INTRODUCTION

DERMATOLOGY SEAMLESS TRAINING PROGRAMME
(approved 2 September 2014)

The Dermatology Seamless Programme aims to train a group of dermatologists who are well grounded in research and basic science. It is designed to attract young doctors who have research and academic interests. Such a group is needed to support dermatology research into the future. It is envisaged that there will be a maximum intake of 3 Seamless track trainees a year, therefore only the best will be selected.

The Dermatology Seamless Programme will comprise of 3 years of pre-Advanced Seamless Training (AST) followed by 3 years of AST. There will also be necessity for an additional 6 months rotation to GM or Geriatric medicine (GRM) in the AST phase of the training, with 2 months GM/GRM rotation per year.

Applications for Seamless Training open in January/February and the interview would be held in March each year. Successful applicants would begin their traineeship in July of each year. The application period may subject to changes by JCST.

ENTRY QUALIFICATIONS
Candidates for the Dermatology Seamless Programme would be doctors who already have research training, or have clearly expressed interest to pursue a career in research. These would include graduates from Duke-NUS GMS, MD-PhDs, and doctors who have spent significant amount of time in research positions, including time spent in research as an undergraduate. Candidates must present their research experience and projects to the Dermatology selection committee as part of the interview process.
Trainees may enter the programme from PGY2.

SELECTION CRITERIA OF APPLICANTS
Applicants who are interested in research might be given preference in selection.

Dermatology RAC will shortlist the applicants based on the criteria set out below for the elimination round. Short-listed applicants will be called up for interviews and further assessment. The elimination round and the interview will be held in the first quarter of each year.
Elimination round criteria:

- Final Year Grades in Medicine and Surgery
- HOD Service grades (HO and MO postings)
- Research experience and training
- Scientific publications
- Research and conference presentations

Applicants are required to submit their CVs (including required information above) together with the application forms.

Interview Criteria:

- Presentation Skills**
- Collegiality and Teamwork
- Personal Qualities and Vision
- Communication skills
- Professionalism

**Short-listed applicants are required to prepare 5 power-point slides for presentation during the interview.

PRE-AST TRAINING

- 3 years

1. Rotation through medical and surgical postings relevant to Dermatology
2. At least 1 month Geriatric Medicine posting stipulated by SAB
3. Self-directed learning in Basic science, Clinical science and Pharmacology (as per the Australian College of Dermatologists curriculum)
4. Self-directed learning in Internal Medicine
5. Self-directed learning in Dermatology
6. Participation in academic activities relevant to Dermatology (in postings or parent dermatology department)
7. Research training

(1) HOSPITAL ROTATION POSTINGS

Trainees will have to go through 3 Mandatory and 1 Preferred Medicine postings. The postings are as follows:
Mandatory Postings
☐ Internal Medicine * (ideally this should be the first posting in the traineeship)
☐ Emergency Medicine
☐ General Surgery or Plastic Surgery
☐ 1 month GRM posting (this can be undertaken as part of the Internal Medicine posting)

Preferred Postings
☐ Rheumatology and immunology
☐ Infectious Diseases
☐ Haemato-oncology
☐ Pediatrics
☐ Dermatology

Others e.g.
☐ Renal Medicine
☐ Respiratory Medicine
☐ Endocrinology
☐ Gastroenterology

(2) CURRICULUM

2.1 Clinical Sciences and Pharmacology Curriculum of the Australian College of Dermatologists

2.11 Clinical Science Modules
Module Topics
Recommended reading will accompany the online modules

1. Evidence Based Medicine, Basic Biostatistics and Evaluation of a Scientific paper:
2. Microanatomy and ultrastructure of the Skin and its appendages:
3. Functions and repair mechanisms of the Skin:
4. Genetics and Embryology in Relationship to the Skin:
5. Immunology and the Skin:
6. Photobiology, Lasers and Ionising Radiation:
7. Anatomy:
2.12 Pharmacology
A thorough understanding of basic pharmacology and the specific pharmacology of drugs used in the treatment of dermatological conditions together with a detailed understanding of the basic principles of topical therapy and knowledge of the pharmacology of the agents used in topical therapy is required. The Pharmacology Examination will source questions from Wolverton (See Reading List) but not from journals. Drugs currently available in Australia and relevant to the practice of medicine as a dermatologist will be examined. The Pharmacology Examination will not include dermatological indications for use, expected clinical response, monitoring and follow-up.
Drug dosage, where this is unique to a specific treatment indication, will not be examined.

