

# From TA to CSA Inv: Pointers on how to clinch the next grant to move up the ladder

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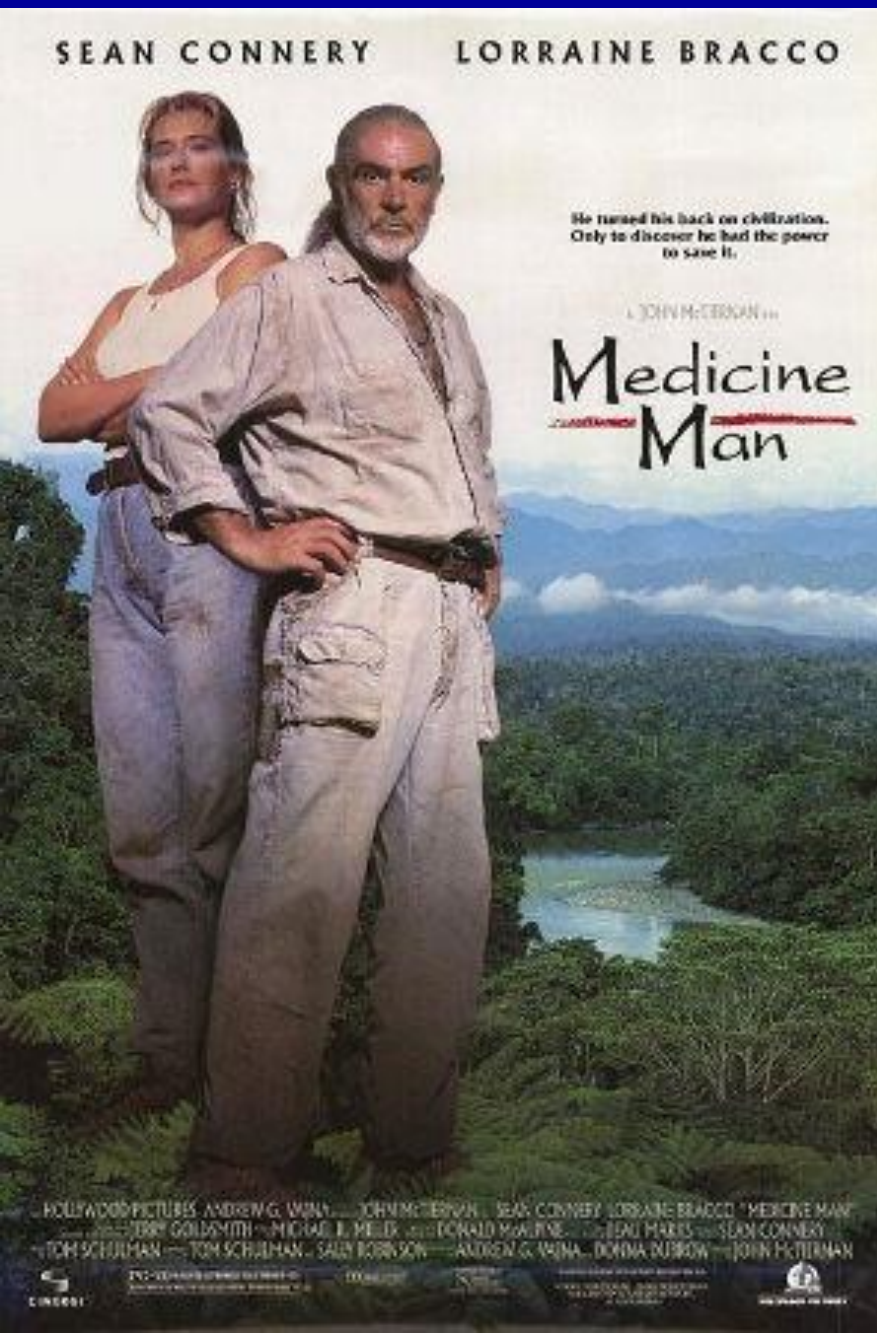
President, College of Clinician Scientists, Academy of Medicine

