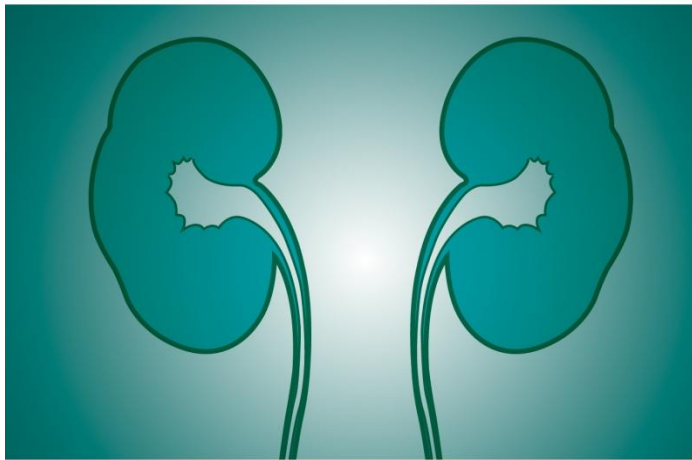




King Saud University
College of Medicine
Medical Education Department



RENAL SYSTEM
RENAL SYSTEM



BLOCK BOOK AND STUDENT GUIDE OF **RENAL SYSTEM**

Academic Year 1430 - 1431

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LIST OF CASES FOR RENAL BLOCK

1. Case no. 1

BRIEF INFORMATION ABOUT THE CASE:

A 32 years old male with severe abdominal pain for more than two hours.

2. Case no. 2

BRIEF INFORMATION ABOUT THE CASE:

A 49 years old female with increased urinary frequency.

3. Case no. 3

BRIEF INFORMATION ABOUT THE CASE:

A 56 years old male with puffiness around the eyes.

4. Case no. 4

BRIEF INFORMATION ABOUT THE CASE:

A 65 years old male with malaise and leg swelling.

INSTRUCTION TO THE STUDENT:

Each week you will be given a clinical case for discussion and to final out what you will be searching and getting information to complete the case. These cases will be discussed in a small group with a tutor to guide you.

GENERAL INFORMATION

Block Title	: Renal Block
Block Code & Number	: Ren114
Credit Hour	: 4
Block Duration	: 4 Weeks
Block Dates	: 3 th April 2010 – 1 th May2010
Block Chairman	: Dr. Mohammed Al-Ghonaim
Block Tutors	: Dr. Zeenate Zaidi Dr. Sayed Shahid Habib Dr. Rana Hasanato Dr. Hala Kfoury Dr. Ali Somily Prof. Mahmoud Al Khattab

LIST OF SMALL GROUPS

Tutor List for Renal Block Small Group Teaching GROUP A&B (Male)	
Group 1	FACILITATOR: DR. SALEH AL RASHEED
Group 2	FACILITATOR: DR. AHMAD ABDULWAHAB
Group 3	FACILITATOR: DR. DANI RABAH
Group 4	FACILITATOR: DR. SALIH SALIHA
Group 5	FACILITATOR: DR. MOHAMMAD AL-OMAR
Group 6	FACILITATOR: DR. AYMAN AL-JAZAIRY
Group 7	FACILITATOR: DR. AMRO AL-HABIB
Group 8	FACILITATOR: PROF. ZAIN ALABEDEEN JAMJOOM
Group 9	FACILITATOR: DR. ALI SOMILY
Group 10	FACILITATOR: PROF. Mohammad Omar, ALSOHAIBANI
Group 11	FACILITATOR: DR. MOHAMMAD KHAN
Group 12	FACILITATOR: DR. MOHAMMAD ATIAH
Group 13	FACILITATOR: PROF. AHMED TURKISTANI
Group 14	FACILITATOR: DR. SAEED VOHRA
Group 15	FACILITATOR: DR. ABDEL MUNIM AL SIDDIG-
Tutor List for Renal Block Small Group Teaching (Female)	
Group 1	FACILITATOR: Dr. Ghada Alsaif
Group 2	FACILITATOR: DR. FAWZIA AL-OTAIBI
Group 3	FACILITATOR: DR. HALA KFOURY
Group 4	FACILITATOR: DR. KHWATER AL-BAKHALI
Group 5	FACILITATOR: DR. MAJDA FUAD SAEED
Group 6	FACILITATOR: DR. MONA HALAWANI
Group 7	FACILITATOR: DR. SANAA AL-SHARAWANI
Group 8	FACILITATOR: DR. LAYLA AL-DOKHI
Group 9	FACILITATOR: DR. SETALBANAT AWADALLAH
Group 10	FACILITATOR: DR. MANAN ALHAKBHANI

