

Why Reproductive Biology?

Dear Profs Herbert and Murdoch

A little something for your
scrapbook.

Esme graduated last week (Chinese,
St Annes Oxford). Too bad she did
not do STEM!

We all just as delighted as we look.

The joy and happiness of her birth
(and your wonderful work) is still
rippling out across the decades.



Personal career path

- ❑ Founded on a series of unlikely accidents
- ❑ First degree in Agricultural Science
- ❑ A few years of wandering
- ❑ Bovine IVF (Ireland)
- ❑ Clinical IVF (Embryologist)
- ❑ *Moved from London to Newcastle to set-up new IVF lab*
- ❑ Combined with research – curiosity-driven in a permissive environment
- ❑ PhD while working as an embryologist
- ❑ *Moved to full academic post after 16 years as a clinical embryologist*

The research calling – making choices

- ☐ Follow your heart / curiosity
- ☐ But think it through – will your work make a story that can be published
- ☐ Will your chosen area of research be fundable in the longer term?
- ☐ When looking to the future keep yourself informed – what's being published in the big journals
- ☐ Don't be scared to switch if you find yourself in a cul-de-sac?

Some guiding principles

- ☐ Research is a lifestyle choice
 - ☐ You have to be a bit scared
 - ☐ Be courageous
 - ☐ Don't be put off by failure – resilience is key to success
 - ☐ Learn from those whose work you admire
 - ☐ Collaborate and learn from others (their faults and their attributes)
 - ☐ Use all the resources available to train yourself
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- ☐ Use all the resources available to train yourself
 - ☐ Writing grants is a skill that can be learned
 - ☐ Learn how to communicate your science to a general audience

Example of a success career in academic medicine



Muzlifah Haniffa,
Wellcome Senior Research Fellow,
Professor of Dermatology and Immunology
Newcastle University, UK





Penang

Medical school

- Medical degree (Cardiff, Wales)
- Intercalated degree (BSc)

After medical school

Cambridge – MRCP



Cold winter hot summer

After MRCP

Newcastle



Cold winter cool summer

Newcastle

- Specialist registrar in Dermatology
- Long distance learning – Diploma in Epidemiology and Medical Statistics (LSHTM)
- Why the diploma?
- Research
- *Pre-liminary data and funding application*

Dermatology department

- Super supportive
- Research half-day slot (*prove yourself..*)
- Scoping and pilot data
- Met many researchers before deciding
- Haematology – Rheumatology – Dermatology

Research

- Research training fellowships
- Applied to Action Medical Research (*March*), Wellcome Trust (*July*) and Medical Research Council (*July*)
- Action Medical Research (£175 000)

PhD

Publications (investment return)

Follow your nose with PhD project

Outside your clinical specialty

Don't be scared to deviate

PhD research question

- 2006 – What was the role of dermal dendritic cells in graft versus host disease?

PhD

- **Publications**
- Thesis (*three people read your thesis from start to finish*)
- One good first author paper (IF >10)
- Review – thesis intro
- A few middle author papers

Post PhD

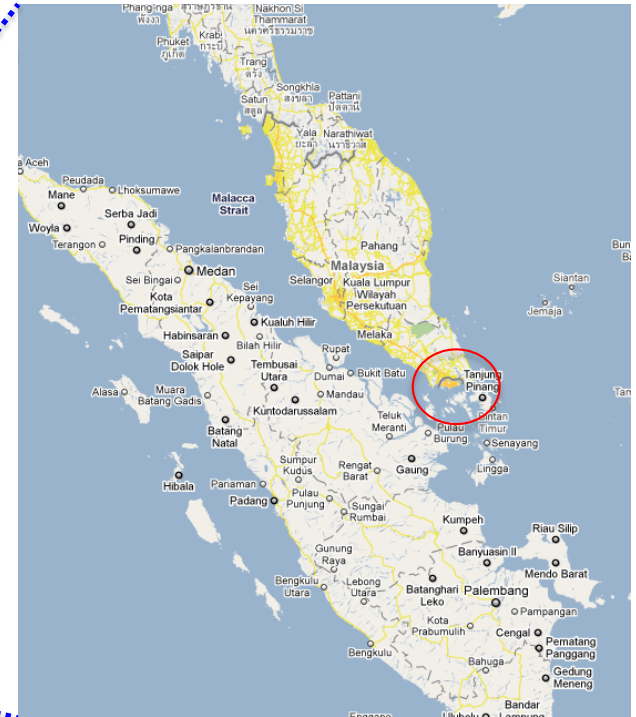
- Complete CCT in Dermatology
- Prepare for next stage – Intermediate Fellowship
- Amazing help and support from PhD supervisor
- Wellcome Trust Intermediate Clinical Fellowship (£650 000) – started post CCT
- Post doctoral research period in Singapore – *go abroad if you can*

