**Mycobacterium vaccae**

- "mold-like" colonies
- Curved rod (comma shaped)
- Acid fast/gram positive (no outer membrane)
- Common in soil
  - We breathe them in or ingest orally
- Prevents TB in high risk people (elderly, PPD* strong positive, diabetics, HIV+)
- Induces neurogenesis
  - Improves cognitive function
- Generates serotonin and norepinephrine (proteins)
  - Chemicals act as anti-depressants

*purified protein derivative = Mantoux test = tuberculin sensitivity test*