RESOURCE PEOPLE

INSTRUCTOR	DEPARTMENT	EMAIL	PAGER
Dr Abuel Makarem	Anatomy	saeedmakarem@hotmail.com	
Prof.Sultan	Physiology	sultanmeo@hotmail.com	
Prof.AL-Sohaibani	Pathology	alsohaibani@yahoo.com	0698
Dr.Shahid Habib	Physiology	Shaidhabib44@yahoo.com	
Dr Aly	Anatomy	Alymahmed53@hotmail.com	
Dr.Waheed Al-Harrizi	Biochemistry	walharizi@ksu.edu.sa	0016
Dr.Mohammed Azhar Chisti	Biochemistry	mchishti@ksu.edu.sa	0210
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Prof. Humaid	Pharmacology	humayyad@yahoo.com	183
Dr.Usman Ghani	Biochemistry	ugresearch@hotmail.com	
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Dr.Hala Kfoury	Pathology	Halak77@hotmail.com	2403
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Prof.Hanan Hajar	Pharmacology	hananhajar@yahoo.com	
Dr.Sumbol Fatema	Biochemistry	sumbulfatma@gmail.com	

WELCOME ADDRESS

Dear Students,

We are pleased to welcome you in the college of Medicine, Renal Block attachment. We hope you will find this block both useful and enjoyable.

General Learning Objectives

The main learning objectives of the course:

By the end of the course the students should be able to:

1. Identify the structure and the function of the urinary system.
2. Recall the most common diseases affecting the Urinary system, their presentation and pathophysiology of related symptoms and signs.
3. To show the needed skills (clinical and laboratory) related to the urinary system.
4. Identify the risk factors related to the diseases, their prevention and to describe a management plan for these diseases.

Weekly Learning Topics

WEEK 1

By the end of this week, the following topic will be covered:

- Anatomy of the kidney and radiological anatomy of the renal system.
- Histology of the kidney.
- Embryology and development of the kidney.
- Glomerular filtration and renal clearance from the physiological view.
- Pathology of the major clinical syndromes.
- Biochemistry of the kidney function test.

WEEK 2

By the end of week, the following topic will be covered:

Anatomy of the ureters, bladder and urethra.

- Embryology development of male genital system.
- Histology of urinary passage.
- Physiology of tubular transportation and renal clearance.
- Biochemistry of aminoacids and urine analysis.
- Pathology of urinary tract infection.
- Microbiology of urinary tract infection.
- Renal Pharmacology.

WEEK 3

By the end of week, the following topic will be covered:

Concentration of the urine from the physiological view.

- Physiology of renal regulation and renal tubular function.
- Physiology of micturation.
- Embryology development of female genital system.
- Biochemistry of renal stones and amino acid metabolism.
- Microbiology of treatment of urinary tract infection.
- Immune complex nephritis from the immunological view.
- Pharmacology of diuretics 1 and 2.
- Pharmacology of urinary tract infection.

WEEK 4

By the end of week, the following topic will be covered:

Physiology of acid base balance.

- Pathology of tumors of kidney and urinary tract.
- Pathology of renal allograft.
- Immunology of transplant.

Instructional Methods:

- Small group discussion.
- Lectures.
- Seminars.
- Laboratory based practical.
- Clinical skills.
- Independent learning.
- Writing an essay or mini thesis.

