Resilience in an Academic Career.

Still hanging on:

lessons in postdoctoral survival.

Doug Browning.

UNIVERSITY OF BIRMINGHAM

IMI

Institute of Microbiology and Infection

MICROBIOLOGY SOCIETY

Career paths

IDEAL

Ph. D.

↓

Postdoc

↓

Fellowship

↓

Lecturer

↓

Reader

↓

Professor

↓

Nobel Prize/ FRS

Highlighting:

Resilience Points (RP).

Independence.

My Career

Ph. D.

↓

Postdoc

↓ - - - ▸ Exit

↓

Temporary Lecturer

↓ - - - ▸ Exit

↓

Postdoc

↓

Temporary Lecturer

↓ - - - ▸ Exit

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Postdoc (R-CoI)

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Postdoc (R-CoI)

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Postdoc (R-CoI)

The Ph.D. Years (1993-1997).

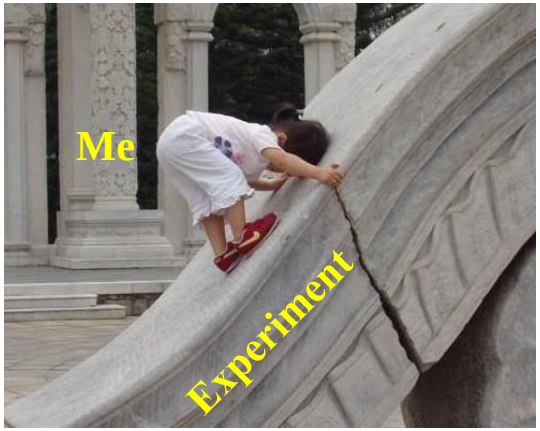
University of Warwick: Gene expression in *Myxococcus xanthus*.

Prof. Dave Hodgson

Goal orientated: PhD at all cost.

Embrace making mistakes (RP): "Go waste some money".

Embrace Independence (RP).



War of attrition.

Things don't work (technical, planning, too ambitious).

Look after mental wellbeing (University/ MS)

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The Early Postdoctoral Years (1997-2002).

Prof. Steve Busby

University of Birmingham: Gene expression in *E. coli.*

Thesis 1 …… Papers 0!

The goals have moved: Publish or be damned (RP)/ PhD papers.

Embrace Independence: you are a big boy now! (RP).

New roles: think independently and train others.

Increased work load: organisation/ time management.

Before and during a postdoc THINK is it what you want to do (RP)?

100 PhDs➡ 30 postdocs➡ 4 academics (Nature, 2014)

Thesis 1 : Papers 4. – – – ▸Exit stage left?(Industry)

A change will do you good!

Prof. Alan Wolfe

Loyola University Chicago: Gene expression in *Escherichia coli.*

4 month “sabbatical” in Chicago (2002).

Research: worked on the *E. coli acs* promoter.

Trained people: molecular biology techniques.

Independence: collaborate and moonlight!!

become “THE go to person”.

Conceptual shift (RP): rewrote PhD paper and started on 2 others.

Research Visit Grants. MICROBIOLOGY SOCIETY

Publish BIG OR be damned.

Worth trying high….. but not everything is Nature (be realistic).

Rejection: (RP) learn from it and move on. Be polite.

Independence: Written the article? Ask to be a *corresponding author.

Fornelos, N.*, **Browning, D.F.***, Pavlin, A., Podlesek, Z., Hodnik, V, Salas, M. and Butala, M.* (2018) Lytic gene expression in the temperate bacteriophage GIL01 is activated by a phage-encoded LexA homologue. *Nucleic Acids Research*. 46(18):9432-9443

*** Corresponding and joint first author.**

Independence: Write a review article (PI or independently).

Become a reviewer: learn the rules (PI/ MS)

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The quest for the Holy Grail!

Temporary Lecturer UoB:

Biosciences (2005-9).

My Career

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↓
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↓
Postdoc (R-CoI)
↓
Postdoc (R-CoI)

The goals have moved again!

Teach, administration, publish & get funding.

Increased work load: organisation/ time management.

(RP) Spread thinly/ perfectionism/ prioritisation (lectures vs £).

