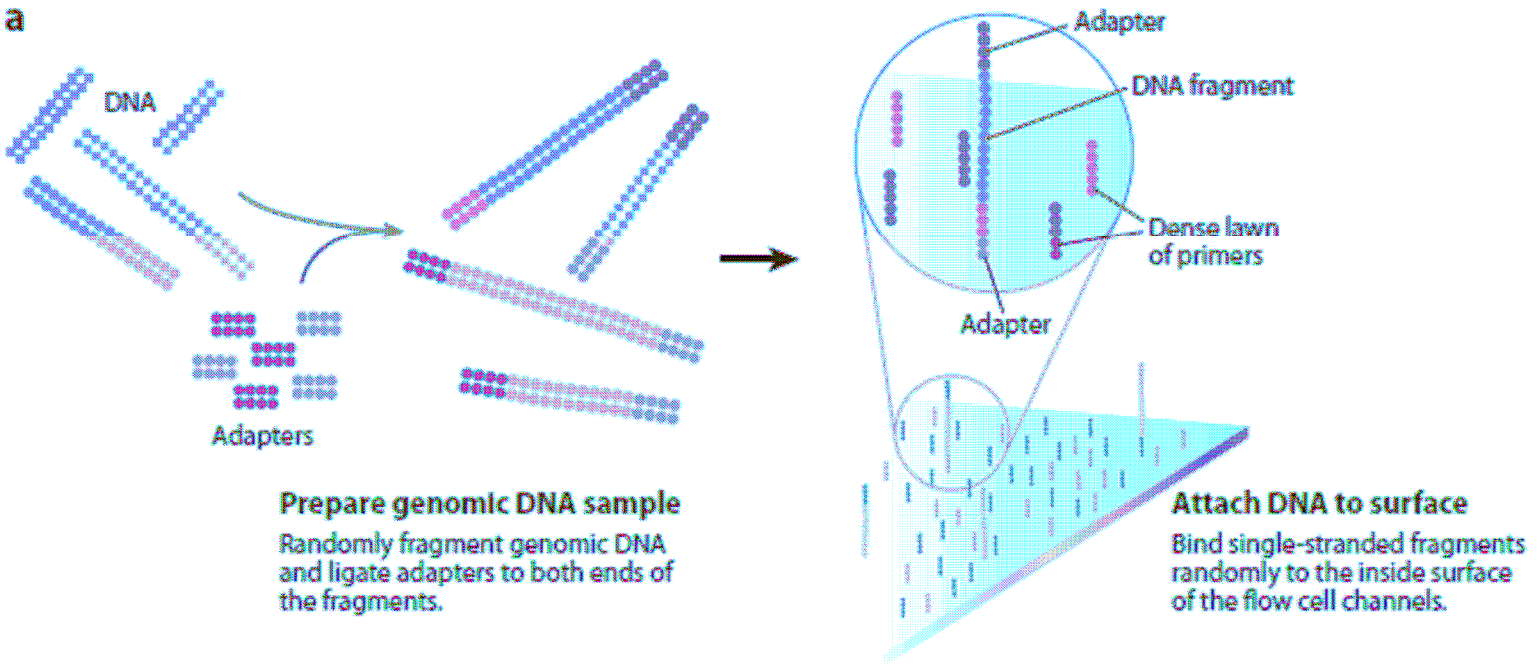
454



Mardis ER (2008), Annu Rev Genomics Hum Genet 9:387-402

... principles - ilumina

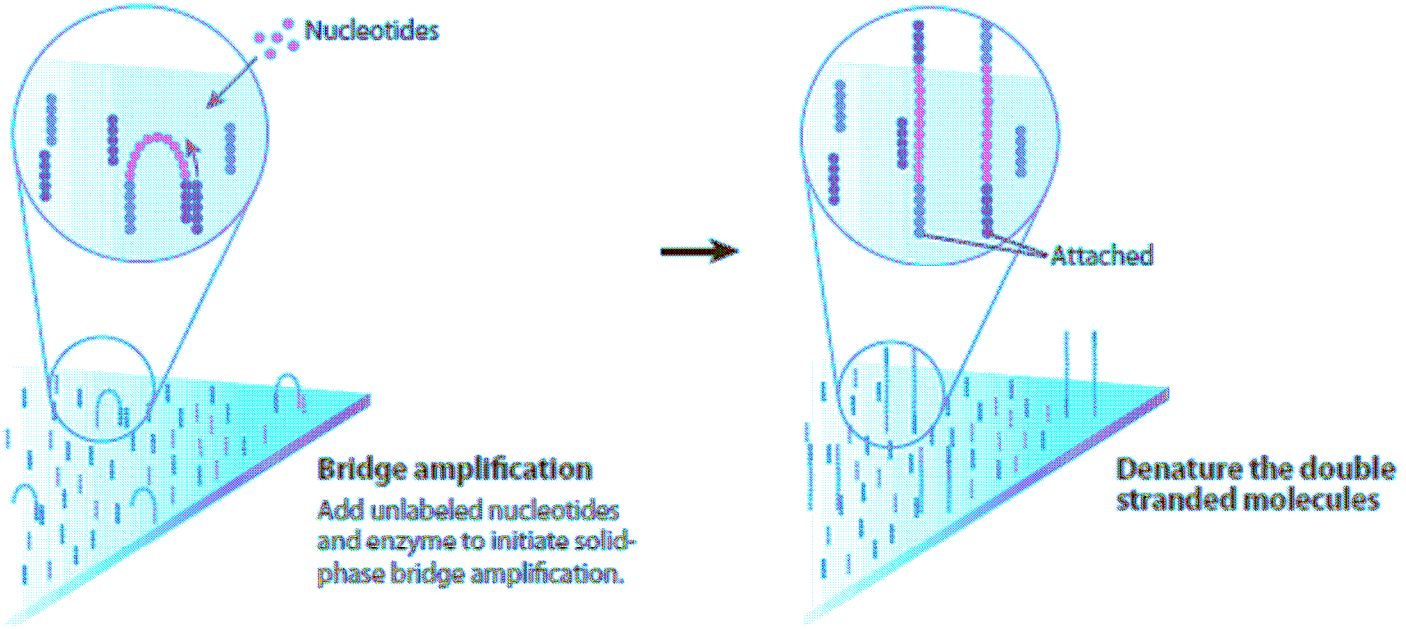