Assessment of Students in the Block

In order to pass the block, you must obtain a minimum final block grade of D (the grading guide attached as appendix¹), this grade is a composition from several block requirements, which can be subdivided as:

- 1- Attendance
- 2- Tutor assessment
- 3- Written Exams
- 4- OSPE (Objective Structured Practical Examination)

The final grade is a composition of the grades obtained for the specified block requirements, calculated as follows:

• Continuous Assessment (Tutor Assessment and Attendance)	: 15%
• Written Examinations (MCQ)	: 55%
• Mid-Block Exam	25%
• Final Block Exam	30%
• OSPE	: 30 %
TOTAL	: 100 %

1. Attendance :

Students are required to attend not less than 75% of all educational activities during the block. These include small group teaching, lectures, practical sessions, skills training sessions and integrated clinical sessions.

Your attendance will be recorded during all sessions. Failure to meet this requirement without a valid explanation will result in exclusion from the final examination. On the other hand, your presence will be rewarded by assigned marks.

2. Tutor Assessment in Large and Small groups (Continuous Assessment):

During each session, your individual efforts will be evaluated by your tutor. The tutors are instructed to evaluate two aspects:

- a. The extent to which you demonstrate that you study and prepare yourself thoroughly between the two sessions (i.e., preparation).
- b. The extent to which you actively contribute during group discussion (i.e., participation). Your grade for each session depends upon both your preparation and your participation.

The grade will be on the scale from “5”, “4”, “3”, “2”, or “1”. Which have the following general descriptors:

- 5 = Outstanding (Excellent)
- 4 = Very good
- 3 = Good
- 2 = Average
- 1 = Poor

The block contains two sessions each week, so the maximum amount of ‘participation points’ you are able to obtain will be from two sessions multiplied by the number of weeks. The total participation points will be recalculated according to the weight for each participation in the total assessment.

Your tutor can give you more information about the evaluation of your participation. The details of this evaluation also given in “Tutor Assessment of Student” form.

3. Written Examination:

- a. Mid block exam 25%: In the form of MCQs, these are prepared mainly from sessions presented to the students in large group. This exam will consist of 50 MCQs that will assess factual knowledge.
- b. Final written exam 30%: at the end of the block in form of MCQs, that are prepared mainly from sessions and presented to the students. This exam will consist of 80 MCQs that will assess factual knowledge too.

4. Objective Structured Practical Examination (OSPE):

This contains 30% of the marks. It is a practical examination at the end of the block. The OSPE examination will consist of 15-20 OSPE stations. The purpose of the OSPE stations is to test your deeper understanding of the basic sciences. The OSPE will take place at the end of each block.

5. Objective Structured Practical Examination (OSPE):

This contains 30% of the marks. It is a practical examination at the end of the block. The OSPE examination will consist of 15-20 OSPE stations. Each station will take about 5 minutes, which contains a mix of slide show and some practical sessions. The purpose of the OSPE stations is to test your deeper understanding of the basic sciences. The OSPE will take place at the end of each block.

Block Evaluation

The block evaluation uses the following three data sources:

1. Student Feedback In form of **DREEM** – Dundee Ready Educational Environment Measure
2. Tutor Feedback
3. Student Results

Methods of student's formative assessment:

- Self evaluation
- Peer evaluation
- Tutor evaluation (both summative & formative)
- Log book