No guarantee of a permanent job (RP) often dependent on funding.

My Career

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Postdoc

Temporary Lecturer

Postdoc (R-CoI)

Postdoc (R-CoI)

Postdoc (R-CoI)

A change will do you good! (mark II)

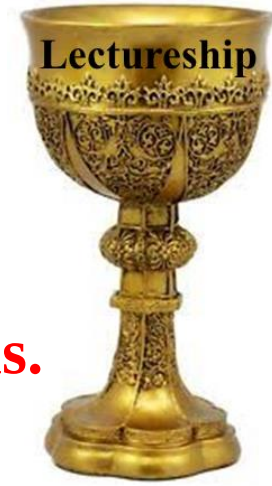
UoB: Immunity & Infection (2009-12)

Outer membrane biogenesis in Gram negative bacteria.

Prof. Ian Henderson

New projects: more rounded scientist.

Creativity: The Friday afternoon experiment.



Temporary Lectureship (1 yr): + module coordination.

(RP): mobility/ flexibility/ strategic appointments/ done deals.

Conceptual shift: obtain funding to do my science.

£ The “F” word…. Funding! £

Science is expensive….. Money Talks!

Fellowships: Requires an excellent idea and CV (~10%) (Discriminators)

Research Grant: Requires an excellent idea (~25%)…. but….

as a postdoc you cannot hold a BBSRC grant (*i.e.* be lead PI or Co-I).

Researcher Co-Investigator: does the research and is Co-I on the grant.

(Shows independence and development of the research idea)

The “F” word.

Researcher Co-Investigator grants.

£

My Career

Ph. D.

⬇

Postdoc

⬇

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⬇

Postdoc

⬇

Temporary Lecturer

⬇

Postdoc (R-CoI)

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Postdoc (R-CoI)

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Postdoc (R-CoI)

1) BBSRC: Bacterial chromosome structure and transcription.

2) BBSRC IB Catalyst Garnt: A new generation of *E. coli* expression hosts and tools for recombinant protein production. (**Something new: Industrially focused**)

3) BBSRC Grant: Understanding and exploiting regulation in pathogenic enteroaggregative *Escherichia coli*.

Still requires a lead PI (Prof S. Busby)

Independence: Small grant (1-2 years) or Harry Smith Vacation Studentships.

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Become a grant reviewer: learn what works (training)

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My Career

So what do I do as a Researcher Co-Investigator?

Ph. D.

↓

Postdoc

↓

Temporary Lecturer

↓

Postdoc

↓

Temporary Lecturer

↓

Postdoc (R-CoI)

↓

Postdoc (R-CoI)

↓

Postdoc (R-CoI)

Research scientist.

Write and submit papers (*corresponding author)

Write research proposals (2019).

Train staff and students (teach).

Sit on committees (make a difference!)

Professional Development Committee

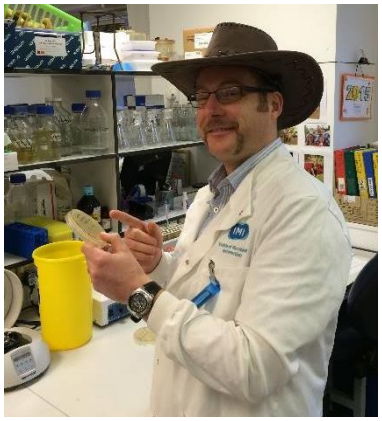
UoB: PERCAT (Postdoc Careers).

Biosciences Health and Safety Committee.

LES R & KT.

Independence: Get involved: ECM Forum or PDC, Coms, Policy committees etc. (Shadowing).

The Postdoctoral Survival Kit.



Have passion for what you do.

Be realistic (mortgage). Have a plan B.

It is OK to say "NO" to things.

Show independence. Publish: review, write and submit papers.

Try to support your research (grants big & small).

Collaborate and moonlight.

Get involved and make a difference!

Show leadership: pass on your experiences, train staff & students.

Get support and advice (mentors)

Steve Busby

Chris Thomas

Nigel Brown

Still hanging on….. it IS precarious……

but the views are great!