- 3. GF carry important messages such as proliferation, differentiation and movement (cell migration, or invasion), which are important in embryogenesis (development), adult tissues and repair.
- 4. As you can see, in any of these cell processes, there are vast opportunities for promotion of tumourgenesis if any deregulation were to occur.
- 5. GF are divided into several families, and the grouping is primarily based on the receptor interaction:
  - Platelet Derived Growth Factor (PDGF)
  - Epidermal Growth Factor (EGF) super family
  - Transforming Growth Factor  $\beta$  (TGF- $\beta$ )
  - Fibroblast Growth Factor (FGF) super family
  - Insulin-like Growth Factor (IGF)
  - . Hepatocyte Growth Factor (HGF)

Platelet-derived Growth Factor (PDGF):

- 1. These GFs are major mitogens (substance that stimulates mitosis in a cell) for many cell types of mesenchymal origin, e.g. fibroblasts and smooth muscle cells, and for some cell populations of
- neuroectodermal origin, like oligodendrocytes.
  2. There are four different PDGF genes that encode polpedides chains:

  PDGF-A
  PDGF-B
  PDGF-C
  PDGF-C

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PDGF-A	Ubiquitous high expression in muscle, pancreas and prostate
PDGF-B	Ubiquitous high expression in placenta
PDGF-C	Ubiquitous high expression in liver, kidney, pancreas entation ary
PDGF-D	More restricted none in brain,lung and muscle Highest expression in heart, pancreas and ovary.

- 3. PDGF gene products are polypeptide chains or varying lengths:
  - A 196 or 211 aa long
  - B 241 aa long
  - C 345 aa long
  - D 370 aa long