Intermediate Clinical Fellowship

- 4 years
- First author to last author
- Independence
- One staff – technician
- Experience elsewhere desirable (North America)

St. Elsewhere

- Which PI?
Established or **young investigator** on upward trajectory
- Clinical work?
- **Start of your identity**, evolution into independence, collaborations



SINGAPORE

SINGAPORE



29 miles x 15 miles

Ginhoux lab (2010)



FEAR – GUILT – ADJUSTMENT

- Single parent
- Tears upon arrival
- Adjusted quickly, chose nursery etc. etc.
- Special time

End of intermediate fellowship

- On a high
- Great publications
- Recognition from the field
- The world was my oyster
- I had wings and wanted to soar

End of intermediate fellowship

- Super stressful time
- Job uncertainty
- No substantial research funding
- Young children
- Research identity and parturition

Senior Research Fellowship (Round I)



Private and Confidential

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Our Ref: 106204/Z/14/Z

22 October 2014

Dear Dr Haniffa

Application for a Senior Research Fellowship in Clinical Science, 'Integrating the human dendritic cell, monocyte and macrophage networks at single-cell resolution in health and inflammation'

The Wellcome Trust's Immune System in Health and Disease Expert Review Group considered your application for a Senior Research Fellowship in Clinical Science at its meeting on 18 September 2014. As you will be aware from my earlier e-mail, you have not been shortlisted for interview.

The Committee agreed that you are an excellent candidate proposing to address an interesting research question. However, it was concerned that the research vision was over-ambitious and was not persuaded of the feasibility of achieving the extensive aims presented in the proposal. Furthermore, the Committee questioned the assumption that the same cellular populations are resident in both mouse and human skin.

I realise that you will be very disappointed by the decision and ordinarily resubmissions are not permitted. However, in light of your excellent track record, on this occasion, the Expert Review Group has indicated that it would be willing to consider a revised application with a more feasible and focussed set of experimental aims and research vision. Please note that the Trust's willingness to permit a further application does not imply that funding will be forthcoming.

Please feel free to contact me if you would like to discuss a further application to this scheme.

Yours sincerely

- Tears of devastation
- Anger - how dare they clipped my wings (which they paid for)!!
(bereavement stages)
- Best thing that happened to me that year (hindsight)
- Get up and try again
- Wrote a review to pitch my science – more words than application
- Much stronger – vision but focused
- Supportive collaborators

Got the SRF



Functional heterogeneity of human mononuclear phagocytes in health and disease

Haniffa lab



Wellcome Trust web page



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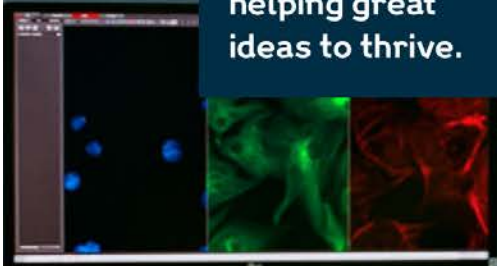
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Good health
makes life better.
We want to
improve health for
everyone by
helping great
ideas to thrive.



Prizes

- Try to win a few!
- ‘Shy bairns get nowt’ (*Don’t be scared to ask*)
- Practice makes perfect
- UK and European prizes

Mentor and sponsor

- Mentor: talks to you
- Sponsor: talks about you
- Need both
- Can be fluid

Many mentors

- Academy of Medical Sciences
- Local
- *Ad hoc – piecemeal*

Lessons I learnt

Believe in yourself

Don't be afraid to dream - BIG

Be ambitious

Be yourself

Don't forget your roots

Lessons I learnt

Make the most of what you have where you are

Be creative

Seize the day - 'carpe diem'

Lessons I learnt

SERENDIPITY

Fortune favours the brave

Fortune favours the prepared

Be generous

Collaborate – win some and lose some

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W
wellcome

If there is no way, create one

banksy
[@therealbanksy](https://twitter.com/therealbanksy)

Prizes

- Academy of Medical Sciences 2009
- BSID Young Investigator Award 2012
- ESDR LEO Pharma Prize in Dermatology 2013
- Lister Institute Research Prize Fellowship 2016
- EFIS ACTERIA Prize in Allergology 2018