

Thayer-Martin agar is also called VPN agar and contains vancomycin, polymyxin, nystatin, and other nutrients that facilitate the growth of *Neisseria* species while inhibiting the growth of other organisms. This is also known as VCN inhibitor, for the combination of antibiotics it has (vancomycin, colistin, and nystatin).

## **Oxidase Positive**

### **Ox-daisy Positive**

An oxidase test is used to determine if bacteria produce certain cytochrome c oxidases to help differentiate bacteria. *Neisseria gonorrhoeae* is oxidase-positive.

## **Glucose Fermenting**

### **Glue-bottle Fern**

*Neisseria gonorrhoeae* can be distinguished from other gram-negative bacteria because the organism is glucose fermenting. However, unlike *Neisseria meningitidis*, *Neisseria gonorrhoeae* cannot ferment maltose.

## **Pilus**

### **Pillars**

Pili are used to adhere to mucosal surfaces by extending the pili and retracting after attaching to a substrate, causing the organism to drag forward.

## **Opa Surface Protein**

### **Throwing plates and saying Opa**

*Neisseria gonorrhoeae* have surface proteins called Opa proteins that bind to receptors on immune cells, and they play a role in preventing an immune response.

## **Rapid Antigenic Variation**

### **Varied Ant-gems**

Rapid antigenic variation is an important virulence mechanism. *Neisseria gonorrhoeae* is capable of altering its surface Opa proteins, making it difficult to mount a defense.

## **IgA Protease**

### **(IgA) Apple-goblin with Propeller-ace**

An IgA protease is an enzyme that cleaves certain amino acid sequences of proteins including, immunoglobulin A. *Neisseria gonorrhoeae* releases IgA protease which destroy IgA, leading to increased pathogenicity. Other IgA protease producers include *Streptococcus pneumoniae* and *Haemophilus influenzae* type B.