a) Systemic Drugs for Treatment of Diseases of the Skin or used in the practice of dermatology
- Pharmacology
  - Structure
  - Absorption and distribution
  - Metabolism and excretion
  - Mechanism of action
    - Clinical use
  - Clinical indications and usage
  - Adverse effects and contra-indications
  - Drug interactions
For:
- Drugs for the treatment of relevant infections
- Immunomodulatory and antiproliferative drugs
- Retinoids
- Psoralens
- Dapsone and sulfapyridine
- Antimalarials
- Antihistamines
- Antiandrogens
b) Topical Therapy

- General
  Skin barrier and principles of percutaneous absorption
  Pharmacology of topical therapy including vehicles, principles of emulsions and types of skin preparations

- Specific Topical Therapies
  Corticosteroids
  Germicides and other antibacterial agents
  Antibiotics
  Antifungal agents
  Antiviral agents
  Preparations used in psoriasis including tars, dithranol, calcipotriol
  Keratolytics
  Retinoids
  Cytotoxic and immunomodulatory agents
  Preparations used in the treatment of acne
  Antiperspirants and depilatory agents
  Agents used to reduce skin pigmentation
  Sunscreens
  Insect repellents and parasiticides
  Cleansing agents and bath preparations
  Camouflaging preparations
  'Traditional' agents

2.2 General Medicine

- Cardiology
  Coronary artery disease
  Peripheral vascular disease
  Heart failure
  Hypertension

- Endocrinology
  Diabetes
Thyroid diseases
Adrenal dysfunction
Male and female hormone dysfunction
Lipid disorders
Metabolic syndrome

- Gastroenterology
  - Hepatitis
  - Inflammatory bowel diseases
  - Peptic ulcer disease

- Hemato-oncology
  - Lymphoproliferative diseases
  - Myeloproliferative diseases
  - Malignancy screening
  - Anaemia
  - Hypereosinophilia
  - Thrombosis and hemorrhage
  - Transplantation medicine

- Infectious diseases
  - HIV
  - The non HIV immunocompromised hosts
  - Sepsis

- Neurology
  - Autonomic nervous system dysfunction
  - Peripheral neuropathies
  - Myopathies
  - Strokes

- Paediatrics
  - Neonatal medicine
  - Child development

- Renal medicine
  - Glomerulonephritis
Renal failure
  - Respiratory medicine
Asthma
Tuberculosis
Sarcoidosis
Respiratory failure

- Rheumatology
  - Lupus, dermatomyositis, scleroderma
  - Vasculitides
  - Arthritides
  - Autoinflammatory syndromes
  - Osteoporosis

- Others
  - Pyrexia of unknown origin
  - Nutritional deficiencies

### 2.3 Surgery Relevant to Dermatology

Prior to Dermatology training, it would be mandatory for candidates to have gone through a posting in general surgery or plastic surgery. Experience in a surgical posting will establish the foundation for future training in Procedural Dermatology. Alternatively, to have attended a Basic Surgical course.

The knowledge to be acquired:
- Surgical anatomy
  - Anatomical landmarks – recognizing the danger zones for arterial bleeding, nerve transection
  - Depth of initial incision, proper level of undermining, and placement of suture depending on underlying anatomy
  - Knowledge of sensory nerves for effective regional nerve blocks
  - Knowledge of anatomy and drainage of the lymphatic system
  - Cosmetic units of the face and skin tension lines that will be used to plan a procedure

- Anaesthesia
  - Preoperative sedation, local and regional anesthesia
Structure and physiology of anesthetics
Infiltrative techniques (local, field block, tumescent, nerve blocks)
Indications for conscious sedation and general anesthesia

- Preoperative, perioperative, and postoperative evaluation.
Medical, surgical, social history, list of current medications, thorough physical examination, counseling, informed consent
Indications for antibiotic prophylaxis

- Surgical techniques
Incision and drainage
Shave, saucerization
Punch biopsy
Incisional and excisional biopsy
Undermining
Skin closure: suturing technique and suture materials

- Wound healing and dressings
Types of wound: acute vs chronic
Phases of wound healing
Factors affecting wound healing
Optimizing outcomes
Types of dressings and techniques of application
Post-operative care and wound care

2.4 Research Training
The 3rd year of the pre-AST phase is reserved for research training / courses. This may be from 6 to 12 months. This is preferable to be after completion of the clinical postings component of the pre-AST seamless phase. Trainees can choose from –

a. Local courses:
   - Masters of Clinical Investigation (YLL SOM)
   - Masters in Public Health (SSH SPH)
   - Graduate Diploma in Applied Epidemiology (SSH SPH)

b. Be attached to a research laboratory
(3) READING LIST

Clinical Sciences and Pharmacology Curriculum:
- Fitzpatrick's Dermatology in General Medicine 7th Edition – Specific chapters (refer to attached list from Australian College of Dermatology – Annex 1)
- Last Anatomy, Regional and Applied
- Salasche, Bernstein and Senkarik - Surgical anatomy of the skin
- Australian College of Dermatology Notes - Principles and Practice of Physical Therapy Treatment in Dermatology
- Guide to safe use of lasers in healthcare
- R Sinclair - Introductory notes to cryotherapy

