



UNIVERSITA' DEGLI STUDI DI MESSINA  
*Dipartimento di Scienze Biomediche, Odontoiatriche e delle Immagini  
Morfologiche e Funzionali*

Corso di Laurea in Biotecnologie Mediche (Classe LM-9)  
**MOLECULAR PHARMACOLOGY AND PRECISION MEDICINE**

*Docente: Prof. Alessandra Bitto*

**COURSE PROGRAM**

- Precision medicine based on pharmacogenetics and pharmacogenomics
- Molecular mechanism of action of drugs for dyslipidemia: statins, fibrates, ezetimibe
- Molecular mechanism of action of drugs for diabetes: insulin, glitazones, dpp-iv inhibitors, glp-1 like, sulphonylureas, metformin
- Molecular mechanism of action of drugs for bone metabolism: estrogens, androgens, SERMS, bisphosphonates, denosumab, strontium ranelate
- Molecular mechanism of action of drugs for heart diseases: anti-angina, anti-hypertensive, anti-arrhythmic
- Molecular mechanism of action of drugs for inflammatory diseases: immunosuppressant and anti-inflammatory
- New drugs: HDAC inhibitors, antisense nucleotides, antagomir, and crispr/cas9 based approaches.

Text books:

Clementi, Fumagalli – Farmacologia Molecolare - UTET

Rang, Dale – Farmacologia – Casa Editrice Ambrosiana