



Introduction

- Limb buds develop from lateral plate mesoderm (somatic layer)

3 developmental axes:

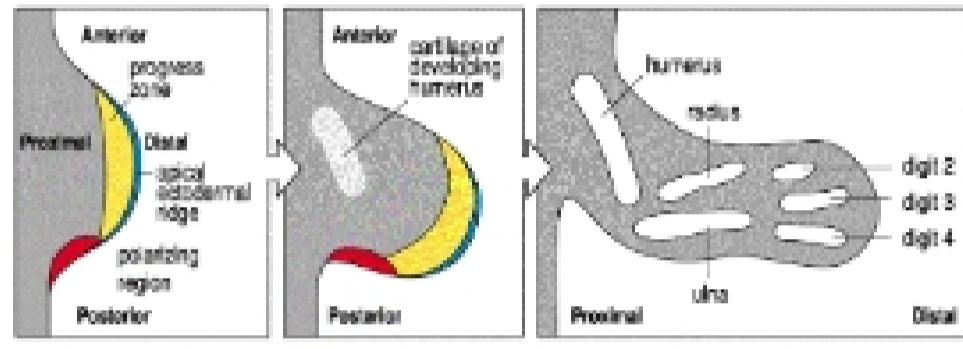
- proximo-distal,
- antero-posterior,
- dorso-ventral

Pattern is organized by:

- progress zone
- apical ectodermal ridge
- polarizing region,
- dorsal ectoderm.

Limbs have three signaling centers

- AER: Apical Ectodermal Ridge
(the AER overlies progress zone @ distal tip of bud)
- ZPA: Zone of Polarizing Activity



The proximodistal axis

Thalidomide

Given for morning sickness in 1960's-1980's



Now used for leprosy
multiple myeloma and
lymphoma

