

## Lecture 6: Normal & facilitated cell entry mechanisms

### 6.1 Introduction

- 6.1.1 the general problem of cell entry
- 6.1.2 choosing modes of cell entry
- 6.1.3 how does Nature do it? (biomimetics)

### 6.2 Non-specific uptake mechanisms

- 6.2.1 pinocytosis by all cells
- 6.2.2 phagocytosis by some cells
- 6.2.3 a recent study of Qdot NP uptake

### 6.3 Nanoparticle uptake

- 6.3.1 NP size matters
- 6.3.2 NP shape matters
- 6.3.3 NP agglomeration reduces uptake
- 6.3.4 A sample study

### 6.4 Receptor-mediated uptake

- 6.4.1 Receptor mediated transport of desired molecules
- 6.4.2 How to study uptake mechanisms by inhibiting pathways with specific drugs
- 6.4.3 Some sample studies

### 6.5 Effects of nanoparticle coatings

- 6.5.1 Acrylate-Facilitated Cellular Uptake
- 6.5.2 Polyethyleneimine Coating Enhancement of Cellular Uptake

### 6.6 Effects of microenvironment and external stimuli

## References

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