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## Appendix N : Case History # 1

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**Directions:** Read the following case history and answer the questions, using your text, any available reference books, and information from your lab exercises as well as your notes from both the lab and lecture material.

A 48-year-old man with a long history of alcoholism was admitted to the intensive care unit with gastrointestinal bleeding. He was intubated (tube inserted through the trachea), and given intravenous fluids and a blood transfusion. He was treated with broad spectrum antibiotics. A culture was taken from his tracheal tube and initially showed *Staphylococcus aureus*. After further antibiotic therapy, a Gram stain of his tracheal aspirate showed polymorphonuclear leukocytes (White Blood Cells) and gram negative rods. The culture of the tracheal aspirate this time yielded a heavy growth of an oxidase-positive, gram-negative, nonfermenting lactose rod that produced a greenish hue (color) on the culture plate and smelled like grapes. The patient was diagnosed with a hospital acquired pneumonia.

1. What is the most likely bacterium (*Genus & species*) that caused this infection?
2. Is this organism frequently found as part of the normal flora of humans?
3. Where can this organism be found in the hospital environment?
4. What is the term given for this type of disease caused in the hospital?
5. Is this organism normally sensitive or resistant to many of the commonly used antibiotics?