Reading Materials

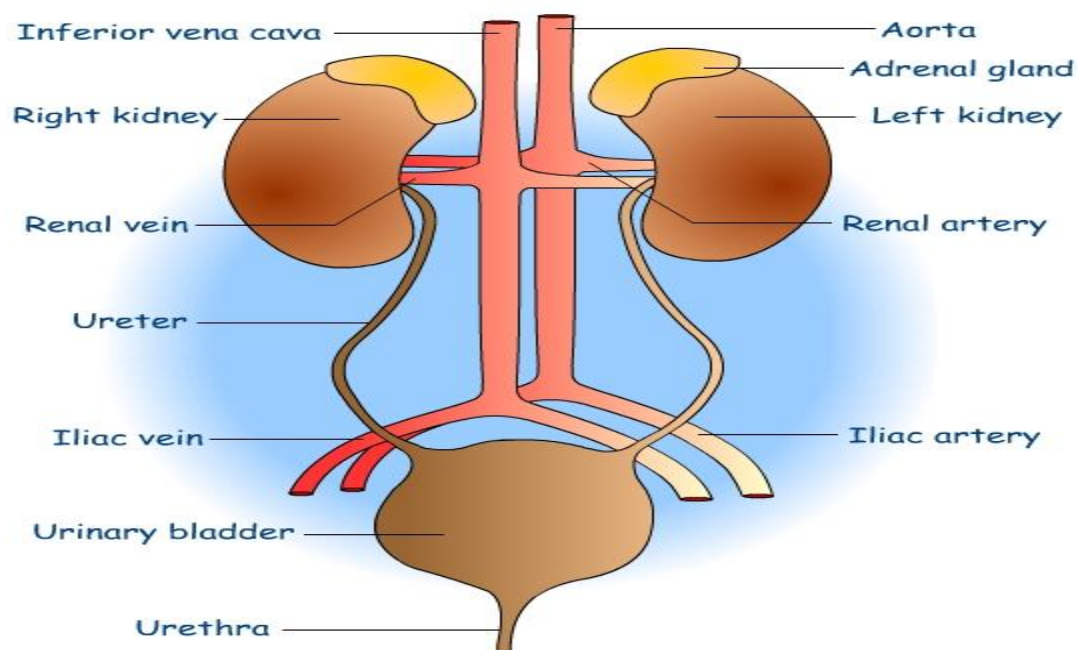
THE STRUCTURE OF THE RENAL SYSTEM

Urine is produced in the kidneys from water and wastes extracted from the blood. The rest of the urinary system is concerned with the storage and ducting of the urine to the outside of the body.

The kidneys are large, bean shaped organs which lie on the dorsal side of the visceral cavity. Blood is supplied to the kidneys by the renal arteries which branch off the aorta. The kidneys are drained by the renal veins into the inferior vena cava. From the kidneys, urine passes to the urinary bladder via the ureters. Urine is passed to the outside environment via the urethra.

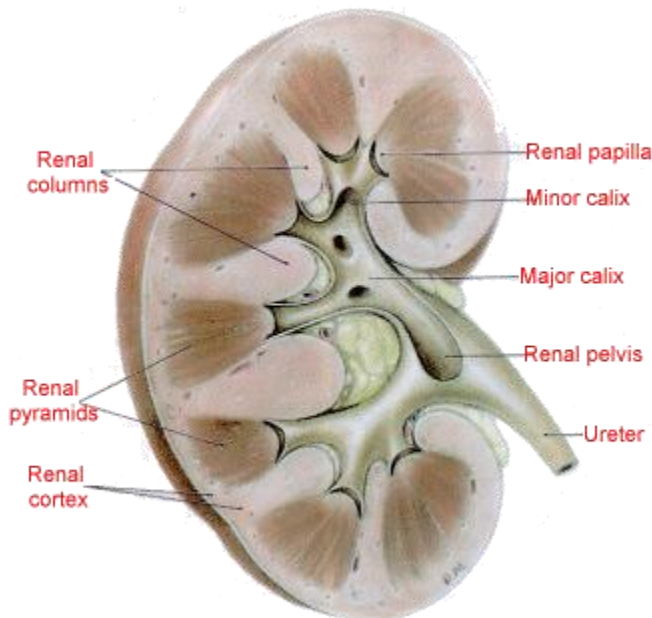
The functions of the kidneys can be summarized as follows:

