Welcome Readers!

Greetings from the Dean of Kasturba Medical College, Manipal
Dear Students,

It is with great pleasure we welcome the first edition of Scientia Medicina’s Newsletter, Conscientia. Here at KMC, we believe student-run organizations and co-curricular activities enhance the learning process. It fosters creativity and builds well-rounded professionals ready to take on new challenges. I encourage each and every one of you to go beyond the boundaries of your textbooks to experience even more. I assure you it will be rewarding if you can use the lessons taught by our dedicated faculty and apply them in a meaningful way.

Dr. Poomnima Baliga, MBBS, MD (Pathology)
Dean, KMC Manipal, Manipal University

Scientia Medicina- The Medicine Club, KMC Manipal

Scientia Medicina, Manipal's premiere medical student club, was born of many informal discussions concerning USMLE questions, frequent conversations regarding electives, internships, and other topics of interest to MBBS students. Formally founded in February 2015, the organization has various facets. Scientia Medicina helps students learn the technique of problem solving for MCQs and clinical scenarios. This is accomplished through social media and peer based discussions in an attempt at "M-Learning."

As comprehensive and vast as our MBBS curriculum is, there is much more we can do and a lot more that is expected of us in the demanding, ever-changing field of medicine. That's why I felt it was imperative we enlighten students about "Medicine Beyond Boundaries," through which we promote concepts like "Clinician Scientist Career" and "Biothinking". All these factors will play an important role, not just for the personal development of a medical student, but for the medical fraternity as a whole. Through Scientia Medicina, we will try to help with everything from basic doubts in clinical examination to guidance about pursuing a career as a Clinician Scientist. We welcome your suggestions to make this venture a success.

Dr. Partha Dabke
Advisor and Co-Founder, Scientia Medicina
Intern, KMC Manipal, Manipal University

Conscientia - "Knowledge shared with others"

Welcome to the first issue of Scientia Medicina’s newsletter, Conscientia.

Conscientia - "knowledge shared with others", reflects the mission of this newsletter which is to present valuable information in a concise, accessible manner that can facilitate our professional and personal lives.

Whether we traverse the path to becoming a doctor effortlessly prancing forward or painstakingly trudging one step at a time, we all could benefit from a guide. It is our hope for Conscientia to be that guide for you; with directions to navigate the twists and turns of the road ahead. Each issue will touch on various topics such as current events in the Scientia Medicina Club, advances in the international medical field, recent changes in medical guidelines (disease classification, diagnosis, and management), exam-oriented tips and advice on conducting medical research projects.

As aspiring medical professionals, we recognize the value of knowledge and the power it has to better our community. Bringing to light this importance, Conscientia aims to organize and disseminate the most valuable information to medical students.

"When we know better, we do better." - Maya Angelou

Teresa Varghese
7th Semester:
Co-Editor in Chief
Scientia Medicina Editorial Board
KMC Manipal, Manipal University

George Varghese
7th Semester:
Co-Editor in Chief
Scientia Medicina Editorial Board
KMC Manipal, Manipal University
RESEARCH CORNER

Overview of STS Awarded by ICMR (2015)

Short term research projects during M.B.B.S. are supported every year by the Indian Council of Medical Research (ICMR). This is a scholarship to carry out a research study in two months and Rs. 10,000 is the total grant given along with a certificate.

STS (2015) Timeline

<table>
<thead>
<tr>
<th>Dec '14</th>
<th>Jan '15</th>
<th>Apr '15</th>
<th>Apr-Sep '15</th>
<th>Aug-Oct '15</th>
<th>Feb '16</th>
<th>June '16</th>
<th>Oct '16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online Registration</td>
<td>Proposal Submission</td>
<td>Proposal result</td>
<td>Time for the project</td>
<td>Report submission</td>
<td>Final Result</td>
<td>Stipend</td>
<td>Certificates</td>
</tr>
</tbody>
</table>

FAQs about the ICMR STS

- **May I do an ICMR STS Project in 1st year?**
  Yes, of course! It can be started from 1st MBBS.

- **May I do the project even if it is not accepted for ICMR STS?**
  Certainly! If you plan a project, there are other ways to get published. Even KMC will fund it for you if selected.

- **How many times may I apply for the ICMR STS?**
  Every year until the final year (9thSem), but not during Internship.