Ilumina



Mardis ER (2008), Annu Rev Genomics Hum Genet 9:387-402

... principles - ilumina

Ilumina



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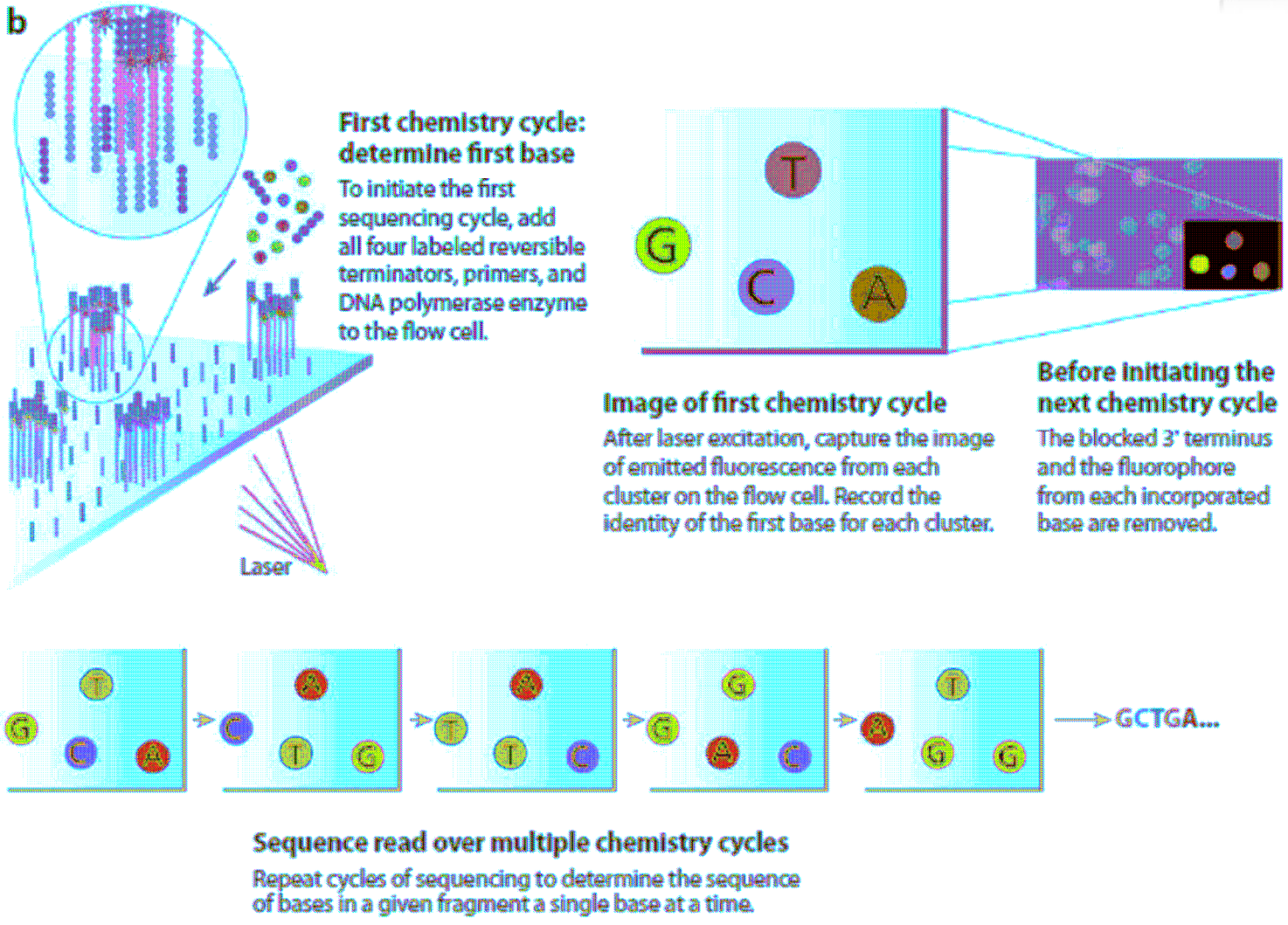