1. Control of the body's water balance.
2. Regulation of blood pressure via the renin-angiotensin-aldosterone system
3. Regulation of blood electrolyte balance - Na^+ , Ca^{2+} , K^+ etc.
4. Excretion of metabolic wastes such as urea, creatinine and foreign substances such as drugs and the chemicals we ingest with our food
5. Help in the regulation of the body's acid base balance
6. Regulation of red blood cell production via the hormone erythropoietin
7. Help in the production of vitamin D



MACROSTRUCTURE OF THE KIDNEY

The kidneys are protected by a tough fibrous coat called the renal capsule. Under the capsule, the arrangement of nephrons and capillaries in the kidney produce the appearance of distinct regions when viewed in longitudinal section. The outer cortex region surrounds darker triangular structures called pyramids which collectively form the medulla. The inner part of the kidney, the renal pelvis, collects the urine draining from the nephron tubules and channels it into the ureter.



On sectioning, the kidney has a pale outer region- the cortex- and a darker inner region- the medulla. The medulla is divided into 8-18 conical regions, called the renal pyramids; the base of each pyramid starts at the corticomedullary border, and the apex ends in the renal papilla which merges to form the renal

pelvis and then on to form the ureter. In humans, the renal pelvis is divided into two or three spaces -the major calyces- which in turn divide into further minor calyces. The walls of the calyces, pelvis and ureters are lined with smooth muscle that can contract to force urine towards the bladder by peristalsis.

The cortex and the medulla are made up of nephrons; these are the functional units of the kidney, and each kidney contains about 1.3 million of them.

The nephron is the unit of the kidney responsible for ultrafiltration of the blood and reabsorption or excretion of products in the subsequent filtrate. Each nephron is made up of:

A filtering unit- the glomerulus. 125ml/min of filtrate is formed by the kidneys as blood is filtered through this sieve-like structure. This filtration is uncontrolled.

The proximal convoluted tubule. Controlled absorption of glucose, sodium, and other solutes goes on in this region.

The loop of Henle. This region is responsible for concentration and dilution of urine by utilizing a counter-current multiplying mechanism- basically, it is water-impermeable but can pump sodium out, which in turn affects the osmolarity of the surrounding tissues and will affect the subsequent movement of water in or out of the water-permeable collecting duct.

The distal convoluted tubule. This region is responsible, along with the collecting duct that it joins, for absorbing water back into the body- simple math will tell you that the kidney doesn't produce 125ml of urine every minute. 99% of the water is normally reabsorbed, leaving highly concentrated urine to flow into the collecting duct and then into the renal pelvis.

The bladder is a hollow, muscular, balloon shaped organ that lies in your pelvis. It collects urine from your kidneys and stores it until it is full enough to empty through the urethra.

The bladder swells into a round shape when it is full and gets smaller when empty. If the urinary system is healthy, the average adult bladder holds about 2 cups of urine for 2 to 5 hours.

The bladder's main function is to store and release urine. Nerves in the bladder tell you when it is time to urinate (empty your bladder). As the bladder first fills with urine, you may notice a feeling that you need to urinate. The sensation to urinate becomes stronger as the bladder continues to fill and reaches its limit. At that point, nerves from the bladder send a message to the brain that the bladder is full, and your urge to empty your bladder intensifies.

References

MICROBIOLOGY

1. **Medical microbiology and introduction of infectious Diseases.** John C. Sherris, Published by prentice International, USA. Latest Edition.
2. **Medical Microbiology.** David Greenwood, Published by ELST with Churchill Livingstone Latest Ed.
3. **Microbiology.** Richard A. Harvey and Pamela C Champe, Lippincott's illustrated reviews, 2nd Edition.
4. **A colour Atlas of Infectious Diseases.** r.t.d. Emod, Published by Wolfe Medical, London, Latest Edition.
5. **A colour atlas of Microbiology.** Olds, Published by Wolf Medical, London, latest Edition.
6. **Medical Parasitology.** Markeyl Voge/David Published by W.B. Saunders Company, London, 7th Edition.
7. **Medical Mycology Lecture Slides.** Al-Hedaithy, S.S.A; Al-Kherajji FOR PRINTING 2006. Riyadh.
8. **Medical Mycology.** J.KWON Chung and J. Bennettee. Published by Lea and Febiger. Philadelphia, Latest.

