

PRE-PENETRATION PROCESS

- **In bacteria**, cell multiplication in the presence of moisture or host exudates.
- Most important genera of plant-pathogenic bacteria:
 - *Agrobacterium*,
 - *Erwinia*,
 - *Pseudomonas*,
 - *Xanthomonas*.



PRE-PENETRATION PROCESS

- Factors affecting spore germination:

- Moisture
 - Temperature
 - Light; UV harmful; fungi protected by pigments (carotenoids)- *Alternaria*, *Cladosporium* in tropics
 - pH : generally 5 - 6.5 (*Botrytis cinerea* tolerate wide range of pH 1.6 - 6.5)
 - O₂ & CO₂
 - Biological factors: e.g. Host Nutrition, Sugars and aminoacids
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- The amount and duration of a particular factor determine the success or failure of spore germination