General Medicine Curriculum:
- Harrison's Principles of Internal Medicine, 17th Edition

(4) SUPERVISORS AND TRAINING LOG BOOKS

4.1 Supervisors
All seamless trainees will have a supervisor from the department that they are rotated to, who will interact with them on a day-to-day or weekly basis. Training supervisors will submit assessment reports at 3 months and at the end of posting to the Joint Committee on Specialist Training. In addition, trainees will have a supervisor from the dermatology department that they have been accepted in, for guidance and counselling. Meetings will be arranged with the dermatology supervisors/team on a regular basis.

4.2 Training Log
Each trainee will complete a training log of cases seen and procedures done every 3 months. Supervisors will assess their progress and performance during the training period and assist the trainee in identifying learning needs. The assessment forms will be signed off by both the supervisor and HOD of the posting department and the supervisor from the dermatology department. Documents relating to the assessments are in the Training Log Book which is sent to the trainee at the commencement of the programme.
At the end of 3 years, a trainee must pass the Intermediate Examination before he/she can proceed with the Dermatology AST training.

The Intermediate Examination consists of the following components:

i. Pharmacology Exam (MCQ) - Australasian College of Dermatologists

ii. Clinical Sciences (Online Assessment Modules) - Australasian College of Dermatologists

iii. Clinical Exam in Internal Medicine - Chapter of Internal Medicine

iv. Basic Dermatology Surgery (IM-Dermsurgery) - Dermatology Residency Advisory Committee

v. ITE IM – Academy College of Physicians

From 2012, the MCQ paper of the Clinical Science Examination has been replaced by online modular assessments in 12 modules (Please refer to 2.11). Modular assessments consist of short questions, essays and projects, and can be attempted by the trainee in any order. The Pharmacology Examination is an MCQ paper. All modular assessments must be completed by Year 3 of training.

Trainees must complete and pass the modular assessments and the Pharmacology Examinations by May of Year 3 of training. The Pharmacology Examinations are held in May and November each year in Australia. The examination will be administered locally and synchronized with the Australian examination. The curriculum which is assessed in these examinations is provided in section 2.12. Trainees may attempt the examination in November or May of Year 1, Year 2 or Year 3.

In-training Examination (IM ITE) of the American College of Physicians.
It is held once a year in October, and is an online examination lasting for 8 hr, comprising of 340 MCQs and synchronised with US Internal Medicine Residents examination timings.

Examinations in Internal Medicine and Basic Dermatologic Surgery
This consists of OSCE style clinical examinations in Internal Medicine and Dermatologic Surgery, organized by the Chapter of Internal Medicine and Dermatology RAC respectively.
The examination format comprises:
1) General medicine cases – 1 long case and 2 short cases
2) Theory paper consisting of the In-Training-Examination (ITE) in internal medicine
3) Dermatologic surgery – stations testing knowledge of basic dermatologic surgery

The local examination will be held in October and April each year, if there are trainees eligible to take the examination. Trainees are allowed to sit for the examination after entry into the programme, provided they have completed the Internal Medicine posting. Trainees will retake the examination 6 months later if they fail either one or both components of the internal medicine examination. They must pass both the clinical examination in internal medicine and basic dermatologic surgery, and theory paper by the end of the 3-year training period.

5.3 Examination Pass
Trainees must pass all components of the Intermediate Exams. Trainees who cannot achieve a pass mark will have to retake the section they have failed in.

5.4 Appeal Process
Trainees who do not pass both Part 1 and Part 2 by Year 3 of training will not be allowed to proceed with AST training. However, they may appeal to the RAC for extension of the pre-AST training under extenuating circumstances and provided they have shown good performance throughout the 3 years training period, as assessed by their supervisors and training director. Subject to RAC and JCST approvals and the approval of the host institution, the pre-AST training period may be extended by a year to allow the trainee to fulfil the examination requirement. Trainees will be designated MOT (Conditional) and postings during this period will be determined by RAC in consultation with MOHH.

(6) GENERAL GUIDELINES

Please refer to Annex 1 for general guidelines on the following:

- Leave Guidelines
- Training Deliverables
- Retrospective Recognition
- Changes to Training Period
- Part-time Training
- Overseas Training
- Withdrawal of Traineeship
- Exit Certification