... principles - ilumina

Ilumina



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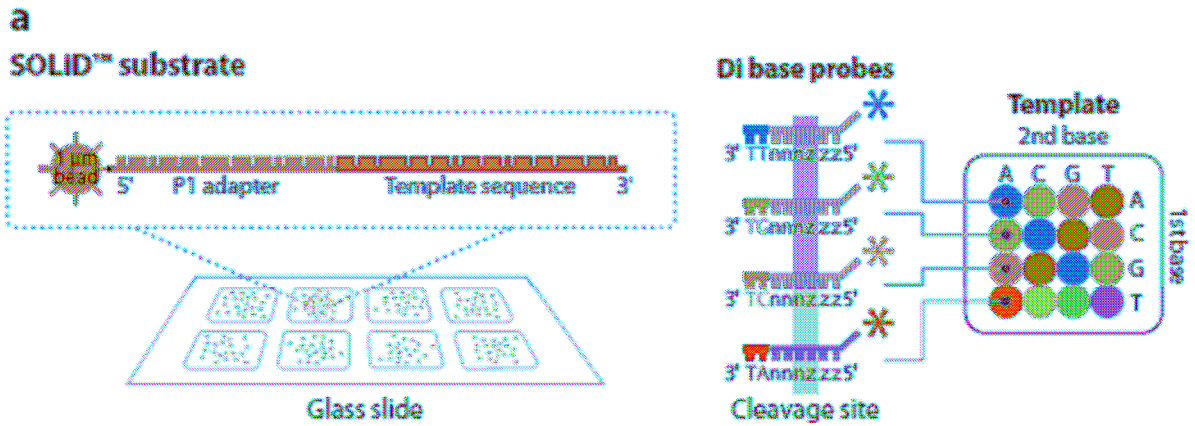
... principles – ABI - Solid