BIOCHEMISTRY

1. **Lippincott Illustrated Review Biochemistry,** Lippincott Williams and Wilkins. 2007. 4th Edition. 9780781764600
2. **Clinical Chemistry: Techniques, Principles, and Correlations** Lippincott Williams and Wilkins. 2009. 6th Edition. 078179045X
3. **Emery Elements of Medical Genetics.** Churchill Livingstone. 2007 13th Edition. 978-0-07020-2917-2
4. **Textbook of Biochemistry with Clinical Correlations.** Wiley-Liss. 2005. 6th Edition. 0471678082
5. **Harper's Illustrated Biochemistry.** Mc Graw Hill Lange. 2006. 27th Edition. 007-125301-7

IMMUNOLOGY

1. **Clinical Chemistry by Kaplan and pesce, 1989 Pages 20-21**
2. **Medical Immunology** Parlslow T. G., stites D.P., Terr A.I., Imboden J.B. complement and Kinin, . 8th Edition (International Edition, Large Medical Books/ McGraw-Hill companies.

PHARMACOLOGY

1. **Basic and Clinical Pharmacology,** Katszing B.G. Latest Edition.

PHYSIOLOGY

1. **Review of Medical Physiology**, William F. Ganong.2009. 23rd Edition, 0071605673
2. **Essentials of Human Anatomy and Physiology**, E. Marieb.2008. 9th Edition, 978-0321513427
3. **Essentials of Human and physiology**, E. Marieb.2006. 8th Edition, 08053-4940-5
4. **Medical Physiology**, A. Guyton, A.Guyton, Guyton and Hall, 11th Edition. W.B. sanders Company, Philadelphia, U.S.A
5. **Human Physiology**, S. Fox.2008. 0-07-111585-, McGraw Hill, U.S.A
6. **Human Physiology**, S. Fox. 2008. 987-0-0-7-110-207-6. McGraw Hill, U.S.A

ANATOMY

1. **Clinical Anatomy** By R.S. snell. 8th Edition Lippincott Williams & Wilkin
2. **The Developing Human, Clinically Oriented Embryology** by K.L. Moore and T.V.N.Persaud. 8th Edition W.B. Saunder London
3. **Color Atlas of Histology** By L.P. Gartner & J.L. Hiatt. 4th Edition Lippincott Williams & Wilkins A Wolters Klumer Company, London- NY
4. **Color Textbook of Histology (Text & Atlas)** L.P. Gartner & J.L. Hiatt. 3rd Edition W.B. Saunders, London- NY
5. **Di Fiore's Atlas of Histology** By V.P. Eroschenko. 11th Edition Lippincott Williams & Wilkins, London-NY
6. **Grant's Atlas of Anatomy** By A.M.R. Agur, A.F. Dallay.12th Edition Lippincott Williams & Wilkins
7. **Clinical Anatomy** By R.S. Snell. 8th Edition Little Brown & Co. UK
8. **NeuroAnatomy** By A.R. Crossman D. Neary. 3rd Edition Churchill Livingstone
9. **McMinn's Colour Atlas of Human Anatomy** By R.H. McMinn. 5th Edition Mosby-Wolf

