

Organic Reaction Mechanisms II

4 Lectures TT 2003 – Illustrating the Importance of Mechanism

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Prior Knowledge Required

- 1st year Biological Chemistry course: basic enzyme catalysis principles; basics of protein structure;
- 2nd year Organic Reaction Mechanisms I.

Books

Primers **36** (Kirby), **67** (Fleming), **81** (Maskill)

Isaacs, *Physical Organic Chemistry*, Longman, 2nd Edition, (1996) Ch 9 & 12

Jones, *Physical and Mechanistic Organic Chemistry*, CUP, 2nd Edition (1984)

Advanced Biological Aspects: Fersht, *Enzyme Structure and Mechanism*;

Advanced Pericyclics: Fleming, *Frontier orbitals and organic chemical reactions*, Wiley, (1976).

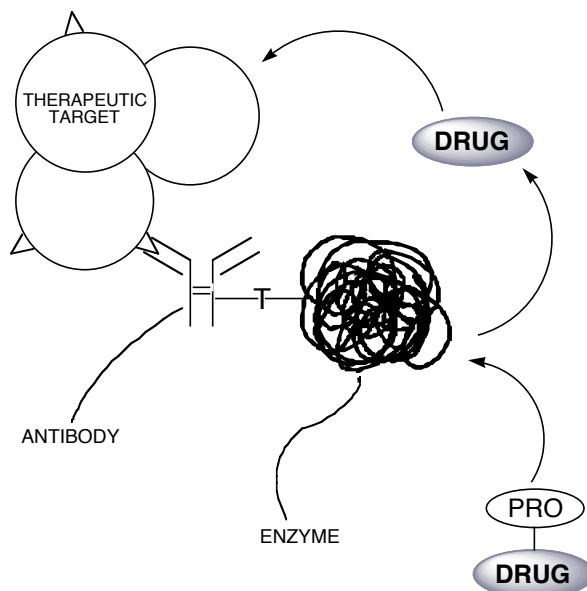
Topics to be Covered

- Catalysis
- Conservation of Orbital Symmetry
- Exploiting Mechanism

Handout 4

EXPLOITING MECHANISM

- Catalysis of Diels Alder Reactions
- Enzyme Inhibitors
- ADEPT/ADEPT
- Catalase



4.1 Catalysis of Cycloaddition Reactions