

Communication and Marketing Department Isebe loThungelwano neNtengiso Kommunikasie en Bemarkingsdepartement

Private Bag X3, Rondebosch 7701, South Africa Welgelegen House, Chapel Road Extension, Rosebank, Cape Town Tel: +27 (0) 21 650 5427/5428/5674 Fax: +27 (0) 21 650 5628

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## Female researchers benefit more from collaboration than male counterparts

A new paper led by the University of Cape Town's (UCT) Dr Jessica van der Wal shows that the "positive effects" of collaboration were stronger for women researchers than men.

The main findings of the study showed that publication number and patterns of collaboration differed significantly according to gender: women focal authors tended to have fewer co-authors, weaker networks, and less diverse groups of co-authors. Gender differences were also apparent in all measures of career progression: women published 50% less than men researchers, were 27% slower and 25% less likely to become PI [principal investigator] and had shorter careers (41% shorter).

"Being more collaborative enhanced career progression. More specifically, having more coauthors and collaborating frequently with diverse groups of co-authors meant that focal authors published for longer and were more likely and quicker to become PI. The effects were in some cases stronger for women, indicating that collaboration behaviour had especially positive effects on career progression for women focal authors," shared Van der Wal.

For Van der Wal the most striking statistic in the paper is that focal authors with more coauthors were more likely to continue publishing than focal authors with fewer co-authors, with the effect size being 62% larger for women compared to men.

"Even when accounting for the number of papers, women who were more collaborative were more likely to persist in academic science, and these relationships were stronger than those that we detected in men. Also, collaboration behaviour established in a researcher's first 10 years of publishing could be formative for their overall career length. So, if you want a long career in academic science, it may be really beneficial that you collaborate in your early career," she shared.

The paper "Collaboration enhances career progression in academic science, especially for female researchers" was published on recently in the *Proceedings of the Royal Society B*. Van der Wal is part of the Honeyguide Research Project in UCT's FitzPatrick Institute of African Ornithology. Her co-authors on the paper are fellow behavioural ecologists Dr Rose

Thorogood of the University of Helsinki, and Dr Nicholas Horrocks of the University of Cambridge.

In their investigation the team looked at how collaboration behaviour was related to career progression in a cohort of behavioural ecologists (935 authors from 39 countries, 32% women, and more than 52 000 papers). They constructed co-authorship networks from subjects' publication records listed on the academic database Scopus. Using "survival analysis" they tested how different aspects of subjects' collaboration behaviour was correlated with their "success" in academic science.

Being more collaborative (having larger, stronger and less clustered networks) enhanced career progression, especially for women.

It was already known that scientists who collaborate more often, and with a wider diversity of researchers, have a better career trajectory. But the paper's findings add a new depth to these dynamics, according to Van der Wal.

"Interestingly, the positive effects of collaboration were stronger for women researchers than their male counterparts," she explained. "This is important as it suggests that efforts to promote collaboration could be particularly valuable for women researchers and might help in reducing the so-called 'leaky pipeline' that results in fewer women in senior positions in science."

Written by Helen Swingler, UCT News



Dr Jessica van der Wal

Photo: Izidine Pinto

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## **Aamirah Sonday**

Media Liaison and Monitoring Officer Communication and Marketing Department University of Cape Town Rondebosch Tel: (021) 650 5427

Email: <u>aamirah.sonday@uct.ac.za</u> Website: <u>www.uct.ac.za</u>