ABI - Solid



Mardis ER (2008), Annu Rev Genomics Hum Genet 9:387-402

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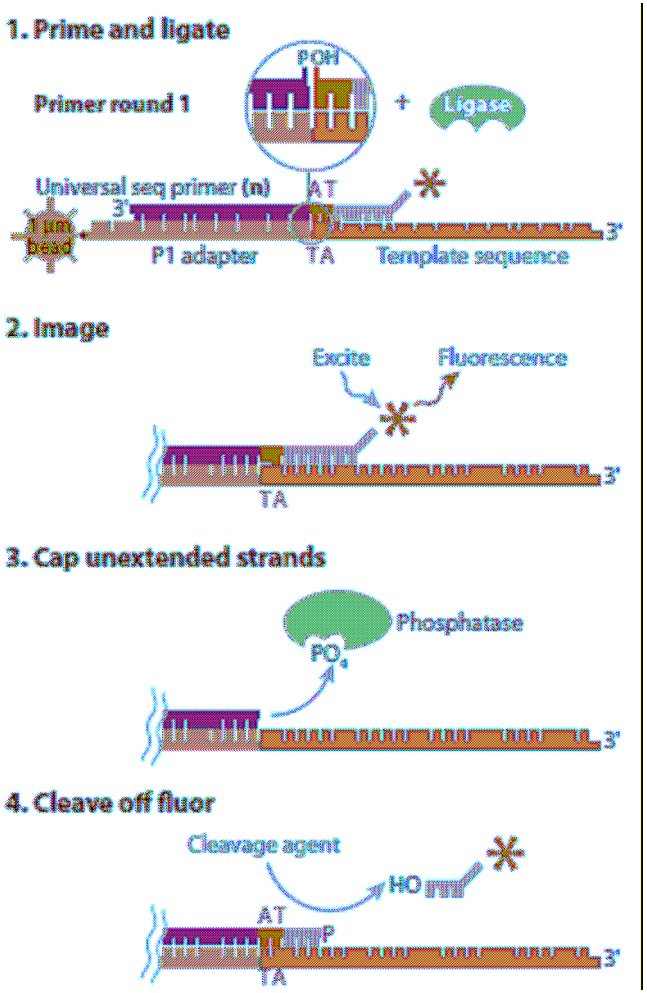

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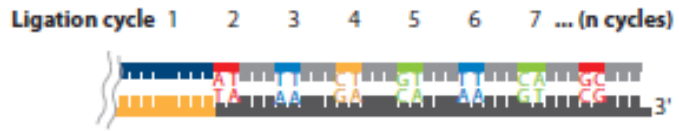
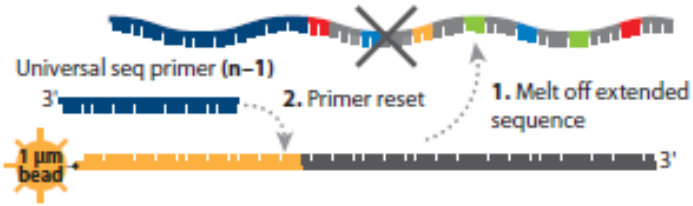
... principles – ABI - Solid

