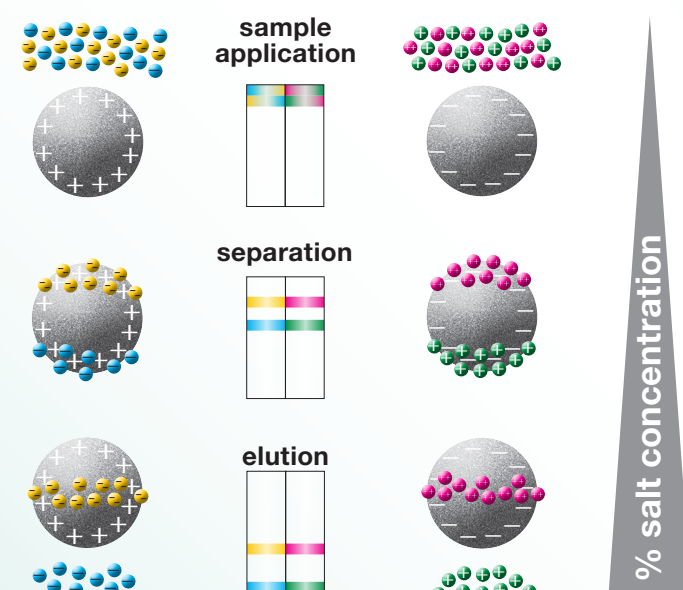


The Principles of Biochromatography

IEX



Ion exchange chromatography

Separation mechanism: **Ion exchange**

Advantage:

Suitable for wide molecular weight range

Stationary Phase:

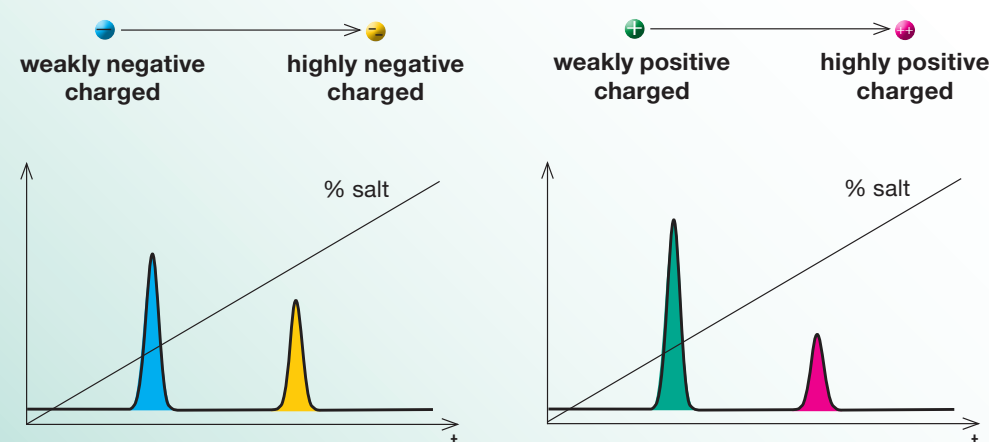
Charged surface (positive: anion exchange, negative: cation exchange)

Mobile Phase:

Buffer for elution with increasing salt concentration
Alternatively, the pH of the mobile Phase can be changed for elution

Elution Order:

First compounds which have the same charge as the surface,
last compounds which are oppositely charged to the surface