**NMRC Clinician Scientist Experience Sharing Session**

**30<sup>th</sup> June 2016**



*SGH – Surgery*



# Congratulations on your Transition Award!

*.....Clinician-Scientists  
(in movies) have such  
exciting lives! .....*

*....and even get to do  
research in exotic  
places.....*

Clinician Scientist Awards (CSA)	Award	Project Title
Yeoh Eng Juh Allen	CSA SI	A <b>multi-centre, multi-faceted</b> therapeutic study incorporating whole genome association and candidate pathway studies for pharmacovigilance and toxicogenomics in childhood acute lymphoblastic leukaemia: Malaysia-Singapore All 2008 study
Wee Joseph Tien Seng	CSA SI	A <b>randomized phase III study</b> of concurrent cisplatin-radiotherapy with or without induction chemotherapy using gemcitabine, paclitaxel and carboplatin in locally advanced nasopharyngeal cancer
Choolani Mahesh A	CSA SI	Enrichment of epsilon-globin-positive fetal primitive erythroblasts and amplification of the fetal genome for array comparative genomic hybridization
Tai E Shyong	CSA SI	(i) A <b>genome-wide association study</b> for cardiovascular and metabolic risk factors in <b>Singaporean Chinese</b> & (ii) High density lipoprotein associated protein variants and their association with diabetes mellitus and cholesterol efflux
Ling Khoon Lin	CSA Inv	Myeloid derived suppressor cells in Helicobacter pylori associated gastritis, <b>pre-malignant and malignant gastric lesions</b>
Chen I-Cheng Mark	CSA Inv	Modelling respiratory pathogens in acute-care hospitals: translating lessons from severe acute respiratory syndrome (SARS) and influenza into <b>plans for outbreak containment</b>
Chan Kok Yen Jerry	CSA Inv	Intrauterine Gene Therapy for Factor X Deficiency in <b>Non Human Primate</b>
Toh Han Chong	CSA Inv	Development of <b>Epstein-Barr virus (EBV) specific T cell therapy</b> for Nasopharyngeal Carcinoma.
Lee Soo Chin	CSA SI	Development of Predictive Biomarkers and Novel Approaches to <b>Therapy in Breast Cancer</b>
Carolyn Lam Su Ping	CSA Inv	Singapore <b>Heart Failure Outcomes</b> and Phenotypes
Charles Chuah	CSA Inv	Eliminating chronic myeloid leukaemia stem cells by <b>targeting protein post-translational modification.</b>

Cross-section  
of **CSA**  
**projects**  
from  
primarily  
**Clinic Based**  
Investigators

Courtesy HW  
Lim, NMRC

# Characteristics of CSA Projects (1)

- Tend to comprise **both clinical and bench components**
  - *Myeloid derived suppressor cells in Helicobacter pylori associated gastritis, **pre-malignant and malignant gastric lesions***
- If it comprises only clinical research, tend to be large clinical trials
  - *A **randomized phase III study** of concurrent cisplatin-radiotherapy with or without induction chemotherapy using gemcitabine, paclitaxel and carboplatin in locally advanced nasopharyngeal cancer*

# Characteristics of CSA Projects (2)

- Tend to involve the participation of **multiple disciplines**
  - (i) A *genome-wide association* study for *cardiovascular* and *metabolic risk factors* in Singaporean Chinese & (ii) High density lipoprotein associated protein variants and their association with diabetes mellitus and cholesterol efflux
- Tend to involve **multiple institutions**
  - A *multi-centre, multi-faceted therapeutic study* incorporating whole genome association and candidate pathway studies for pharmacovigilance and toxicogenomics in childhood acute lymphoblastic leukaemia: Malaysia- Singapore All 2008 study

