The Cohort Analysis

University of Southern California
University Committee on Appointments, Promotions, and Tenure
(Training based on the 2022 UCAPT Manual)

Definition & Purpose

What is a cohort analysis?

A cohort analysis is a part of any promotion or appointment dossier that helps **situate the candidate within their field's current conception of rank**. The candidate in question is compared (with certain metrics applicable to their field) to "a peer group of about **five to ten scholars who were recently granted a similar promotion or appointment** (e.g., given tenure, promoted to full professor) at departments the University regards as of equal or greater stature" (this is directly from the 2022 UCAPT Manual, Section 7.2.1).

The cohort is meant to create a pulls-no-punches snapshot of what rank looks like. And the analysis, along with the external reviewer letters, helps to create a balanced external view of the candidate to offset potential internal institutional biases.

Sources of Potential Cohort Names

1. The external reviewers ideally should be providing some ideas of comparable people and programs (our UCAPT template solicitation letter prompts them for this).
2. The faculty review committee(s) assigned to the case can also suggest peer and aspirational programs or individuals.
3. Trusted ranking sources can provide top programs in the area, or those ranked similarly and above USC, and then names (and hopefully data) can be found on their programs' websites.

   Note: If there are multiple potential cohort members at the chosen peer/aspirational programs, all should be included so the cohort is not curated with bias.

Choosing the Best Metrics

This is an area dependent on discipline and even specific sub-field, and metrics are best decided by the faculty review committee assigned to the case at the departmental level, as they will typically know the closest specifics of the candidate's area. Typical **metrics capable of assessing average volume and impact of work relative to rank** include, but are not limited to:

- Number of refereed journal articles published or accepted for publication (in press, not submitted); differentiated by top field venues and all venues
- Number of books published or accepted for publication
- Number of refereed conference proceedings or publications
- Number of federal grants, differentiated by PI work and other work
- Number of awards from disciplinary organizations
- Number of creative works published
- Number of citations for published articles or books, via Google Scholar or Web of Science or both
- Corresponding H-index of published works, via Google Scholar or Web of Science or both

Sources of Cohort Data

Data gathering and refining is the hardest part. Complete data for the cohort analysis chart can be found by triangulating sources:

1. CVs and biographical data as posted on the departmental websites (hopefully)
2. Google Scholar profiles (see next slide)
3. Web of Science profiles (available via the USC Libraries website, see slide)
4. Sometimes if faculty are prominent in disciplinary organizations or journals, their CVs or data are posted there too
5. LinkedIn can be helpful
6. Departmental administrative staff should also have their faculty's CVs on file if they aren't online anywhere…

Google Scholar

Kelvin J. A. Davies

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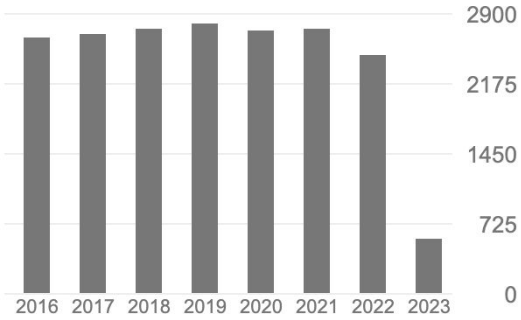
Ageing Free Radicals Proteostasis Homeostasis Protein Degradation

TITLE	CITED BY	YEAR
Mitochondrial free radical generation, oxidative stress, and aging E Cadenas, KJA Davies Free radical biology and medicine 29 (3-4), 222-230	3911	2000
Free radicals and tissue damage produced by exercise KJA Davies, AT Quintanilha, GA Brooks, L Packer Biochemical and biophysical research communications 107 (4), 1198-1205	2584	1982
Protein damage and degradation by oxygen radicals. I. general aspects. KJ Davies Journal of Biological Chemistry 262 (20), 9895-9901	2509	1987
Oxidative stress: the paradox of aerobic life C Rice-Evans, B Halliwell, GG Lunt, KJA Davies Biochemical Society Symposia 61, 1-31	1817	1995

Cited by

VIEW ALL

	All	Since 2018
Citations	57651	14096
h-index	119	62
i10-index	262	189



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Last Name * Davies

First Name and Middle Initial(s) Kelvin

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330 Publications from the Web of Science Core Collection

Include publications not indexed in Core Collection (0) All Publications Citations: highest first

1 of 7

Mitochondrial free radical generation, oxidative stress, and aging
Cadenas, E and Davies, KJA
Published 2000 | FREE RADICAL BIOLOGY AND MEDICINE
2,188 Times Cited