Proteins / Peptides

- BioPro IEX QA
- BioPro IEX QF
- BioPro IEX SP
- BioPro IEX SF

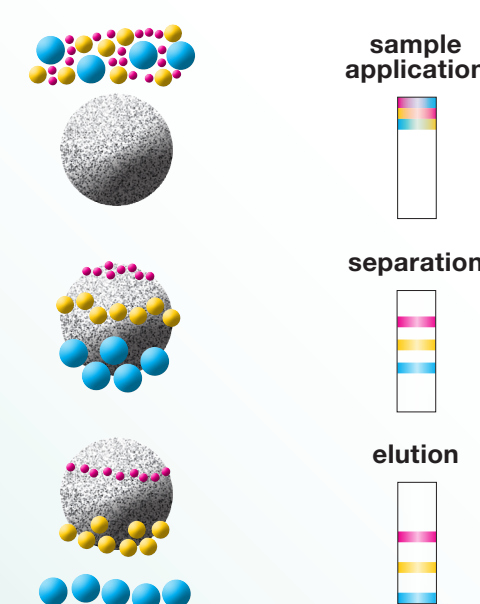
(Monoclonal) Antibodies

- BioPro IEX QA
- BioPro IEX QF
- BioPro IEX SP
- BioPro IEX SF

Oligonucleotides / Nucleic Acids

- BioPro IEX QA
- BioPro IEX QF

SEC



Size exclusion chromatography

Separation mechanism: **Size exclusion by hydrodynamic volume**

Advantage:

Preserving biological activity / easy to handle

Stationary Phase:

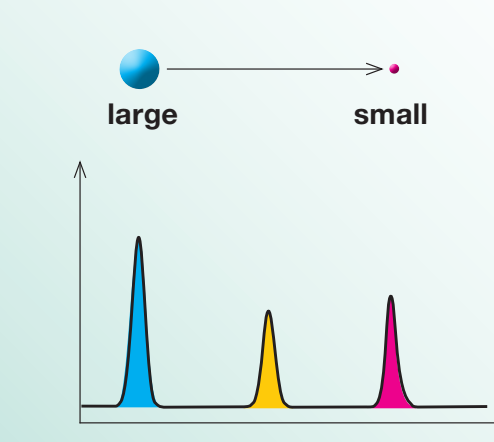
Porous packing material

Mobile Phase:

Aqueous solutions / buffer

Elution Order:

First large molecules, last small molecules



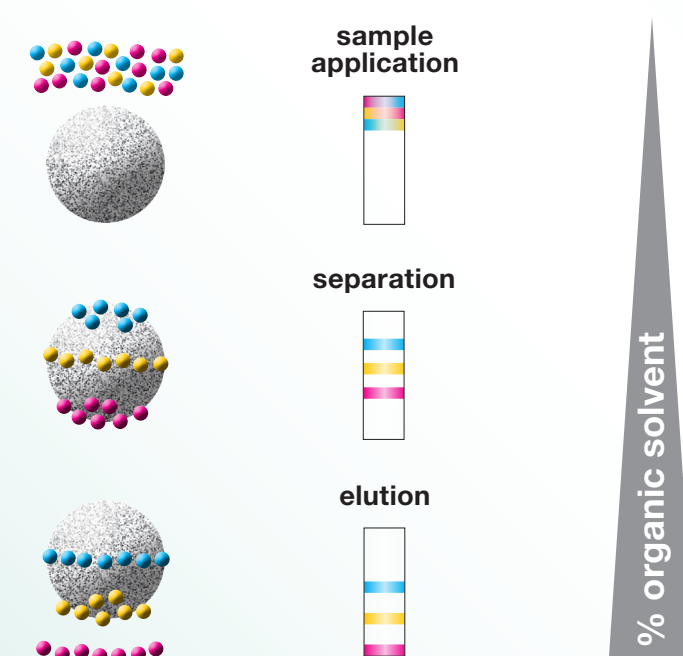
Proteins / Peptides

- YMC-Pack Diol-60 (for MW < 10,000)
- YMC-Pack Diol-120 (for MW 1,000 to 100,000)
- YMC-Pack Diol-200 (for MW 5,000 to 300,000)
- YMC-Pack Diol-300 (for MW 20,000 to 1,000,000)
- YMC-SEC MAB (for MW 10,000 to 700,000)

(Monoclonal) Antibodies

- YMC-Pack Diol-200 (for MW 5,000 to 300,000)
- YMC-Pack Diol-300 (for MW 20,000 to 1,000,000)
- YMC-SEC MAB (for MW 10,000 to 700,000)

RP



Reversed phase chromatography

Separation mechanism: **Hydrophobic interactions / distribution**

Advantage:

High resolution / standard LC conditions

Stationary Phase:

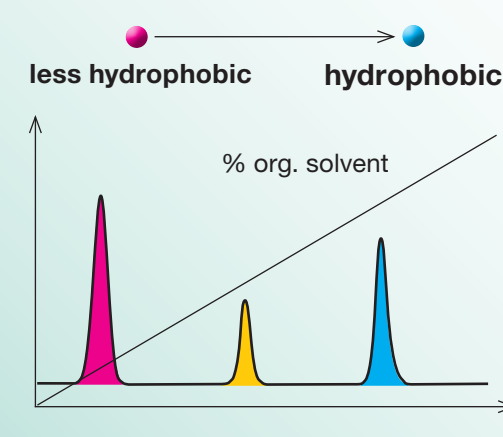
Non-polar

Mobile Phase:

Polar, mixtures of water / buffer and organic solvents

Elution Order:

First less hydrophobic compounds, last hydrophobic compounds



Proteins / Peptides

- YMC-Triart C18
- YMC-Triart Bio C18
- Meteoric Core C18 BIO
- YMCbasic
- YMC-Triart Bio C4

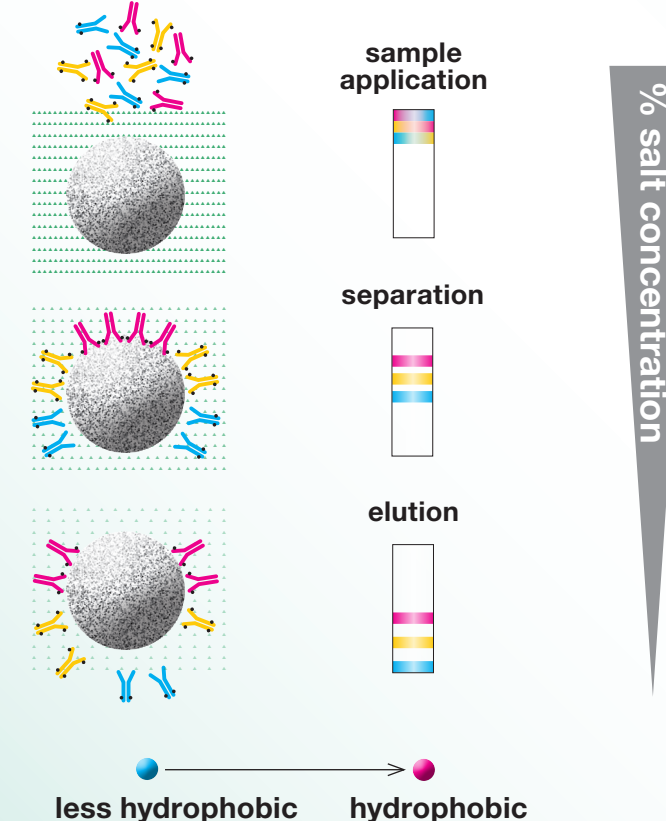
(Monoclonal) Antibodies

- YMC-Triart Bio C4

Oligonucleotides / Nucleic Acids

- YMC-Triart C18
- YMC-Triart Bio C18
- YMC-Triart C8
- Hydrosphere C18

HIC



Hydrophobic interaction chromatography

Separation mechanism: **Hydrophobic interaction**

Advantage:

Non-denaturing conditions

Stationary Phase:

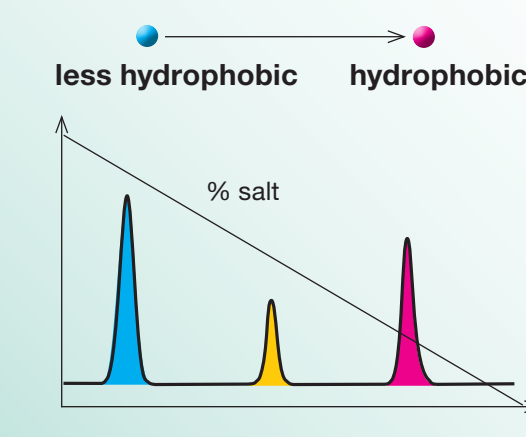
Non-polar

Mobile Phase:

Buffers for elution with decreasing salt concentration

Elution Order:

First least hydrophobic compounds,
last greatest hydrophobic compounds



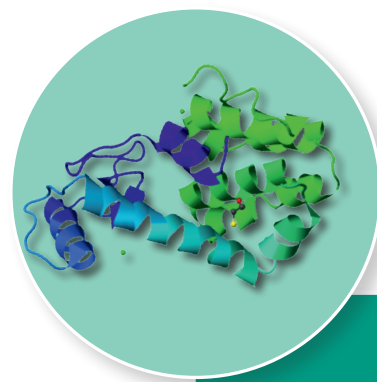
Proteins / Peptides

- BioPro HIC HT
- BioPro HIC BF

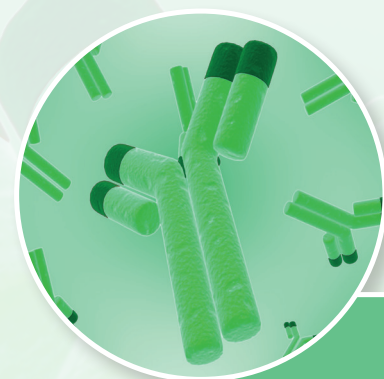
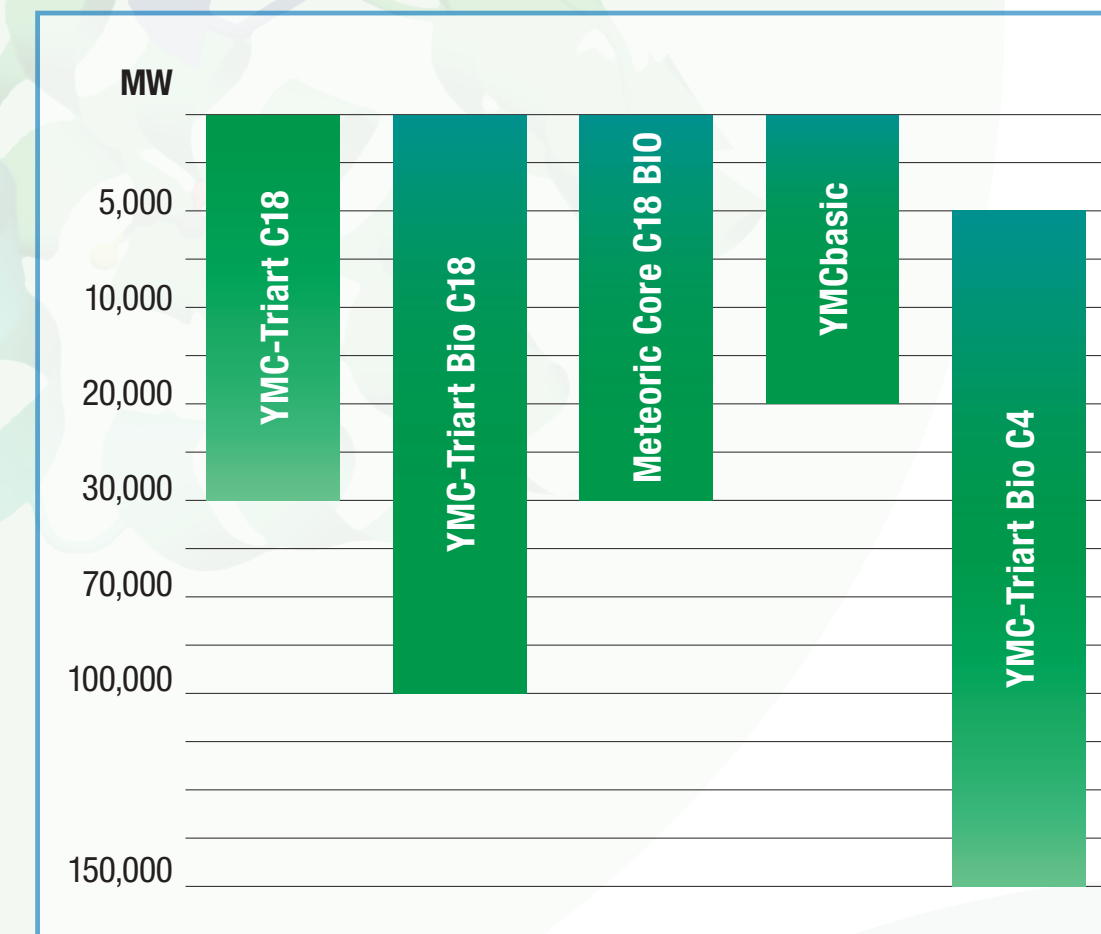
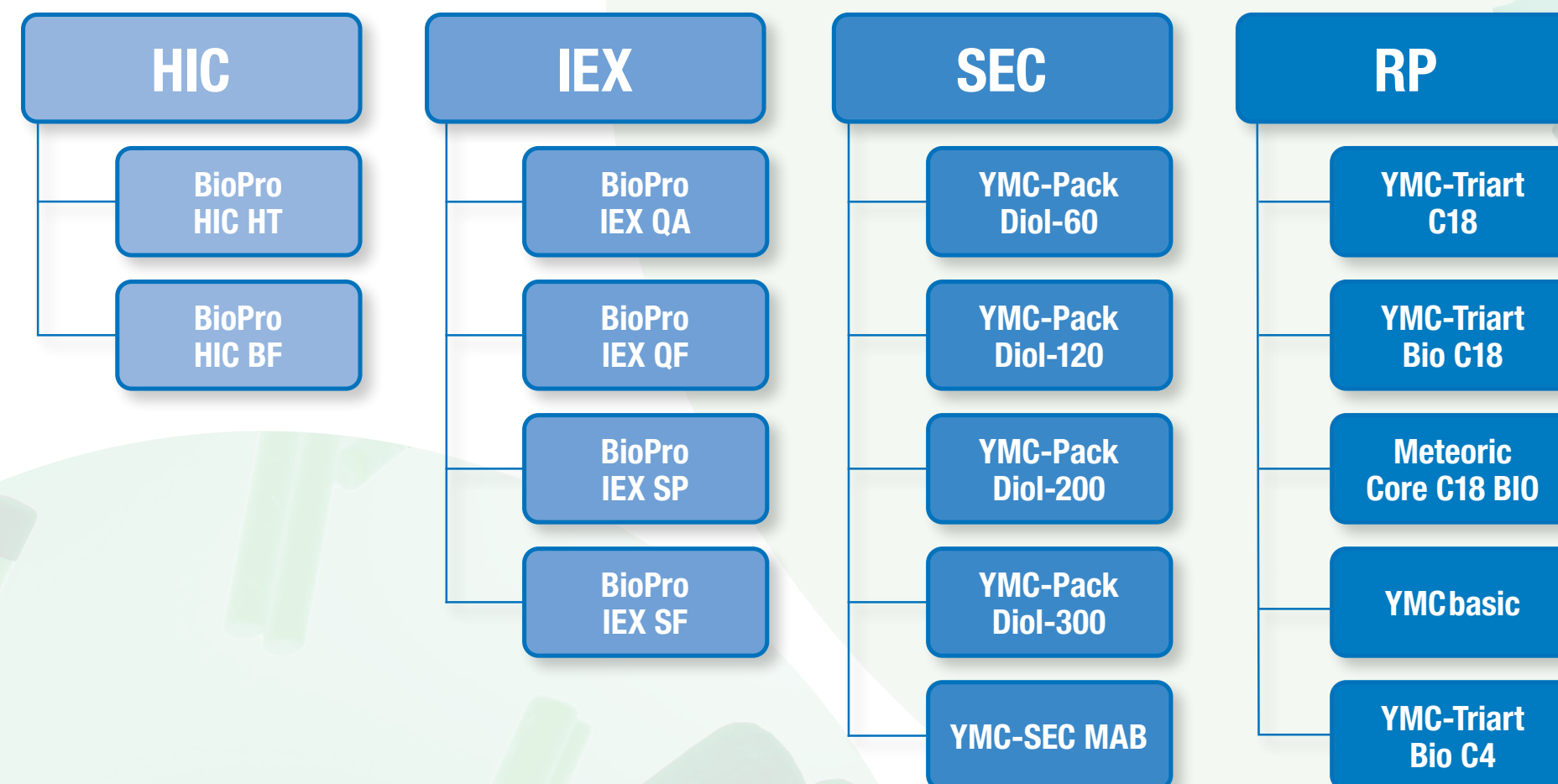
(Monoclonal) Antibodies