# Phenotype of the successful Clinician-Scientist



- Understands both **clinical** and **bench** research
- Has collaborators in **different disciplines**
- Has collaborators in **different institutions (countries)**
- Has applied for **grants** many times and published **papers**

Award	Project Title
TA	Analysis of <b>blood-based biomarkers</b> in first episode psychosis
TA	Concurrent validity of <b>biochemical biomarkers</b> associated with cartilage morphological change in patients with early osteoarthritis
TA	<b>Viral Mediators</b> of HIV-Associated Osteoporosis
TA	Is Retinal Vessel Diameter (IRED) a <b>Potential Biomarker</b>
TA	Respiratory Dialysis: <b>Simple Carbon Dioxide Removal</b> for Patients with Respiratory Failure
TA	<b>Comprehensive pain programme</b> to determine mechanism of transition of acute to chronic postsurgical pain- functional brain imaging, quantitative sensory testing, psychological and genetic screening: prospective cohort study
TA	Delineating oncogenic pathways of Natural Killer / T-cell Lymphoma and <b>identification of molecular subsets</b> of prognostic and clinical importance
TA	The effectiveness of <b>strength and balance training</b> in patients with diabetic peripheral neuropathy on quality of life and functional status: a randomized controlled trial with cost-utility analysis
TA	SERENDIPITI <b>Surgical Exploration</b> of REversible Normal pressure hydrocephalus vs. Decline due to Injury Post-Intracranial pressure, Trauma or Intracranial haemorrhage
TA	<b>Anti-fungal resistance diagnosis-</b> Moving forward with molecular techniques for point of care therapeutics

Cross-section  
of **TA projects**  
from primarily  
**Clinic Based**  
Investigators

Courtesy HW Lim, NMRC

# Characteristics of TA Projects

- Can be completed by a **single department**
  - *Analysis of blood-based biomarkers in **first episode psychosis***
  - ***Viral Mediators** of HIV-Associated Osteoporosis*
- Can be completed by a **single discipline**
  - *Respiratory Dialysis: **Simple Carbon Dioxide Removal** for Patients with Respiratory Failure*
  - *Is Retinal Vessel Diameter (IRED) a **Potential Biomarker***



# Getting from a TA grant to a CSA Grant

## TA Grant

- Can be completed by a **single department**
- Can be completed by a **single discipline**
- Can be only **clinical research**
- Addresses **specific issues**
- Sometimes addresses very **local issues** – unlikely to change clinical practice

## CSA Grant

- Addresses **important scientific issues**
- Involves both **clinical** and **bench** components OR large prospective **clinical trial**
- Involves **different disciplines**
- Involves **different institutions (countries)**
- Potential to **change clinical practice**

# The Short Life of a TA: A 3-year Makeover

- Need to make many **new friends** who can become **future collaborators**:
  - Basic *scientists, epidemiologists, statisticians*
  - Clinicians from *different disciplines*
  - Scientists and Clinicians from *different institutions*

