

*Summary report*

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# Wellcome Trust Basic Science Career Tracker

Results of wave 3 (2011)



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## Introduction

In summer 2011, the Evaluation Team at the Wellcome Trust launched the third wave of the Wellcome Trust Basic Science Career Tracker, an online survey that enables us to track the career destinations of key cohorts of Wellcome Trust-funded researchers. The Career Tracker gives an understanding of the career choices that award holders make and helps to inform the Trust's provision of research and career support. Now the Career Tracker is in its third year, we are beginning to be able to conduct career path trend analysis for some of our early cohorts.

## Methodology

Each year, members of the cohorts (those in their final year of funding and those who have completed their term of funding in previous years) receive a short online survey asking about career intentions and destination. We aim to track the people in each cohort for a minimum of five years, beginning in their final year of funding. In this way, as the cohorts build over time and our information on their career paths grows, we hope to be able to understand the challenges and opportunities that emerge for former funding recipients and feed this into future funding strategy.

The Career Tracker covers a range of Wellcome-Trust funded researchers in the UK and internationally. We are currently tracking former or current award holders of the following schemes:

- **Basic Science PhD Studentships (PhD)**, in which students are funded through structured four-year PhD programmes
- **Sir Henry Wellcome Postdoctoral Fellowships (SHWPF)**, early career fellowships for the most promising newly qualified postdoctoral researchers
- **Research Career Development Fellowships (RCDF)**, intermediate career fellowships allowing postdoctoral researchers to become independent
- **International Senior Research Fellowships (ISRF)**, senior fellowships for outstanding researchers working in Central Europe and India.

In wave 3 of the Basic Science Career Tracker (summer 2011), overall participation was high, with a total response of 81 per cent across all the cohorts; response rates among the most recent cohorts are typically higher than for earlier cohorts. A key challenge in any kind of panel (cohort)-based tracking is to ensure that the response rate at each investigation point remains high; we are working to secure high levels of participation by raising awareness of the value of the Career Tracker to the Wellcome Trust and by ensuring that the results are easily accessible to award holders who are curious to find out more about the cohort of which they are part.

**Table 1**  
Response across all cohorts in wave 3

Cohort	Number approached	Number of responses achieved in W3
PhD 2003/04	n = 59	n = 43 (73%)
PhD 2004/05	n = 72	n = 55 (76%)
PhD 2005/06	n = 69	n = 56 (81%)
PhD 2006/07	n = 68	n = 57 (84%)
SHWPF 2006/07	n = 19	n = 17 (89%)
RCDF 2002/03	n = 20	n = 17 (85%)
RCDF 2003/04	n = 14	n = 11 (79%)
RCDF 2004/05	n = 17	n = 15 (88%)
RCDF 2005/06	n = 22	n = 20 (91%)
RCDF 2006/07	n = 20	n = 18 (90%)
ISRF 2001/02	n = 21	n = 16 (76%)
ISRF 2002/03	n = 15	n = 13 (87%)
ISRF 2003/04	n = 11	n = 8 (73%)
ISRF 2004/05	n = 7	n = 7 (100%)
<b>Total</b>	<b>n = 434</b>	<b>n = 353 (81%)</b>

All analysis presented in this report is based on the cohorts who responded and all charts and tables reporting survey data show percentages, unless otherwise stated.

When appropriate, award holders' comments have been included to support the data and illustrate emerging themes and issues; these are anonymised and referenced according to the type of grant received by the individual.