ABI - Solid

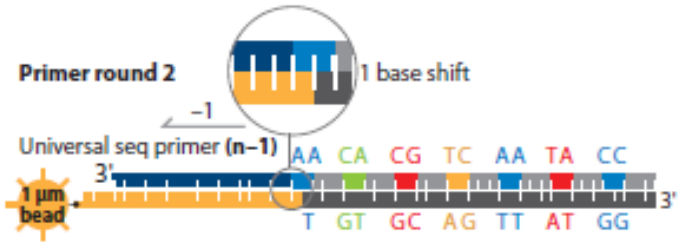
5. Repeat steps 1–4 to extend sequence



6. Primer reset



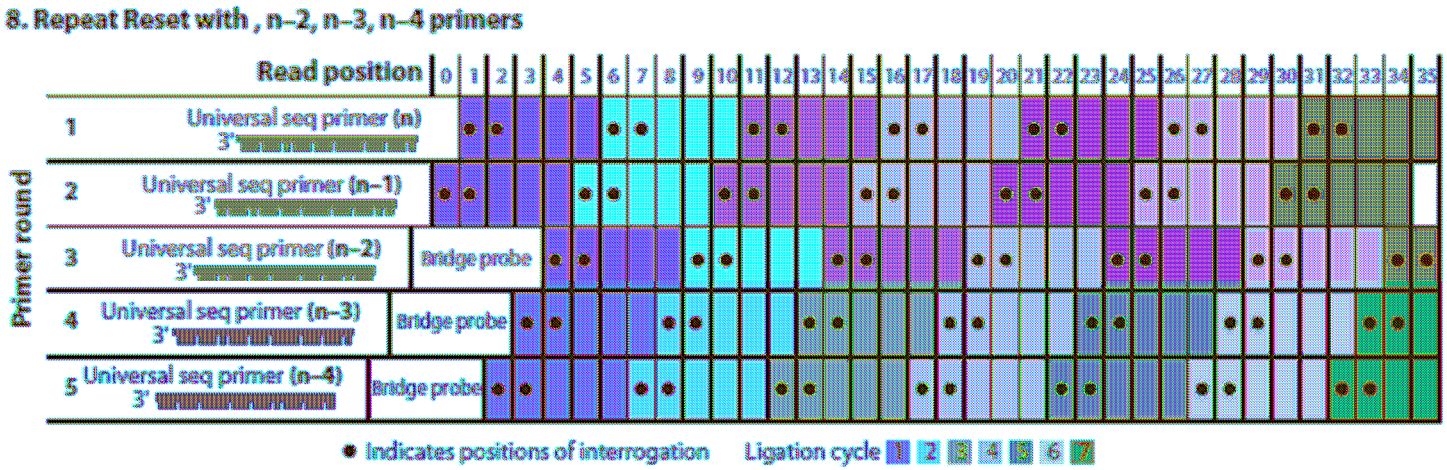
7. Repeat steps 1–5 with new primer



Mardis ER (2008), Annu Rev Genomics Hum Genet 9:387-402

... principles – ABI - Solid

