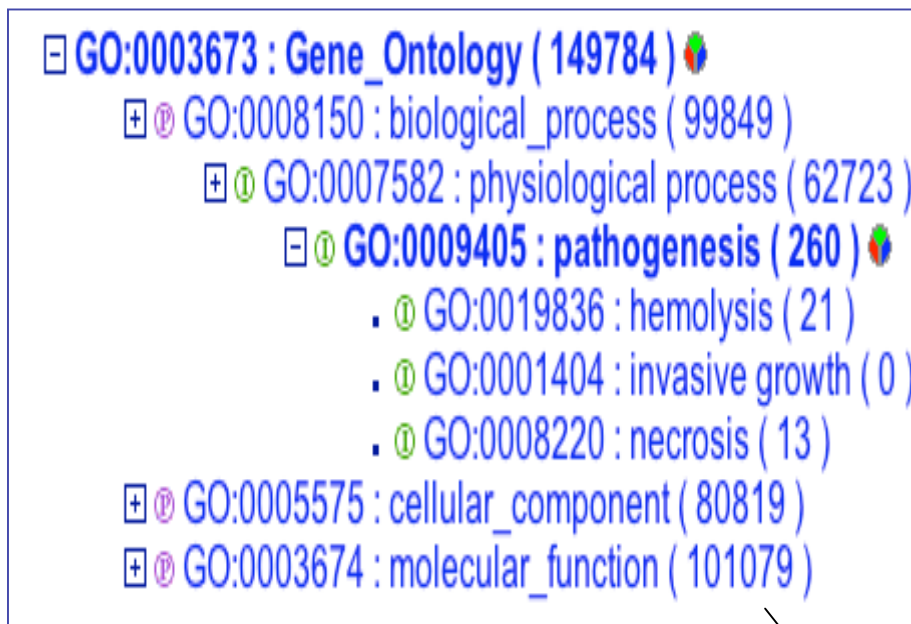
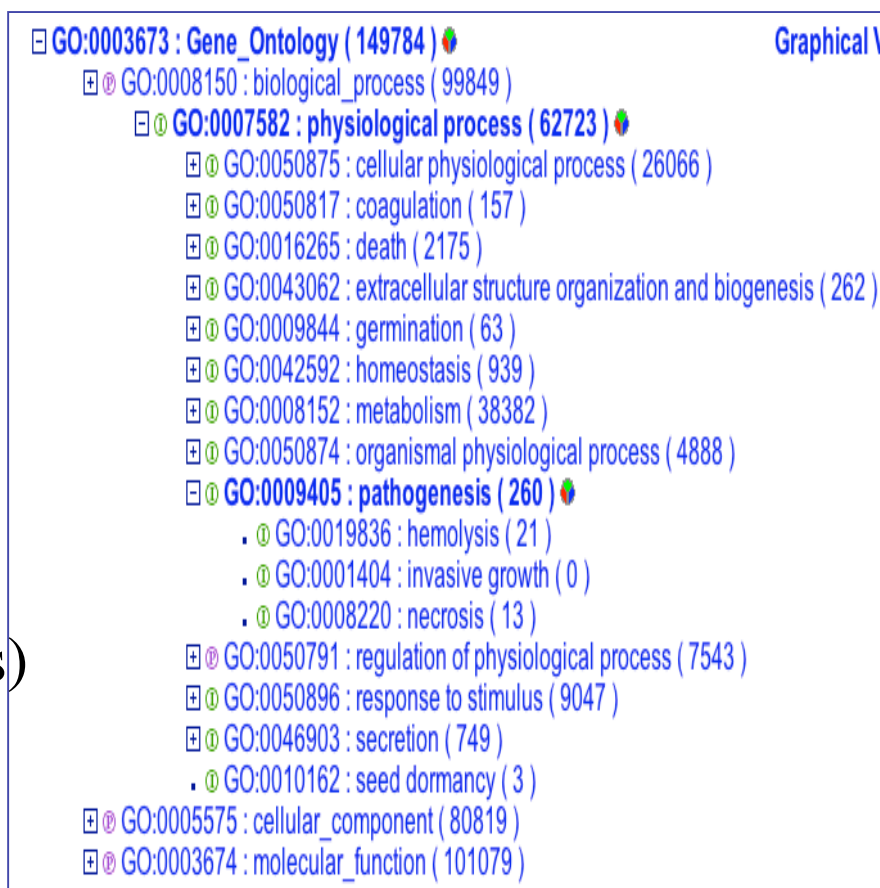


# Current tree structure around “pathogenesis”



(with siblings)



# current tree structure around “host-pathogen interaction”

**GO:0003673 : Gene\_Ontology ( 149784 )**  [Graphical View](#)

- ⊕ **GO:0008150 : biological\_process ( 99849 )**
  - ⊕ **GO:0009987 : cellular process ( 32926 )**
    - ⊕ **GO:0007154 : cell communication ( 9155 )**
      - ⊖ **GO:0030383 : host-pathogen interaction ( 271 )** 
        - **GO:0020035 : cytoadherence to microvasculature ( 57 )**
        - ⊖ **GO:0030682 : evasion of host defense response ( 224 )** 
          - ⊕ **GO:0020012 : evasion of host immune response ( 217 )**
          - ⊕ **GO:0019049 : viral host defense evasion ( 7 )**
        - ⊖ **GO:0019048 : virus-host interaction ( 32 )** 
          - ⊕ **GO:0019054 : viral host cell process manipulation ( 5 )**
          - ⊕ **GO:0019049 : viral host defense evasion ( 7 )**
          - ⊕ **GO:0046730 : viral induction of host immune response ( 4 )**
  - ⊕ **GO:0007582 : physiological process ( 62723 )**
    - ⊕ **GO:0050896 : response to stimulus ( 9047 )**
      - ⊕ **GO:0009605 : response to external stimulus ( 7045 )**
      - ⊕ **GO:0009607 : response to biotic stimulus ( 3740 )**
      - ⊕ **GO:0006952 : defense response ( 3044 )**
        - ⊖ **GO:0030682 : evasion of host defense response ( 224 )** 
          - ⊕ **GO:0020012 : evasion of host immune response ( 217 )**
          - ⊕ **GO:0019049 : viral host defense evasion ( 7 )**
  - ⊕ **GO:0016032 : viral life cycle ( 255 )**
    - ⊖ **GO:0019048 : virus-host interaction ( 32 )** 
      - ⊕ **GO:0019054 : viral host cell process manipulation ( 5 )**
      - ⊕ **GO:0019049 : viral host defense evasion ( 7 )**
      - ⊕ **GO:0046730 : viral induction of host immune response ( 4 )**
  - ⊕ **GO:0005575 : cellular\_component ( 80819 )**
  - ⊕ **GO:0003674 : molecular\_function ( 101079 )**

# Problems with pathogenesis terms

- “pathogenesis” is a “victim-centric” term
- many processes involved in the interaction with host are not present
- need to capture interactions with host by organisms other than pathogens
- sometimes hard to determine if something is a pathogen or not