## Key findings

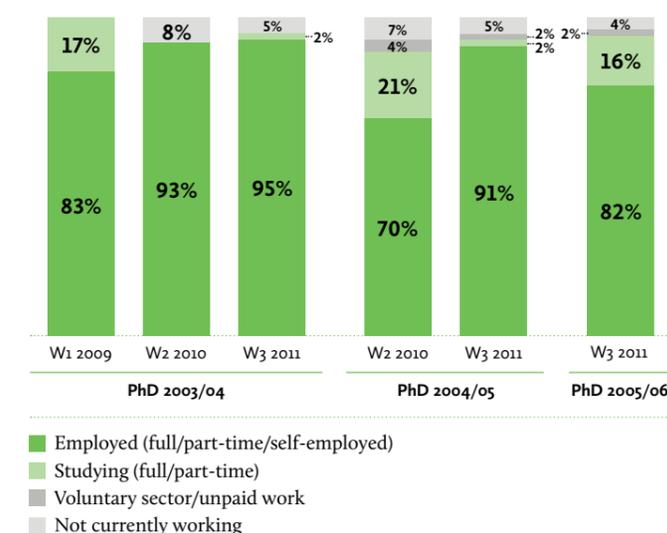
The findings from the third year of the Basic Science Career Tracker are allowing us to identify potential trends in the data because we are now able to report on actual career destinations among most cohorts, rather than intentions.

- Former PhD grantholders reported high levels of employment, with approximately three-quarters taking a first position in academic research.
- Three years after completing their PhD training, 95 per cent of the 2003/04 cohort reported being employed in full-time positions, with 60 per cent remaining in academia.
- For this early PhD cohort, the percentage of men employed in academia has remained high over the three years, but the percentage of women has fallen from 67 per cent to 46 per cent. There is also a trend for students to conduct postdoctoral work outside the UK, with an increasing proportion taking up positions in the UK.
- No major career destination changes have been observed over the past three years in former RCDF holders. Almost all (97 per cent) were employed in academia, among whom nearly half (n = 32, 47 per cent) enjoyed a high level of independence as researchers in receipt of Wellcome Trust funding in their own right.
- The former ISRFs were also well established in their academic careers: all (except one) were employed in academic positions where they continued to do the same or similar research as they had been doing during their award.
- Because the majority of Sir Henry Wellcome Postdoctoral fellows have not completed their award, the analysis primarily provides a snapshot of their career intentions. All fellows (n = 15) who were still on the award expressed their commitment to undertaking academic research after finishing their fellowship.

## Basic Science PhD award holders

Former PhD students included in the Career Tracker reported high levels of employment; the majority of former students were in employment after three years (in 2011). In the 2003/04 cohort, 95 per cent reported being employed in full-time positions (Figure 1).

**Figure 1**  
Basic PhD Programme: former PhDs – employment status

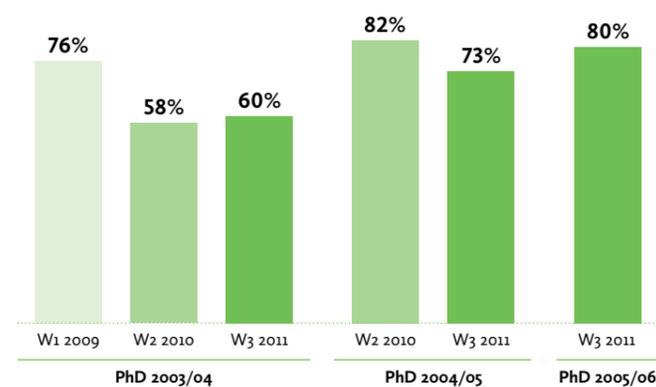


Base: All former PhDs.  
 PhD 2003/04: W1 n = 41, W2 n = 40, W3 n = 43  
 PhD 2004/05: W1 n = 3 (small sample size), W2 n = 57, W3 n = 55  
 PhD 2006: W2 n = 3 (small sample size), W3 n = 56.  
 Q: Which of the following best describes your current employment status?

In terms of employment sector, the majority of the 2003/04 cohort (60 per cent) remained in academic research. For the 2003/04 cohort, we are also able to provide the beginnings of a trend analysis: the proportion remaining in academia has decreased over time (Figure 2). One year post-PhD, 76 per cent of individuals in the cohort were employed in academia (67 per cent women and 93 per cent men); three years post-PhD, the percentage of men in academia has remained high, but the percentage of women has fallen from 67 per cent to just under half (46 per cent) (Figure 3).

