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Mr. **Nasser Ghaly Yousif**
2195 S. Oswego way 203
80014 Aurora Colorado, USA

Ulm, July 18, 2012
Responsible Office Ms. Pichler
Phone: +49(0)731 50-22057

Certificate of all Study and Examination Results – Transcript of Recodes

Program:	Oncology/Hematology	Student ID Number:	734784
Degree	Master	Date of birth	12.02.1967
Subject-Related	4(at summer Semester 2012)	Place of birth	Iraq

Name of Achievement	Type/form of exam	Date	Grade Status	Credits	Attempt
1000 Interdisciplinary (Module 1)	**K G**	**06.01.2011**	**1,2 BE**	**12**	**1**
71222 Cellular and Molecular Biology	MO G	06.01.2011	1.0 BE	2	1
71213 Cellular and Molecular Biology	MP S	16.01.2011	1.0 BE	1	1
71233 Immunology and Genetic	MO G	20.01.2011	1.0 BE	1	1
71214 Immunology and Genetic	MP S	22.01.2011	0.9 BE	2	1
71234 Basic Medical pathology	MO G	25.01.2011	0.8 BE	2	1
71237 Basic Medical pathology	MP S	28.01.2011	0.7 BE	2	1
71244 Medical Biochemistry	MO G	29.01.2011	0.9 BE	1	1
71215 Medical Biochemistry	MP S	31.01.2011	0.8 BE	1	1
1100 Clinical Research (Module 2)	**K G**	**04.05.2011**	**3,5 BE**	**11**	**1**
71238 Clinical Trails	MO G	04.05.2011	2.7 BE	2	1
71212 Clinical Trails	MP S	06.05.2011	2.9 BE	2	1
71222 Ethical Aspects	MO G	08.05.2011	2.2 BE	2	1
71225 Ethical Aspects	MP S	11.05.2011	2.5 BE	2	1
71225 Biometry	MO G	13.05.2011	2.0 BE	2	1
71245 Biometry	MP S	13.05.2011	1.9 BE	2	1
71229 Management	MO G	14.05.2011	2.5 BE	2	1
71211 Management	MP S	14.05.2011	2.8 BE	2	1
1200 Pharmacology (Module 3)	**K G**	**09.09.2011**	**3,5 BE**	**11**	**1**
71251 Mechanism of chemotherapy	MP S	14.09.2011	2.8 BE	2	1
71251 Pharmacology/Pharmacodynamics	MP S	14.09.2011	2.8 BE	2	1
71251 Advance Pharmacology	MP S	14.09.2011	2.8 BE	2	1
71251 Pharmaceutical Bioinformatics	MP S	14.09.2011	2.8 BE	2	1
1300 Clinical Oncology (Module 4)	**K G**	**02.02.2012**	**3,5 BE**	**11**	**1**
71251 Clinical Oncology I	MP S	14.02.2011	2.8 BE	2	1
71251 Clinical Oncology I	MP S	14.02.2011	2.8 BE	2	1
71251 Clinical Oncology II	MP S	14.02.2011	2.8 BE	2	1
71251 Clinical Oncology II	MP S	14.02.2011	2.8 BE	2	1
71251 Clinical Hematology	MP S	14.02.2011	2.8 BE	2	1
71251 Clinical Hematology	MP S	14.02.2011	2.8 BE	2	1
71251 Integrated Therapeutics Concepts	MP S	14.02.2011	2.8 BE	2	1
8000 Master Thesis	**K G**	**02.07.2012**	**2,5 BE**	**11**	**1**
8001 Master Thesis	MO G	02.07.2012	2.8 BE	2	1

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Certificate for all study and examination results without additional subjects for Nasser Ghaly Yousif, 734784

Type of examination: K=Account MO=Module DA=Diploma Thesis FP= Subject Exam TP

https://www.asobm.org/wp-content/uploads/Oncology-master-program-Ulm-University-Nasser-G-Yousif.pdf

Oncology Master Program

Syllabus for Pharmacology

7.5 credits

Module code: Ulm625/1200
Education cycle: Second cycle
Main field(s) of study and in-depth level: Pharmacy A1N,
Grading system: According to the Ulm University System 1-5
Postgraduate Medical oncology student, Pharmacology Module
Pharmacology department
Revised by: The Educational Board of Pharmacy
Entry requirements: For applicants within: Oncology Master, Hematology Master, Medicine Master
Module director: Prof. Dr. Travis O'Brien
PREREQUISITE: BMSC 8210, 8212 or permission of instructor.
LECTURE CONTACT TIME/HOURS: Five hours-long sessions per week plus 4 lectures
sessions on individual drugs.
METHOD OF ASSESSMENT: The final grade will be calculated from Examination (80%)
and Class Presentation (20%)

