

**Proposal for establishing Senior Scientist Positions and respective Fellowships  
by Dr. Sheila Dias and Dr. Erika Cretney**

**Summary:**

**Problem:** Upon completion of their Postdoctoral training, scientists are faced with extremely limited options in academia, resulting in the “loss” of greatly talented and highly productive academic researchers whose training costs thousands or even millions of research dollars. This is due to 1) the limited amount of laboratory head positions available in a system that presumes a continuous and quasi-obligatory progression from the position of Postdoctoral (postdoc) Researcher to Laboratory Head; 2) incapacity of individual laboratories to provide the salary for highly qualified scientists.

**Solution:** We propose the creation of a novel position in academic research, the Senior Scientist and the respective Fellowships. It targets researchers with more than 5 years of postdoc experience who are highly successful, productive, motivated, invested and even partly independent but do not wish to advance to a Laboratory Head position. These positions would be financed by Senior Scientist Fellowships, to be awarded in a highly competitive manner. We propose they consist of a monetary award that complements a base salary (equivalent to PSP3 and obtained by the recruiting laboratory - eg. NHMRC project or program grant). Importantly, the award would include funds for professional development (conference travel, laboratory visits etc). This pioneering proposal values career development, professional excellence and is financially appealing for individual laboratories, research institutions and funding bodies (governmental and private).

**Expected impact on Australian research:** It is our strong belief that establishing Senior Scientist positions and respective Fellowships will specifically:

1. **Increase the scientific productivity of individual laboratories and academic institutions,** due to the highly competitive nature of the Fellowships, to be awarded to highly qualified Senior Scientists based on their scientific performance and contributions to the scientific community.
2. **Help combat the “loss” of highly qualified individuals from academic research.** The scientific hierarchy is pyramid-shaped in nature and the number of Laboratory Head positions available is (and will always be) considerably smaller than the number of postdocs ready to progress in their career. In addition, the Laboratory Head position is not a desired pathway for every single postdoc (due to personal/family reasons, level of commitment to leadership and management, passion for being directly involved in experiments amongst other reasons). Importantly, this personal decision not to become a Laboratory Head should not be, by any means, mistakenly perceived as a ‘failure to achieve’ or ‘lack of ambition’.
3. **Help combat women leaving careers in scientific research.** It is well known that the general problem of “drop off” after the postdoc research position is exacerbated amongst women. We believe that one of the major reasons is a deliberate choice by women with young families to abandon the pursuit of an independent career (and hence a scientific career in academia). At present, in order to invest in their career development, most female researchers delay motherhood until their postdoc years. Consequently, these women take maternity leave or are heavily invested in taking care of young children precisely at the stage when they are supposed to be taking their final leap toward becoming an independent researcher. Creating an intermediate position between postdoc and Laboratory Head would give these women the choice to continue evolving in their research career and potentially assuming higher hierarchical positions in the following years.
4. **Help stop the brain drain of PhDs.** Facing no alternatives to a Laboratory Head position in academia, one of the most common alternative career paths is a transition to the private sector. Even if this is a necessary and highly valuable outcome, it is disappointing for many postdocs due to their passion for academic research. This is an open route for brain drain from Australia toward countries with

extremely appealing salaries in the private sector, like the US. This is also a bad outcome for the Australian biotech and pharmaceutical industries.

5. Smart financial management of research dollars. Financial investment involved in the training of each postdoc researcher is in the order of thousands to millions of dollars. Thus, it seems unreasonable that upon such heavy government and private financial and personal investment, postdocs who do not become Laboratory Heads are relinquished.
6. Help junior laboratory heads afford to recruit experienced researchers to their laboratories. The early years for a new Laboratory Head are extremely challenging with expectations of high scientific productivity despite limited ‘hands on help’ (often just one research assistant (RA) and student). The new Laboratory Head is divided between physically establishing the laboratory, orienting and training a RA (possibly inexperienced), writing grants, designing and performing experiments amongst other scientific commitments that he/she may have. The first years are extremely demanding from a scientific point of view and this inevitably takes a toll on the researcher’s family. In reality, these challenges are one of the reasons that can lead postdocs, especially women, abandoning their pursuit of an independent career. Providing these new Laboratory Heads the opportunity to hire an extremely productive high-level scientific contributor for a PSP3 level salary would be an outstanding opportunity. It would be in the best interest of the new investigator, his/her host institution and an undeniable motivator for future generations of postdocs aspiring to develop an independent career.

### **Key principles of the Senior Scientist Fellowship:**

- Fellowship: Estimated total of \$35,000-\$50,000/p.a from which \$31,000-\$46,000 will complement a PSP3 base salary (covered by the normal laboratory funding) and \$4,000 for professional development (conference travel, laboratory visits, workshops, etc). This implies that principal investigators will be able to specify in their grant proposals the desire to allocate such PSP3 salary to a Senior Scientist, and then have the opportunity to recruit a Fellowship recipient. The amount of “complement” over a PSP3 salary would be dependent on the years of experience but capped at a maximum amount inferior to the base salary of a laboratory head.
- Target applicants: Highly competitive researchers with > 5 years of postdoc experience who wish to pursue a career in scientific research in Australia beyond the postdoc stage, but do not wish (at least immediately) to advance to a laboratory head position.
- Criteria for award selection: Excellent track record as continuing key contributors to the scientific productivity of an established laboratory or institution. Fellowships (and renewals) will be awarded based on scientific performance, defined as but not limited to, publications in peer-review journals, participation in grant applications, prizes, orientation and training of RAs and PhD students, conference presentations and contributions to the scientific community.
- Appointment and eligibility: In agreement with the duration of project grants, currently 3 years. Previous recipients of this Fellowship will be eligible to reapply. Applicants will not be eligible to apply for an NHMRC Career Development Fellowship (CDF) in the same year. Senior Scientist Fellowships cannot be awarded to an applicant who is a current recipient of another Fellowship (including CDF, CJ Martin, Doherty and DECRA Fellowships).

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We are also thankful to the Strategic Review panel for considering our proposal. Please do not hesitate in contacting us to further discuss, develop and/or implement these pioneering measures.

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