



Catch me if you can!

By anonymous students

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Definition of Infectious Diseases:

- Are caused by microorganisms such as bacteria, viruses, and fungi
- Can be transmitted human-human and human-animal
- Most affect third world countries

Top 10 Most common diseases that kill

- 1. Ischemic heart disease
- 2. Cerebrovascular disease
- 3. *Lower Respiratory infections
- 4. *HIV/AIDS
- 5. Chronic Obstructive Pulmonary Disease
- 6. Perinatal conditions
- 7. *Diarrheal diseases
- 8. *Tuberculosis
- 9. *Malaria
- 10. Trachea, bronchus, lung cancers

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Recent Diseases in our World

- Recently (January), 115 people have died of Avian Flu
- 2007: A business man flying from US to various countries in Europe as a TB carrier was detained. A fellow passenger was affected.

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Problems with I.D.

- The infectious disease itself and mutation
- Resources (and lack thereof)
- Environment (climate and ecology)
- Time
- Lack of understanding
- Ethical constraints on research

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Ways we have been tackling the problems:

- Vaccines
- Antibiotics
- Pharmaceutical drugs
- Not developed for all
- Resistant strains (e.g. penicillin resistance)
- Allergies to antibiotics
- Painful Side effects, allergies, also resistance

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Proposed Solutions:

Bioengineer Bacteria

- Engineer bacteria to attack disease microbes (like was seen in the IGEM project)
- Attack!!

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Engineer Viruses

- Engineer Bacteriophages (bacteria-specific viruses) to attack target bacteria

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Boost Immunity

- Vitamin-C producing bacteria that live in your small intestine (symbiotic relationship)

Detect Virus infection mode

- And design compound to inhibit different areas of the virus's infection

Connect Hospitals to Researchers

- When patient comes in with new virus, a sophisticated screening system will be able to identify protein coat and infection mode, a vaccine can be developed from the blueprint, and this information can be transferred to other hospitals.

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New innovative solutions! (that
you create!)

The background of the image is an abstract composition of soft, flowing lines in shades of blue and white. The lines originate from the left side and curve towards the right, creating a sense of movement and depth. The colors transition from a deep, dark blue on the far left to a bright, almost white light on the right. The overall effect is ethereal and futuristic.

Save the good viruses, save the world!

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20.020 Introduction to Biological Engineering Design
Spring 2009

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