**TEM**: transmission electron microscopy. Electrons are transmitted through the specimen

**SEM**: scanning electron microscopy. The surface of a specimen is scanned by a beam of electrons deflected from specimen ‘surface.

**Chromatography**: techniques used for sample preparation which let separate molecules by size, charge or binding affinity.

**Electrophoresis**: the cell is loaded into a gel and then an electric field is applied to the gel. This Electric field moves the molecules through the gel differentially

Since DNA molecules are negatively charged, when the electric field is applied to the gel, the DNA molecules moved towards the positive charges. But larger molecules move slowly and run through the argos matrix and run next to a sample of known molecular weight called the DNA ladder.

**Mass spectrometry or MassSpec**: measures mass to charge ratio of ions in a sample.

Cell membrane: a barrier which maintains physical integrity.