- **Is my “Research” completed after acceptance of the report?**
  It is, but ideally you should aim to present it at a conference and/or get it published.

- **Do I need to submit the Ethical Committee Clearance letter with the proposal?**
  That is not mandatory; it can be submitted with the report.

- **Under which department in KMC can I do my project?**
  Any department that interests you is allowed as long as you find a faculty advisor.

This year there was a RECORD HIGH of 55-60 applications to ICMR from KMC.
For detailed application process please visit: [http://icmr.nic.in/shortr.htm](http://icmr.nic.in/shortr.htm)

Scientia News!

Our past events:

- **23rd February 2015** (First session)- A tale of Islets
- **27th March 2015** A journey across the pyramidal tract- localizing the lesion by Dr Sudha Vidyasagar, Professor Department of Medicine
- **2nd April 2015** USMLE- The real deal by Dr. Sumit Gupta, Chicago
- **7th May 2015** Introduction to evolutionary medicine by Dr. MK Unnikrishnan
- **30th July 2015** Residency in Germany by Dr. Partha P. Dabke
- **12th August 2015** (Last session) - Life of an Indian Medical graduate doing residency in the USA by Dr. Anantha Harijith MD University of Illinois, College of Medicine, Chicago

United States Medical Licensing Exam (USMLE) update:

Take home messages from the last session by Dr. Harijith included:

- Take the exam when you are ready. Do not feel pressure to follow the American student timeline.
- Do electives/clerkships closer to your application for residency (preferably during internship).
- UWORLD question bank is the most comprehensive and most commonly used question bank.
- Approximate cost to do all three steps is (USD) $4,050 (Step 1: $865, Step 2 CK: $865, Step 2 CS: $1,505, Step 3: $815)
- Try to get H1 visa as opposed to a J1. This requires completion of USMLE Step 3.

Other USMLE Step 1 updates include:

- Number of questions has been reduced from 322 to 308 thus giving more time for each question.
- Percentile scoring has been removed. Only three digit raw score is being used, ranging from 1-300.
  (See: ecfmg.org)
**FAQs about the ICMR STS**

**Our past events:**

- Percentile scoring has been removed. Only three digit raw score is being used, ranging from 1-300.
- Number of questions has been reduced from 322 to 308 thus giving more time for each question.

Other USMLE Step 1 updates include:

- Try to get H1 visa as opposed to a J1. This requires completion of USMLE Step 3.
- Do electives/clerkships closer to your application for residency (preferably during internship).
- Take the exam when you are ready. Do not feel pressure to follow the American student timeline.

Take home messages from the last session by Dr. Harijith included:

**United States Medical Licensing Exam (USMLE) update:**

1. Under which department in KMC can I do my project?
2. Do I need to submit the Ethical Committee Clearance letter with the proposal?
3. Is my “Research” completed after acceptance of the report?
4. How many times may I apply for the ICMR STS?
5. May I do the project even if it is not accepted for ICMR STS?

For detailed application process please visit:

- May I do an ICMR STS Project in 1st year?

This is a scholarship to carry out a research study in two months and Rs. 10,000 is the total grant given along with a certificate.

**Exam Tips**

Below are some tips and tricks that will hopefully serve to increase your productivity and save some of your sanity.

1. **Easily distracted by social media and other websites?**
   - >>>Coldturkey.com (Windows) and selfcontrol.com (Mac) are websites that will prevent you from going to distracting sites for set amounts of time.

2. **Hard time remembering what you learned?**
   - >>>Teaching someone something is a good way to cement your own knowledge on the subject.

3. **Have trouble waking up for that 8 am class?**
   - >>>Drink a glass of water before bed to wake up rejuvenated and ready to take on the day!

4. **Breakfast Fruits**
   - >>>Had breakfast this morning? Here are some essential fruits to refresh your memory:

   - **Apple core deformity:** Carcinoma Colon (double contrast barium enema finding)
   - **Peau d’orange skin:** Breast Cancer
   - **Banana fracture:** Paget’s Disease
   - **Strawberry tongue:** Scarlet Fever, Kawasaki Disease
   - **Raspberry Tumor:** Umbilical Adenoma
   - **Cranberry juice:** Prevents UTI
   - **Mulberry hypertrophy:** Rhinitis medicamentosa.
   - **Cherry red spots:** Central Retinal Artery Occlusion, Gaucher’s