PROTEIN DAMAGE AND DEGRADATION BY OXYGEN RADICALS .1. GENERAL-ASPECTS
DAVIES, KJA
Published 1987 | JOURNAL OF BIOLOGICAL CHEMISTRY
1,478 Times Cited

Metrics

Profile summary

330 Total documents
330 Web of Science Core Collection publications
0 Preprints

Web of Science Core Collection metrics

96 H-Index

330 Total Publications

34,218 Sum of Times Cited

24,509 Citing Articles

View citation report

Author Position

First	27%
Last	49%
Corresponding	35%

Refining Data

As the USC candidate is being assessed for appointment or promotion now, their metric numbers can be through the date of chart assembly. The others in the cohort should be measured only to the time of their promotion to rank, as we are comparing their metrics at the time of promotion, not beyond. **The cohort members should have achieved rank recently, within the last 2-3 years. Again, we are confirming a current snapshot of rank at associate or full at our peer and aspirational institutions in this candidate's area.**

Work should be separated in the chart that has been done since their last appointment or promotion. For faculty up for associate/tenure, that's work completed since appointment to the tenure-track, and for faculty up for appointment/promotion to full professor, that's work since promotion to associate. **So a frame of certain years should be placed on the works next to the career totals: between respective year of appointment or promotion in previous rank to the current rank achievement year.**

Work should also be separated that appears in top venues (usually top-tier journals versus the total). It's also helpful to separate senior authored or solo-authored or PI grant work versus the total for high-volume publication and grant fields.

Note on Senior Lateral Cases

Since these folks have usually spent time at rank at their current institution and are moving to ours, the comparison will (in most cases) be way easier to see the bar was crossed, and that's expected.

The frame between respective year of appointment or promotion in previous rank to the current rank achievement year is a bit different, since they are now seeking the same rank at USC that they already achieved elsewhere, we are essentially independently re-assessing their record NOW with current rank standards for USC's equivalent or aspirational programs in the candidate's area.

We can't really parse the nuances of rank plus however many years, all we can do is confirm that yes this looks like it indeed crosses the bar for associate or full as we and other strong programs see it. For very senior candidates, the Provost may approve a different cohort frame that may help in assessing peers for Distinguished or University Professor hires, for example.

However, we might get someone coming from an institution so different from USC that the bar there would not necessarily equal the bar here or at higher ranked programs in the field, so it's important to see the rank snapshot and explain those aspects in the analysis and administrative memos, if it's applicable.

Template Chart

	Someone	Someone	Someone	Someone	Someone	Someone	Someone	Average	Candidate
Degree Year									
Degree School									
# Years Since PhD									
Current School									
Current School US News Ranking									
Current Faculty Rank									
Year Rank Achieved									
# Years Since last appointment /promotion (i.e. years between TT appt and tenure or years between associate and full)									
# Total refereed journal articles									
# Refereed journal articles since last appointment/promotion									
# Total articles in top-tier journals									
# Articles in top-tier journals since last appointment/promotion									
# Total Books									
# Books since last appointment/promotion									
# Book chapters...									
# PI Grants...									
# Awards...									
# Invited Talks...									
# Google Scholar/Web of Science citations									
# Google Scholar/Web of Science h-index									

Quantitative Data Section

This cohort analysis chart and accompanying explanation of how the cohort was chosen and what the best comparative metrics for this field were, is only **part of the quantitative data section** of the dossier (Section 1-B). The other parts of this data section include:

- A table showing the candidate's number of publications per year (with top journals differentiated from other journals and journal impact factors noted, if applicable)
- Citation counts for each of the candidate's publications
- A list of all the candidate's grants (if applicable)

These above are not comparative with the cohort, but just the candidate's, so we can see long-term patterns of growth and change. But again, we want to focus our primary data analysis on work done since their last appointment or promotion (since appointment to TT or to associate), though it certainly can and should be compared to their career totals too, that's part of the meaning we make of the cohort and greater section.

Commenting on the Cohort Analysis

The department, school, and/or dean should comment on the cohort analysis and how the candidate fits with their peers in their assessment memo(s) for Section 1 of the dossier.

Typical questions that these memos should address include, but are not limited to:

- How do they compare within the typical standards of the discipline in terms of quality and impact, both qualitative and quantitative? How do they compare to the **averages** of the cohort? Are below average numbers offset by quality?
- Does the cohort analysis use the best metrics for this discipline? (Books, articles, conferences, grants, creative works, etc.)
- What is the quality of the venues they have published within?
- Are citations relevant to this candidate's impact? Why or why not? Are there other better measures of impact included in the dossier? (e.g. book reviews or other critical attention to their work.)
- Are there co-authorship elements to be considered and explained, and/or is that important in this field?
- Are there any recent trends in the field to be taken into account? How interdisciplinary is this candidate?