- BioPro HIC HT
- BioPro HIC BF

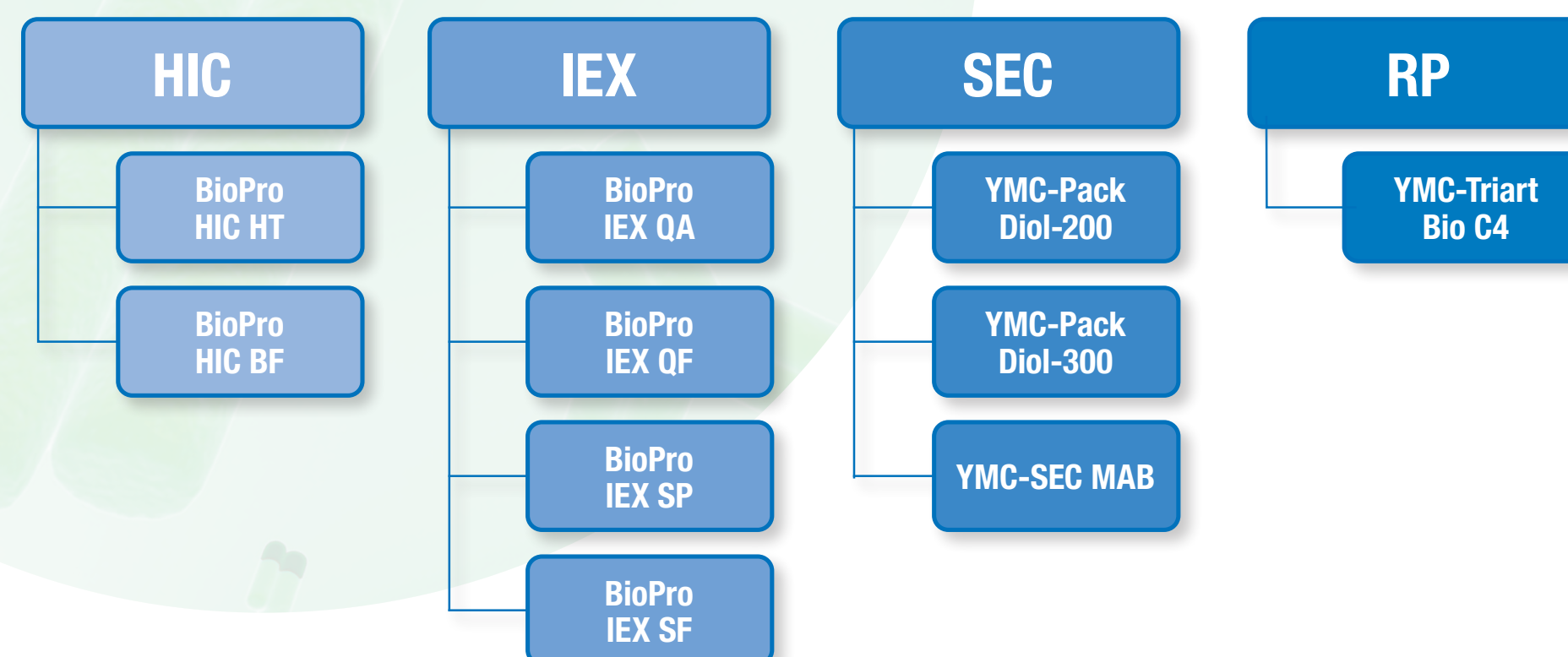
YMC Columns for Biomolecules



Proteins / Peptides



(Monoclonal) Antibodies



Oligonucleotides / Nucleic Acids