PATHOLOGY

1. **Essential Haematology** By A.U. Hoffbrand & J. E. Pettit. Latest Edition Blackwell Sciences. ISBN 0632051531
2. **Robbins Basic Pathology** By Kumar, Cortran & Robbins. Latest Edition Saunders, NY. ISBN 08089-007-2
3. **Wheaters Basic Hispatology**. A colour Atlas & Text. By A Stevens J.S. Lowe, B. Young. Latest Edition Elsevier Churchill Livingstone. ISBN 0443-06-020-7
4. **Core Pathology** By Alan Stevens, James Lowe & Ian Scott. Third Edition Mosby (Elsevier). ISBN 9780723434443
5. **Lippincotts Illustrated review Microbiology** By William A. Strohol. 2nd Edition .2007 Amazon. ISBN 0-397-51568-5
6. **Medical Parasitology** By E. K. Markell, Krotoskiwa, John D. T. Latest Edition Saunders 0-7216-7634-0
7. **Medical Mycology** By Known- chung K, Benette J., Latest Edition Lea & Febiger 1992. ISBN 0-8121-1463-9
8. **Medical Mycology** Lecture Slides Al-Hedaithy & Obeikan Book stores.2006 ISBN 9960-56-185-2
9. **Immunology** By Richard A. Goldsby & Others. 5th Edition W.H. Freeman company, U.S.A. ISBN 0-7167-4947-5
10. **A practical guide to Clinical Virology**. By R. J. Whitley. Latest Edition John Wiley, NY, U.S.A. ISBN 0-470-85687-4

TUTORS CONTACT INFORMATION

CHAIRPERSON: Dr. Mohammed Al Ghonaim			
CO-CHAIR: Prof. Mahmood Al Khattab			
MEMBERS	DEPARTMENT	CONTACT NO.	E-MAIL ADDRESS
Dr. Zeenate Zaidi	Anatomy Department		zzaidi@ksu.edu.sa
Dr. Sayed Shahid Habib	Physiology Department		shaidhabib44@yahoo.com
Dr. Rana Hasanato	Biochemistry Department		ranamomen@yahoo.com
Dr. Hala Kfoury	Pathology Department		halak77@hotmail.com
Dr. Ali Somily	Microbiology Department		ali.somily@gmail.com
Prof. Mohamed Osman Gad El Rab	Immunology Department		mogad@yahoo.com



TUTOR ASSESSMENT OF STUDENT
SCHOOL YEAR 2009-2010

Student Name: _____ **Block Title:** _____
Tutor Name: _____ **Block Dates:** _____

Complete this form for each student in your group. Give your constructive feedback to the student at the end of the session. Please submit your form to the appropriate program staff.

Record your global (overall) rating of this student's performance in the 2nd Small Group Session. Make this judgment with reference to the performance criteria of three skills area: Preparation, Participation Behavior. (See the details for description of each area) Please discuss your evaluation feedback with the student.

PERFORMANCE CRITERIA						
1. Preparation a. Familiar with the content of basic references b. Illustrate concepts with specific examples. c. Identifies when help is needed. d. Gets beyond the basic texts. e. Integrates knowledge across organization levels. f. Generally well prepared.	<table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> </table>	1	2	3	4	5
1	2	3	4	5		
2. Participation a. Contributes actively, regularly and substantially to the learning group. b. Draws diagrams, flowcharts and tables to explain, explore and summarize. c. Demonstrate and improves skills in the small group teaching process. d. Uses evidences. e. Facilitates participations of others. f. Engages in (and initiates) assessment, goal-setting and monitoring for self and the group. g. Critically assesses and challenges others' concepts and ideas in a logical and constructive way. h. Makes links with prior relevant reading.	<table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> </table>	1	2	3	4	5
1	2	3	4	5		
3. Professional Behavior a. The student comes on time, and doesn't arrive late or leave early. b. Consistently demonstrates kindness, caring, acceptance of responsibility, honesty and fairness. c. Attend to good functioning of the group. d. Explains and discusses using terminology e. Knowledgeable about, and demonstrates the application of ethical principles. f. Accurately identifies areas personal strength and weakness. g. Demonstrates self awareness and discloses feelings and values. h. Gives and receives feedback with skill and useful outcomes i. Absence with excuse or absence without excuse.	<table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> </table>	1	2	3	4	5
1	2	3	4	5		
TOTAL						



Global Rating:
improvement

☐ Meet the requirements

☐ Requires

**KING SAUD UNIVERSITY
COLLEGE OF MEDICINE
MEDICAL EDUCATION DEPARTMENT**

**SMALL GROUP TUTOR EVALUATION FORM
BLOCK**

Date: _____

Tutor's Name: _____ Group No.: _____

Student: ☐ Peer: ☐ Other: ☐ Name (Optional): _____

How well did the tutor facilitate group process in the following regards? Please put a check (✓) in the box.