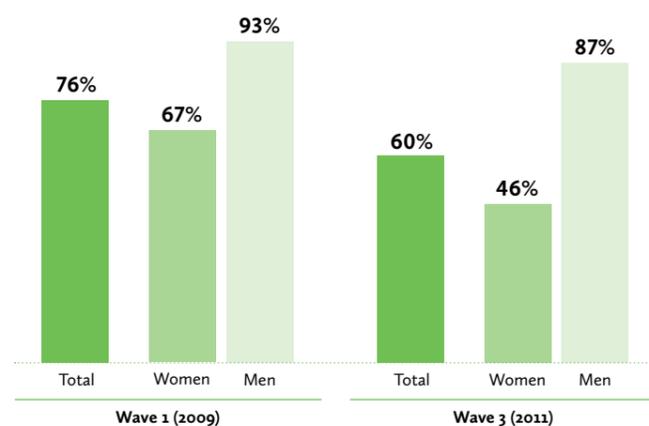
The increase in the number of women who leave academia in the first years post-PhD has been well described in previous studies,<sup>1</sup> and we are exploring the potential reasons for it in our own in-depth study.

**Figure 2**  
Basic PhD Programme: former PhDs – proportion staying in academia



Base: All former PhDs.  
PhD 2003/04: W1 n = 41, W2 n = 40, W3 n = 43  
PhD 2004/05: W1 n = 3 (small sample size), W2 n = 57, W3 n = 55  
PhD 2005/06: W1 n = N/A, W2 n = 3 (small sample size), W3 n = 56.  
Q: In which of the following sectors are you currently mainly working/studying?

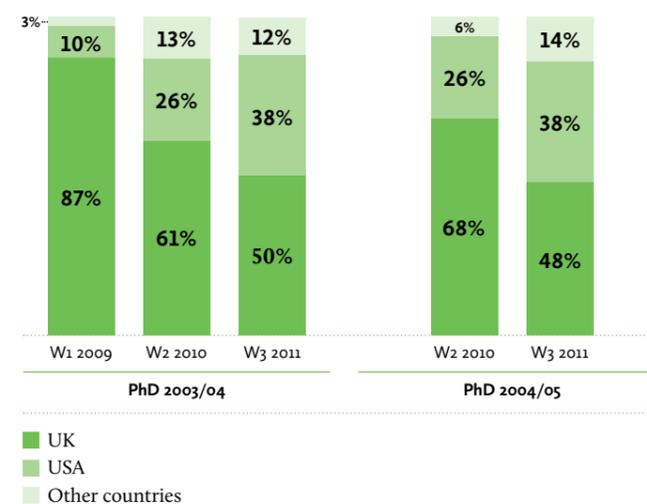
**Figure 3**  
Basic PhD Programme (2003/04 cohort): former PhDs – proportion of men and women staying in academia (post-award)



Base: All former PhDs 2003/04.  
PhD 2003/04: W1 n = 41, W3 n = 43;  
PhD 2003/04 (female): W1 n = 27, W3 n = 28;  
PhD 2003/04 (male): W1 n = 14, W3 n = 15.  
Q: In which of the following sectors are you currently mainly working/studying?  
Q: Are you male or female?

The Basic Science Career Tracker also reveals a trend for students to conduct postdoctoral work outside the UK. Among the 2003/04 cohort, in each year after completing their PhDs, an increasing proportion of those remaining in academic research have taken up postdoctoral positions outside the UK, predominantly in the USA. A similar trend can be seen for the PhD 2004/05 cohort (Figure 4; see Box 1 for illustrative comments).

**Figure 4**  
Basic PhD programme (2003/04 cohort and 2004/05 cohort): former PhDs in academia – current country



Base: All former PhDs 2003/04 and 2004/05 who are in academia.  
PhD 2003/04: W1 n = 31, W2 n = 23, W3 n = 26  
PhD 2004/05: W1 n = 1 (small sample size), W2 n = 47, W3 n = 40.  
Q: Please tell us which country you are currently based in.

