The PhD Experience

A career in academic medicine
- an honest evaluation

Dr Chun Yew Fong
MBBS BMedSci FRACP FRCPA
The Start

- MBBS BMedSci, Melbourne University 2005
- Institute of Cancer Research, London, UK
My Clinical Journey

- Junior Medical Training – Austin Health, Melbourne
- Clinical/Laboratory Haematology – The Alfred, Melbourne

- Post-fellowship training
  - PhD
  - Overseas experience
  - Focus on basic science / translational medicine
    - Learn the language to talk early phase clinical trials and interface with scientists, pharma and the clinic
My Scientific Journey - The PhD Experience

- Cambridge University
  - Joined Mark Dawson
  - Gurdon Institute/Cambridge Institute of Medical Research at Addenbrooke’s Hospital
  - Epigenetic targeted therapies in AML
  - VERY basic science, no clinical component

- Melbourne University
  - Returned after 12 months to Peter MacCallum Cancer Centre
  - Unique funding arrangement
  - Clinical work
LETTER

BET inhibitor resistance emerges from leukaemia stem cells

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Publishing has rewards...

- 2014 VCCC Picci Award for Excellence in Cancer Research
  - Live in NYC and work at MSKCC
  - Travel to London, New York, Montreal, Orlando on post-doc tour

- 2016 EHA/ASH Translational Research Training in Haematology Program
  - Year long mentorship program
  - One week in an Italian villa talking science with who’s who in haematology research
  - Funded to attend EHA and ASH
Life as an academic – in economy class.
A Typical Work Week

• Monday – experimental work AM, clinic PM
• Tuesday – experimental work
• Wednesday – lab meeting AM, clinical MDT and clinic PM
• Thursday – experimental work, after-hours private pathology
• Friday – experimental work

• Experimental work varied
  • Cell biology – tissue culture, flow cytometry and sorting, high throughput drug screens, etc
  • Molecular biology – application of –omics technology to interrogate transcriptional regulation
  • In vivo – mouse modelling
Research Higher Degree?

• Things to consider:
  • Why am I doing a higher degree?
    • Genuine interest vs ‘doing it to get a job’
      • Fascinating, ability to delve into and be an ‘expert’ in your chosen field
      • Will it get you a job? – Not by itself and may make you LESS employable
  • What is your long term goal?
    • Full time clinical work? – do a clinical fellowship in XYZ
    • Clinical trials? – do a clinical fellowship with a DMedSci
    • Basic/translational research? – do a PhD
    • Academic career as a clinician scientist? – do a PhD
The Academic Career Pathway

- Clinician scientist
  - PhD (3-4 years)
  - Post-doctoral researcher, usually overseas (4-6 years)
  - Junior group leader (Intermediate NHMRC fellowship)
  - Associate Professor (Senior NHMRC fellowship)
  - Professor

- Degree of difficulty increases exponentially, funding options decrease even quicker
- Grant writing is an art and critical to your success
Not all research higher degrees are created equal

Things to consider:

- Which higher degree?
  - MPhil, DMedSci, PhD

- What type of research?
  - Clinically based or basic laboratory or both?
  - Focus is critical to success

- Supervisor
  - VITALLY IMPORTANT – will make or break your experience/career.
  - Consider their supervision track record, where past students/post-docs have moved on to, talk to current members of laboratory
Research Higher Degree?

• Where?
  • Overseas
    • More options for high impact science
    • Absolute need to go with funding secured
    • Track record essential to open doors
    • More risky/challenging option
    • Personal growth
    • Risk of “out of sight, out of mind” for jobs upon return
  • Local
    • Funding easier to obtain, easier to work clinically
    • If successful, overseas post-doc is a definite option and well trodden path
Research Higher Degree?

• Things to consider:
  • Funding
    • Competitive
    • Limited pool of philanthropic funders
      • NHMRC, Leukaemia foundation, HSANZ, RACP, RCPA, departmental funding
    • It’s a pay cut.

• Long term: full time clinical vs academic salary
• Happy to talk about this in more detail …
It’s a personal choice

**Pros**
- Discovery!
  - Powerful highs
  - Make a big impact beyond the individual patient in front of you
- Academic kudos
  - Success begets success
- A whole new skill set
- Truly collaborative

**Cons**
- Science takes time
  - Depressing lows
  - “What on earth am I doing?” moments
- Where’d my clinical salary go?
- Long term:
  - Always chasing grants
  - The further up you go the less “science” you do
- Being pigeon-holed as the ‘science guy’ by the ‘clinical guys”

Chun Fong 2016
My advice

- Talk to everyone, get as many opinions as possible!
- Consider what you want to do long term
- **Do not** do a higher degree just to get a job
  - It should not be your default choice
  - You will just be miserable
- Find the right supervisor
- Apply for all funding options
  - No matter how small or how unlikely
- Plan well ahead – 12-18 month lead time required