ABI - Solid



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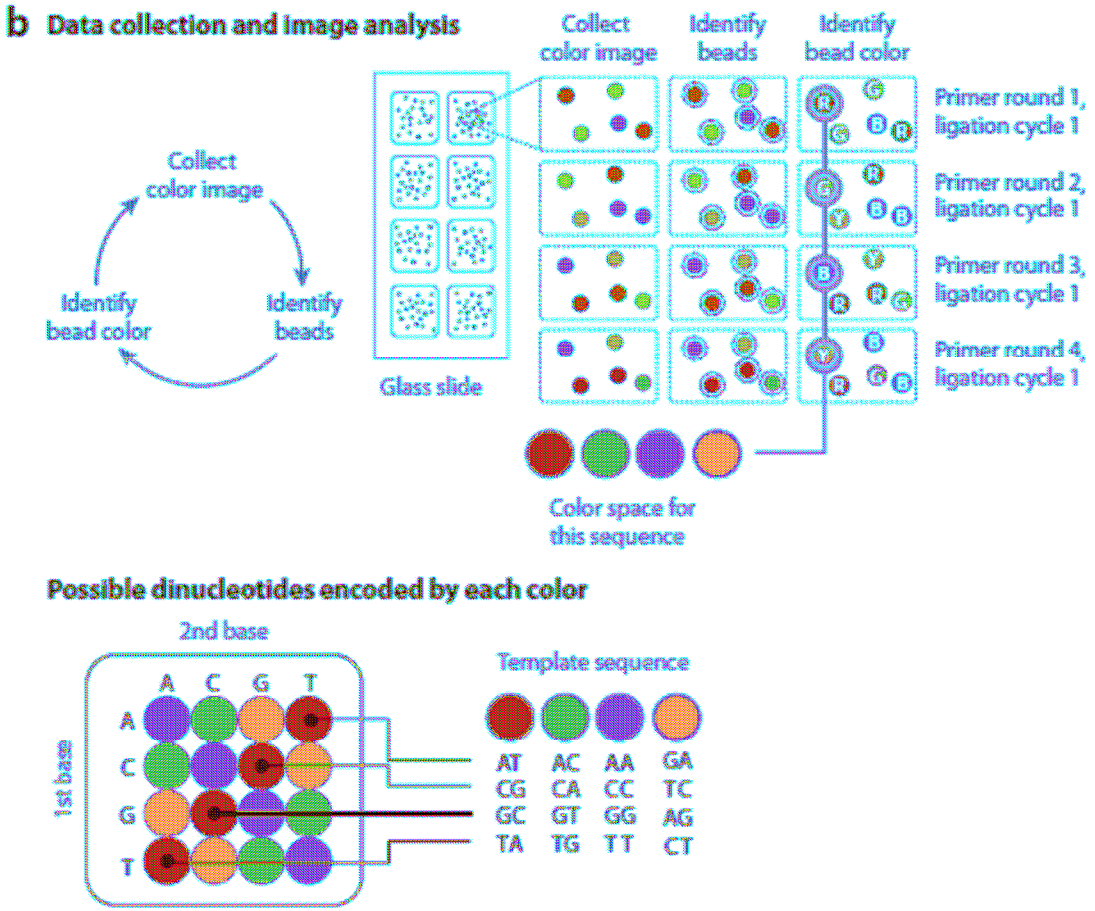

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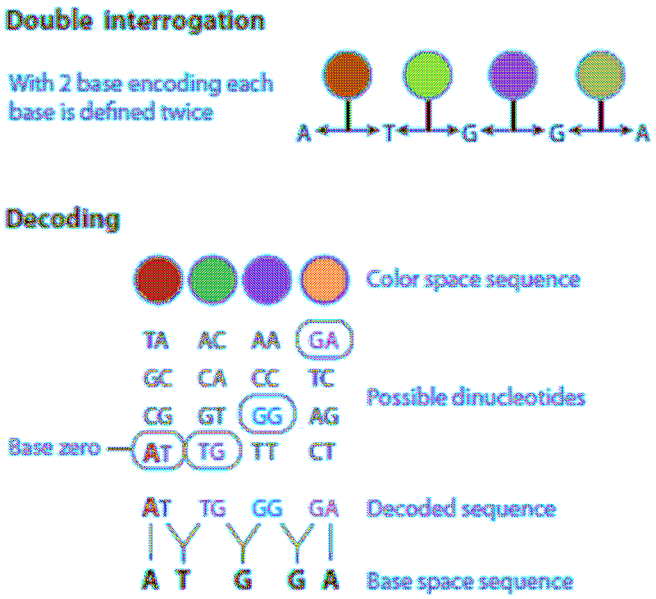

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