**Box 1**  
Examples of comments from former PhD students on moving outside the UK for an academic postdoctoral position

Returning home	Good experience
<p>"I am going to come back to my home country since my family is based there and I would like to pursue my scientific career there."</p> <p>"I will go back home. I am very happy with academic research... but life is better in my country."</p>	<p>"Working in different countries enriches both personal and academic experience; there's great universities in the USA."</p> <p>"I think it is good to experience a different academic environment, and a lot of centres of excellence are outside the UK."</p>
Draw of opportunities offered outside the UK	
<p>"I am planning to go to America, because I think this is the best place to do science – or, I at least want to find out whether it is."</p> <p>"Obviously, this depends upon where I get a postdoctoral position, but there are many world-class institutions in the USA and in Europe, and I would welcome the opportunity to carry out my postdoctoral work in another country."</p>	<p>"I would like to experience working in a different country and learn how different institutions operate for two years as a postdoc before returning to a UK university."</p> <p>"I'm currently planning to change to another institution or country. I understand that this offers many advantages but also know that I am – to some degree – responding to expectations. There is a lot of pressure on young scientists to relocate throughout their early career."</p>

<sup>1</sup> See for example: Wellcome Trust. 2000. Review of Wellcome Trust PhD Research Training: Career paths of a 1988-1990 Prize Student cohort. [www.wellcome.ac.uk/About-us/Publications/Reports/Biomedical-science/WTD003200.htm](http://www.wellcome.ac.uk/About-us/Publications/Reports/Biomedical-science/WTD003200.htm)

Approximately one-quarter of former PhD students are currently in receipt of other Wellcome Trust funding.

Across all PhD student cohorts included in wave 3 of the Basic Science Career Tracker, 36 (24 per cent) who had finished their award, and were working or studying, reported they had left academia (11 men and 25 women). Most had a science-related career, such as:

- working for a biotechnology company (n = 11)
- medicine (n = 5)
- science administration (n = 4)
- science communication (n = 4)
- medical charity work (n = 2)
- teaching (n = 1).

Others had careers in different areas, including management or strategy consulting (n = 3) and law (n = 2).

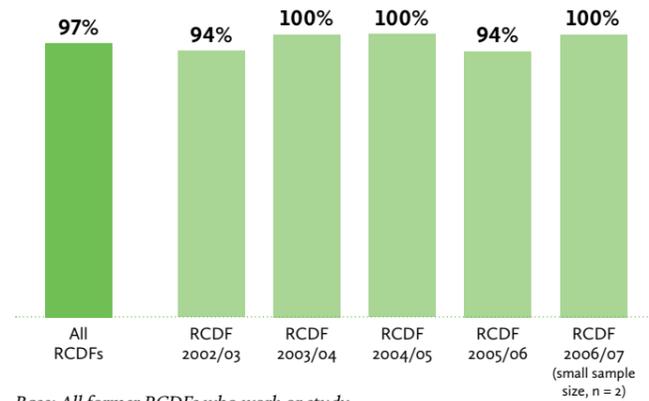
The most commonly cited reasons for pursuing a career outside of academia were a lack of job security, uncertain job prospects and a lack of funding opportunities.

## Research Career Development Fellowship award holders

In wave 3, most (80 per cent) RCDF award holders had completed their award; therefore, we can report on actual career destination among these cohorts.