- | | | | | | | | | | | |
|--|---|--------------------------|---|--------------------------|---|--------------------------|---|--------------------------|---|--------------------------|
| 1. Appropriately facilitated the brainstorming sessions. | 1 | <input type="checkbox"/> | 2 | <input type="checkbox"/> | 3 | <input type="checkbox"/> | 4 | <input type="checkbox"/> | 5 | <input type="checkbox"/> |
| 2. Appropriately facilitated the hypothesis reorganization sessions. | 1 | <input type="checkbox"/> | 2 | <input type="checkbox"/> | 3 | <input type="checkbox"/> | 4 | <input type="checkbox"/> | 5 | <input type="checkbox"/> |
| 3. Appropriately facilitated the reporting sessions. | 1 | <input type="checkbox"/> | 2 | <input type="checkbox"/> | 3 | <input type="checkbox"/> | 4 | <input type="checkbox"/> | 5 | <input type="checkbox"/> |
| 4. Appropriately manage the time flow. | 1 | <input type="checkbox"/> | 2 | <input type="checkbox"/> | 3 | <input type="checkbox"/> | 4 | <input type="checkbox"/> | 5 | <input type="checkbox"/> |
| 5. Help to keep the group focused on its task | 1 | <input type="checkbox"/> | 2 | <input type="checkbox"/> | 3 | <input type="checkbox"/> | 4 | <input type="checkbox"/> | 5 | <input type="checkbox"/> |
| 6. Provided a well balanced intervention within the group process, but avoided dominating. | 1 | <input type="checkbox"/> | 2 | <input type="checkbox"/> | 3 | <input type="checkbox"/> | 4 | <input type="checkbox"/> | 5 | <input type="checkbox"/> |
| 7. Intervened when chairman or reporter needed. | 1 | <input type="checkbox"/> | 2 | <input type="checkbox"/> | 3 | <input type="checkbox"/> | 4 | <input type="checkbox"/> | 5 | <input type="checkbox"/> |
| 8. Provided constructive positive and constructive feedback to the group as needed. | 1 | <input type="checkbox"/> | 2 | <input type="checkbox"/> | 3 | <input type="checkbox"/> | 4 | <input type="checkbox"/> | 5 | <input type="checkbox"/> |
| 9. Encouraged positive and constructive feedback within the group about its performance | 1 | <input type="checkbox"/> | 2 | <input type="checkbox"/> | 3 | <input type="checkbox"/> | 4 | <input type="checkbox"/> | 5 | <input type="checkbox"/> |
| 10. Showed enthusiasm. | 1 | <input type="checkbox"/> | 2 | <input type="checkbox"/> | 3 | <input type="checkbox"/> | 4 | <input type="checkbox"/> | 5 | <input type="checkbox"/> |
| 11. Helped to create a supportive group climate. | 1 | <input type="checkbox"/> | 2 | <input type="checkbox"/> | 3 | <input type="checkbox"/> | 4 | <input type="checkbox"/> | 5 | <input type="checkbox"/> |
| 12. Encouraged logical and critical thinking. | 1 | <input type="checkbox"/> | 2 | <input type="checkbox"/> | 3 | <input type="checkbox"/> | 4 | <input type="checkbox"/> | 5 | <input type="checkbox"/> |
| 13. Overall rating of the tutor. | 1 | <input type="checkbox"/> | 2 | <input type="checkbox"/> | 3 | <input type="checkbox"/> | 4 | <input type="checkbox"/> | 5 | <input type="checkbox"/> |

Number Code Values:

5- EXCELLENT

4- VERY GOOD

3-GOOD

2- FAIR

1- POOR