

Professor Rajendra Prasad

Lectures for PhD students, 15th – 19th October 2018

MULTIDRUG RESISTANCE

Overexpression of the ATP-Binding Cassette (ABC) drug transporter P-glycoprotein (P-gp) is often responsible for the failure of chemotherapy as a treatment for human tumors. The presence of proteins homologous to P-gp in organisms ranging from prokaryotes to eukaryotes indicates that drug export is a general mechanism of multidrug resistance. The series of lectures will highlight the structure, mechanism and functions of MDR transporters from microbes to man. The lectures will include deeper insight into the functioning of the membrane lipid and proteins in relation to MDR proteins. The broad topics that will be covered are tentatively listed below;

- **Emerging clinical drug resistance: from microbes to man**
- **Role of membranes in Multidrug Resistance (MDR)**
- **Membrane transporters and MDR**
- **Superfamilies of ABC and MFS transporters**
- **Rational mutational analysis of MDR transporters**
- **Promiscuity of MDR transporter proteins**
- **Chemical nature of multidrug binding pocket of MDR proteins**
- **Emerging roles of ABC transporters**
- **Mechanism of drug transport**
- **Inhibitors/modulators of MDR proteins**

Termin	Dzień tygodnia	Godzina	Miejsce
15.10.2018	Poniedziałek	14.15 – 17.00	Minicentrum Konferencyjne (Luwr)
16.10.2018	Wtorek	14.15 – 17.00	Minicentrum Konferencyjne (Luwr)
17.10.2018	Środa	14.15 – 17.00	Minicentrum Konferencyjne (Luwr)
18.10.2018	Czwartek	14.15 – 17.00	Minicentrum Konferencyjne (Luwr)
19.10.2018	Piątek	12.15 – 15.00	Minicentrum Konferencyjne (Luwr)