

# Seven myths about scientists debunked

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Another myth is that we all look like this. Credit: U.S. Army RDECOM/Flickr, CC BY-SA

As scientific researchers, we are often surprised by some of the assumptions made about us by those outside our profession. So we put together a list of common myths we and our colleagues have heard anecdotally regarding scientific researchers.

## **Myth 1: Researchers are paid by their research institutes**

A research-focused academic will be provided with excellent colleagues, space, core technical support and often some money for lab

maintenance. But not always a salary. Tenure is rare and is more likely to occur in universities but usually with teaching commitments.

The requirement for most researchers is to attract their own salary and [research funding](#) from outside their institute. This is typically in the form of competitive government grants, philanthropy and/or industry collaborations.

Scientific researchers are finding it harder to fund themselves due to reduced competitive grant funding. Luckily, some research organisations have a "safety net", offering subsidies for limited amounts of time to top-performing researchers who have not funded their own salaries.

## **Myth 2: Researchers are paid to publish in journals**

Surprisingly, unlike contributors to off-the-shelf journals and magazines, researchers have to pay the journals to publish their papers after they have been accepted for publication.

This is because, unlike mainstream publications, [scientific journals](#) generally do not receive money from advertisers. Costs can range up to A\$2,000 per article, and up to US\$5,700 (A\$7,359) for "[open access](#)" journals, which do not charge a subscription fee. With most researchers publishing between five and ten papers a year, this can quickly add up.

## **Myth 3: Researchers are paid for working long hours**

Scientific researchers are typically paid for between 37 and 39 hours per week.

However, due to a combination of healthy obsession, the increasing cost of experiments and the pressure to compete for an ever-shrinking pool

of funds, many put in up to twice these hours, often working evenings and weekends.

In contrast to those in the legal and accounting professions, for example, no overtime is paid to scientific researchers.

## **Myth 4: Worthy research always gets funded**

In 1937, the success rate for medical research grants [was 49%](#), with a total of 63 applications made.

Through to 2000, success rates hovered around 30%, meaning one in three grants were funded. This sustained research careers and allowed growth in the research workforce. Today, around 7,000 PhD students graduate each year, with more than half in science, technology, engineering and maths.

In 2014, however, the success rate for most Australian government funded [research grants](#) hit a 30-year low of 15%, with another drop predicted for 2015. With 4,800 grant applications every year, there is a lot of excellent research – and researchers – missing out.

This issue was [highlighted](#) recently by four Australian Nobel Laureates. Unfunded research is often terminated, leading to a loss of valuable resources, such as specialised disease models and highly skilled research staff.

## **Myth 5: Researchers can claim costs of journal subscriptions and society memberships**

Subscribing to leading journals is essential for staying up to date with discoveries in one's research area research as soon as they are published.

A typical subscription will be a few hundred dollars each year.

Although many journals are available free via university libraries, many make their articles available only to personal subscribers in the first year after they're published.

It is also important that researchers keep in contact with colleagues via societies, and a researcher will often hold two to five different memberships. Generally, grant funding bodies do not allow budgets to include such items, and most research institutes will not provide funding either.

The best a typical researcher can do is to claim part of these expenses back as a tax deduction.

## **Myth 6: Researchers are trained to write and to manage budgets**

In general, there are no compulsory courses in science communication, grant writing or budget management. These are usually picked up from mentors and from trial and error.

Progressive research institutes and university departments may offer some training in these areas, but again, this is not systematic.

## **Myth 7: Researchers have a career for life**

Gone are the days of "once a researcher, always a researcher". This is partly due to the "casualisation" of Australia's research workforce and higher education sector, but also the high turnover of research personnel.

Most researchers sign a 12 month contract – sometimes less. Senior

investigators with [Fellowships](#) may receive a contract for the duration of their fellowship, but few, if any, are considered "permanent employees".

This is not unique to [scientific research](#), but this short-term, high-risk career path has serious consequences for all researchers, particularly [women in science](#).

Young investigators are being encouraged to consider careers [beyond research](#) and some of our best and brightest are choosing to stay abroad.

## **The truth**

Scientists are passionate about their research and readily do overtime and work *pro bono* (minus the executive assistant and company car), all while seeking funds for their salary, and for those in their team.

This is after more than a decade of higher education enabling the researcher to become an international specialist in their field. A huge investment for the individual, the government and society. Few researchers complain though because of the joys of research, the thrill of discovery and the desire to help others.

We hope this has helped shed some light on the [life of a scientific researcher](#), and dispelled a few myths that are floating around about how and why we do what we do.

Scientists want you to "get" what we do. After all, our science impacts you too, and much of it is funded through your tax dollars. Increased investment in Australian science, together with diversified training of the research workforce, will secure the future of Australian research and [researchers](#) – and every Australian.

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