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My background

PhD in Engineering, MSc in Biotechnology, BSc Chem. Eng.

Tecnológico de Monterrey, Monterrey, Mexico.

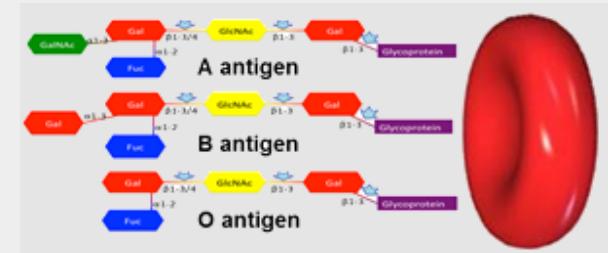
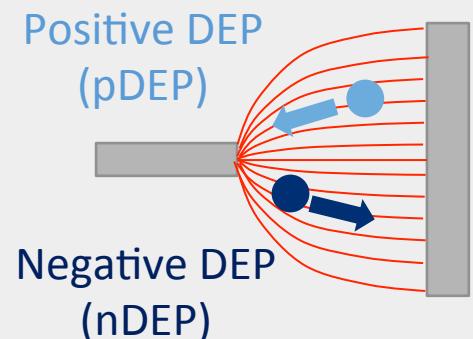
Areas of research

Electrokinetics – Dielectrophoresis (DEP)

- ✓ Cell manipulation in **non-uniform** electric fields
- ✓ Force dependent on cell dielectric properties

Blood and Red blood cells (RBC)

- ✓ 8 different blood types
- ✓ Different RBC membrane antigens (ABO)



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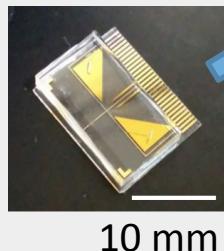
How I can contribute

- Microfabrication technology allows the use of DEP on RBC to determine blood type in a portable microfluidic system (point-of-care devices).

Portable
blood typing
unit



AC signal,
frequency
sweep



10 mm

Microfluidic
device