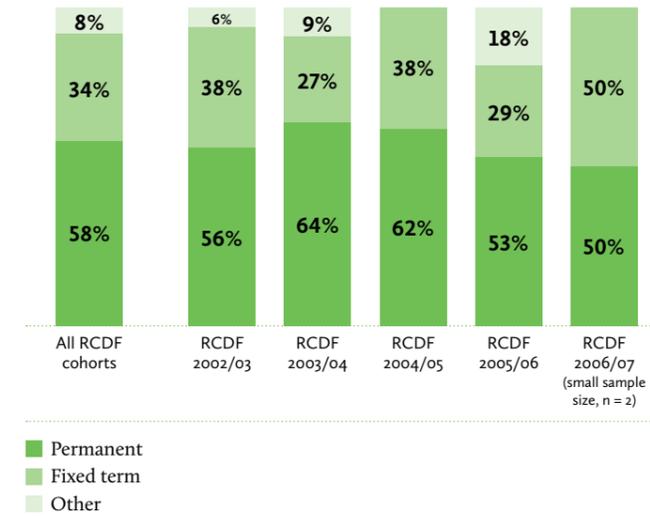
Almost all (97 per cent) of the former RCDFs were employed in academia (Figure 5), compared to 100 per cent in 2009 and 95 per cent in 2010. More than half (58 per cent) were employed on a permanent contract (Figure 6). The former RCDFs enjoy a well-established career in academia – no major career destination changes have been observed in the three years since the Basic Science Career Tracker was established.

**Figure 5**  
All RCDF cohorts, wave 3: former RCDFs – proportion staying in academia



Base: All former RCDFs who work or study.  
Base total, n = 61; RCDF 2002/03, n = 17; RCDF 2003/04, n = 11;  
RCDF 2004/05, n = 13; RCDF 2005/06, n = 18;  
RCDF 2006/07, n = 2 (small sample size).  
Q: In which of the following sectors are you currently mainly working/studying?

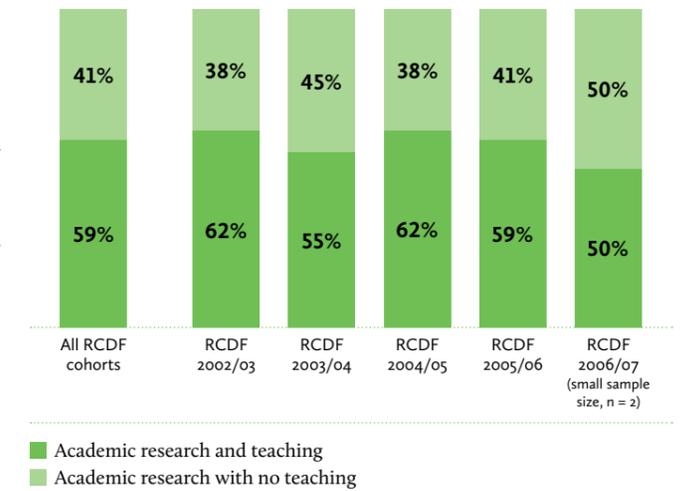
**Figure 6**  
All RCDF cohorts, wave 3: former RCDFs in academia – type of contract



Base: All former RCDFs in academia.  
All RCDFs, n = 59; RCDF 2002/03, n = 16; RCDF 2003/04, n = 11;  
RCDF 2004/05, n = 13; RCDF 2005/06, n = 17;  
RCDF 2006/07, n = 2 (small sample size).  
Q: What type of contract do you currently have?

The majority of former RCDFs were combining academic research with some teaching (Figure 7); nearly all (98 per cent) continued to do research in the same or a similar area as during their RCDF award.

**Figure 7**  
All RCDF cohorts, wave 3: former RCDFs in academia – current role



Base: All former RCDFs in academia.  
All RCDFs, n = 59; RCDF 2002/03, n = 16; RCDF 2003/04, n = 11;  
RCDF 2004/05, n = 13; RCDF 2005/06, n = 17;  
RCDF 2006/07, n = 2 (small sample size).  
Q: Which of the following best describes your current role?

Thirty-two (46 per cent) former RCDFs, who remained in academia, continued to receive funding from the Wellcome Trust as a lead applicant, and nine (15 per cent) were funded by the Medical Research Council as a lead applicant.