**Stay tuned for Lunch in next issue!**

Source: The Express Tribune

**Tech Zone**

**Must have tech apps**

- **Diagnosaurus:** Input a symptom or a disease and quickly get a good differential diagnosis.
- **Eponyms:** Quick way to look up more than 1,700 medical eponyms (ex: Virchow’s nodes, Rovsing’s sign).
- **Real World Procedures:** Learn common medical procedures and protocols. With the help of videos and illustrations the app provides background information, indications, safety precautions, step-by-step protocols, and complications of various procedures. This is ideal for ward rounds.
- **Figure 1:** Instagram for medical doctors. Upload your own medical images and participate in discussions with users all over the world. Patient privacy is protected.
Current Events in Medicine

Update Your Forensics Notes!

INDIAN CHILD LABOR LAW: The Cabinet approved a ban on employment of children below 14 years of age. Children can be employed only in non-hazardous family enterprises, TV serials, films, advertisements, and sporting activities (except circus) after school hours.

The penalty for employers who violate this law has been increased from Rs. 20,000 to Rs. 50,000. There is a jail term of up to three years for any subsequent offence.

(www.labour.gov.in)

American Diabetes Association 2015 Conference highlights:

• Spouses of newly diagnosed diabetics are twice as likely to develop Diabetes within a year following initial diagnosis of their loved ones.
  (Emory University, Atlanta, Georgia USA)

• After one hospitalization for Diabetic Ketoacidosis (DKA), there is a 10% increased risk of an early death within five years. After four hospitalizations for DKA, there is a 30% increased risk of death within six years.
  (Edinburgh Centre for Endocrinology and Diabetes)

New Dengue vaccine looks promising

Sanofi Pasteur, a multinational pharmaceutical company, in collaboration with the Bill and Melinda Gates Foundation, has developed a live recombinant tetravalent vaccine. Currently in phase III clinical trials, it is found to be effective against all four serotypes of the Dengue virus.

(Bulletin of the World Health Organization 2015)

Noteworthy Medical Guideline Updates

ADA Diagnosis of Gestational Diabetes Mellitus (GDM)- 75gm Oral Glucose Tolerance Test

Take Fasting Blood Sample from pregnant woman (24-28 weeks of gestation) suspected of GDM

Give 75 gm of glucose (OGTT) in 250-300 ml water

Take blood sample after 1 hr

Take blood sample after 2 hr

Inference: GDM diagnosis made if plasma glucose values meet or exceed:
  Fasting: 92 mg/dL (5.1 mmol/L)
  1 h: 180 mg/dL (10.0 mmol/L)
  2h: 153 mg/dL (8.5 mmol/L)

Diagnosis Of Hypertension (Joint National Committee 8)

JNC 8 Recommendations

<table>
<thead>
<tr>
<th>Patient Subgroup</th>
<th>Target SBP (mm Hg)</th>
<th>Target DBP (mm Hg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>≥ 60 years</td>
<td>&lt; 150</td>
<td>&lt; 90</td>
</tr>
<tr>
<td>&lt; 60 years</td>
<td>&lt; 140</td>
<td>&lt; 90</td>
</tr>
<tr>
<td>&gt; 18 years with CKD</td>
<td>&lt; 140</td>
<td>&lt; 90</td>
</tr>
</tbody>
</table>

CKD = chronic kidney disease; DBP = diastolic blood pressure; SBP = systolic blood pressure

Source: Medscape

Gonorrhea

The CDC 2015 Guidelines recommends the following for first line treatment of Gonorrhea:

Single i.m. injection Ceftriaxone 250 mg + Single oral dose Azithromycin 1 g

References:


Meet the Contributing Editors for this Issue

Teresa Varghese (7th Sem)  Sohini Ray (7th Sem)
George Varghese (7th Sem)  Avinav Gupta (3rd Sem)
Partha Dabke (Intern)  Aditya Kumar (5th Sem)
Shahrukh Khan (9th Sem)  Hannah Matthew (5th Sem)
Chaitan Jaunky (7th Sem)  Aishani Chawla (5th Sem)
Sharan Mirchandani (7th Sem)  Raj Sekhar (3rd Sem)

WE WANT TO HEAR FROM YOU!

Your feedback is important to us. To submit an item for the newsletter or request a topic to be discussed, send us an email at mmj.scientia@gmail.com.