# The Short Life of a TA: A 3-year Makeover

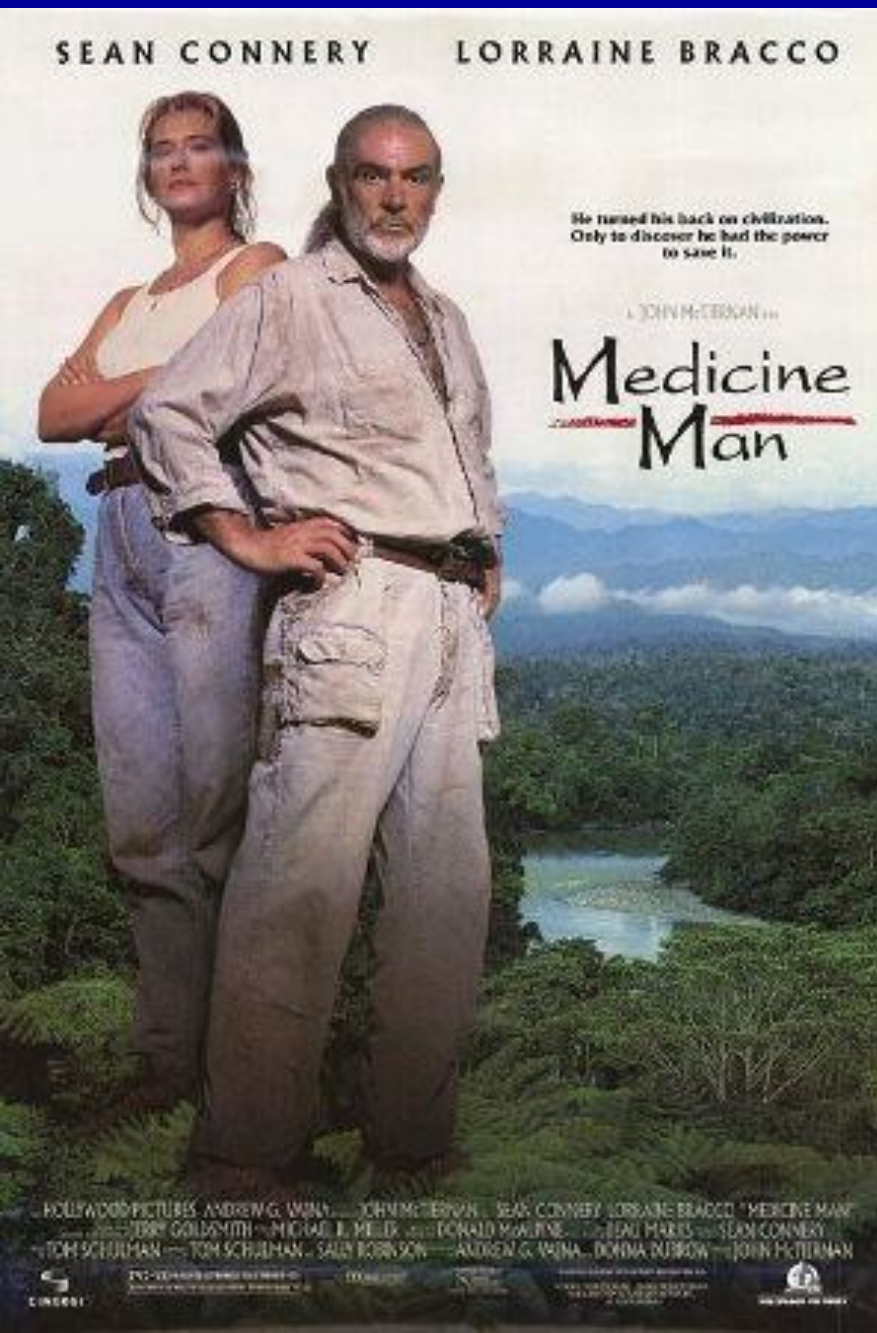
- Need to make many **new friends** who can become **future collaborators**:
  - Basic *scientists, epidemiologists, statisticians*
  - Clinicians from *different disciplines*
  - Scientists and Clinicians from *different institutions*
- Need to look for **good mentors**
  - Clinician-scientist with *proven track record*
  - Who can introduce you to *new friends*
  - Who can give you *new good ideas*

# Things (sometimes) Beyond the Control of a TA

- Some **institutions/specialties** have more **good mentors**
- Institution with more **good mentors** are **more aligned** towards **academic medicine**
- **Solutions**

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- Institution with more **good mentors** are **more aligned** towards **academic medicine**
- **Solutions** *from least to most painful*
  - Look for good mentors
  - (join the College of Clinician Scientists)
  - Change institution
  - Change specialty
  - Give up the dream



**Its worth the Effort!**

*.....Clinician-  
Scientists lead  
such exciting lives!*