Mechanism of chemotherapy

1 credit

1. Target DNA, produce alkylation through formation of intermediates. No phase-specific drugs
2. Interfere with DNA synthesis. They are structural analogs or they inhibit several enzymes. S-phase specific
3. Cause linkage of double strands of DNA and prevent replication. They are derived from microorganisms.
4. Cell cycle specific drugs.
5. Bind to microtubular proteins, thus inhibit microtubule assembly resulting in dissolution of the mitotic assembly
6. structure. M- phase specific drugs.
7. DNA Topoisomerases I and II are essential enzymes for transcription, replication and mitosis. The following drugs are able to inhibit these enzymes.
8. Miscellaneous Mechanisms
9. Resistance to chemotherapy
   Primary Resistance
   Acquired Resistance
   Mechanisms of resistance to chemotherapy
10. Chemotherapy toxicities
11. Pre- chemotherapy assessment
12. Rationale of systemic chemotherapy

Pharmacology/Pharmacodynamics

2 credits

- PHARMACODYNAMICS

1 credit

1. General Instructional Objective
2. A general understanding of how drugs work and how their actions may be modified.
3. An understanding of the clinical application of this knowledge
4. Required Abilities

5. To explain the concept of drug action with respect to: receptor theoryenzyme interactions physico-chemical interactions
6. To explain receptor activity with regard to: ionic fluxes second messengers and G proteins nucleic acid synthesis evidence for the presence of receptors regulation of receptor number and activity
7. To define and explain dose-effect relationships of drugs with reference to: graded and quantal response therapeutic index potency and efficacy competitive and non-competitive antagonists partial agonists, mixed agonist-antagonists and inverse agonists
8. To describe efficacy and potency with reference to dose-response curves
9. To explain the Law of Mass Action and describe affinity and dissociation constants
10. To describe the mechanisms of adverse drug effects

- PHARMACOKINETICS

1 credit

1. General Instructional Objective
2. An understanding of the fate of drugs in the body and how this may be affected by physiological and pathological disturbance
3. An understanding of the clinical application of this knowledge
4. Required Abilities

a. To explain the concept of pharmacokinetic modeling of single and multiple compartment models and define:

5. half-life clearance zero and first order kinetics volume of distribution bio-availability area under the plasma concentration time curve extraction ratio
6. To describe absorption and factors that will influence it with reference to clinically utilised sites of administration
7. To describe factors influencing the distribution of drugs (e.g. protein binding, lipid solubility, pH, pKa) and their alteration in physiological and pathological disturbance
8. To describe the mechanisms of drug clearance and how physiological and pathological disturbance may effect these
9. To describe the mechanisms of non-hepatic and hepatic metabolism of drugs. To describe Phase 1 and Phase 2 reactions, hepatic extraction ratio and its significance, first pass effect, enzyme induction and inhibition
   To explain and apply concepts related to intravenous and infusion kinetics. To describe the concepts of effect-site and effect-site equilibration time and their clinical applications. To describe the concept of context sensitive half time and its clinical applications
10. To calculate loading and maintenance dosage regimens
11. To describe the pharmacokinetics of drugs administered in the epidural and subarachnoid space
12. To explain clinical drug monitoring with regard to peak and trough concentrations, minimum therapeutic concentration and toxicity.

Advance Pharmacology

4.5 credits

1. Clinical Pharmacology and Therapeutics (CPT)/ **3 credits**
2. Use of statistical techniques pertinent to Clinical Pharmacology/ **0.3 credits**
3. Dosing regimens, Rational prescribing – individuals, Rational prescribing population/ **0.3 credits**
4. Drug regulation, Pharmacoepidemiology, Adverse drug reactions/ **0.4 credits**
5. Drug errors and Drug overdose, Helsinki Declaration, Drugs and the fetus/ **0.5 credits**

Pharmakologie und Toxikologie, Universität
Pharmacology and Toxicology Faculty member Ulm/Germany
Dr. Karen Briski, Professor of Pharmacology, Department Head
Dr. Nick J. Bruno, Professor of Pharmacology
Dr. Ronald Berry, Professor of Pharmacology and Toxicology
Dr. Tom Hoover, Professor of Pharmacology
Dr. Prof. Dr. Travis O'Brien, Professor of Pharmacology and Toxicology
Dr. Sushma Krishnamurthy, Professor of Pharmacology and Toxicology
Dr. Paul Sylvester, B.J. Robinson/Pfizer Endowed Professor of Pharmacology
Dr. Girish Shah, Calhoun Endowed Professor of Pharmacology
Dr. H. Glenn Anderson, Professor of Pharmacology and Toxicology
Dr. Seetharama Jois, Professor of Pharmacology
Dr. Scott McDonald, Professor of Pharmacology
Dr. Yong-Yu Liu, Associate Professor of Pharmacology
Dr. Jana Sutton, Professor of Pharmacology and Toxicology
Dr. Ronald A. Hill, Associate Professor
Dr. Keith Jackson, Assistant Professor of Pharmacology
Dr. Nektarios Barabutis, Assistant Professor of Pharmacology
Dr. Jean Christopher Chamcheu, Assistant Professor
Dr. Camile Currier, Assistant Professor
Ruthie Sampson, Administrative Assistant
Mary L. Rhea, M.Ed., NCC, LPC, Assistant Dean for Student Affairs & Development
Katie R. Kelley, MBA/ Alumni Outreach Coordinator

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