

## PROMOTING MENTAL WELL-BEING FOR COLUMBIA POSTDOCS

In the last couple of years the mental well-being of graduate students, postdoctoral researchers and associate research scientists has been acknowledged to be an important issue that needs to be addressed.<sup>1-3</sup> UC Berkeley, Yale University, Emory University, the University of Texas and the University of Arizona have studied this amongst their own trainees.<sup>4</sup> One survey examined the links between positive emotions, resilience, and adaptive strategies for moderating anxiety and depressive symptoms in postdoctoral fellows.<sup>5</sup> **Of the 200 postdoctoral fellows evaluated, 13 percent were flourishing, 58 percent were languishing, and 29 percent were depressed.**<sup>5</sup> A study amongst UC Berkeley graduate students concluded that *‘increasing positive emotions through acknowledgement for work well done or promoting feelings of value and inclusion helped combat clinical levels of anxiety and depression’*.<sup>6</sup> To achieve this, the primary concerns of many postdocs and graduate students, which typically include career prospects, financial stability, social support, and feeling valued and included, should be addressed.<sup>6</sup>

A controversial discussion started after Oliver Rosten’s paper, “On Functional Representations of the Conformal Algebra,” was rejected by multiple journals before being accepted by The European Physical Journal C in 2017.<sup>7</sup> Not because of its scientific content but because of its acknowledgement which was dedicated “in loving memory” to Francis A. Dolan.<sup>7</sup>

*“This paper is dedicated to the memory of my friend Francis Dolan, who died, tragically, in 2011 ... I am firmly of the conviction that the psychological brutality of the postdoctoral system played a strong underlying role in Francis’s death. I would like to take this opportunity, should anyone be listening, to urge those within academia in roles of leadership to do far more to protect members of the community suffering from mental health problems, particularly during the most vulnerable stages of their careers.”*<sup>8</sup>

High levels of stress and depression are not uncommon in the Columbia postdoctoral community. At our institution, high levels of stress are often the result of feeling isolated in a new and strange environment, cultural differences and the continuous pressure of having to perform at peak efficiency at all times. If signs of stress and anxiety are not signaled and dealt with in time, this may lead to severe forms of depression. Sometimes, this even ends with the worst outcome imaginable. Tragically, two postdoctoral researchers and one associate research scientist from the Columbia community committed suicide, in May 2016, October 2017 and September 2016, respectively. We find these numbers, in such a short time frame, highly alarming and would like to bring the mental well-being of Columbia postdocs and associate research scientists to everybody’s attention. Unfortunately, there are no statistics on suicides among graduate students, postdoctoral researchers and associate research scientists in the United States or worldwide.<sup>9</sup> According to the American Association of Suicide Prevention, in the United States alone 13.5 per 100,000 persons commit suicide<sup>10</sup> At this moment, Columbia University roughly counts 1,800 postdoctoral researchers and associate research scientists. Recalculating that number to the Columbia postdoc and associate research scientist population, this should translate to approximately 0.25 suicides for 1,800 young scientists. The harsh reality shows otherwise.

Although a lot of relevant information is provided by different sources within Columbia University, to date, many postdocs at Columbia University still don’t have any idea of where to go to when they feel stressed, depressed or worse, something which is similar to the outcome of some surveys.<sup>11</sup>

Informative e-mails are often not read and bringing stress-related problems up for discussion with a supervisor is often considered not to be an option. The OPA does organize orientations for postdocs on a regular basis during which they address mental well-being in detail. They organize a series of Wellness Wednesdays addressing important issues like mindfulness, getting better sleep, building resilience, eating right, and social support. In addition, they also organize yoga and meditation sessions. The OPA provides a listening ear to those who are in need to talk to somebody and help people reach out to the proper channels in case needed. Unfortunately, many postdocs are not aware of this valuable information, despite efforts to make this information available. At Columbia University the orientations for new postdocs are not mandatory, meaning that most of the postdocs never attended a postdoc orientation and are never provided with this information. The National Postdoctoral Association has recommended the following solutions to address this problem: <sup>11</sup>

1. Release information about your university's mental health facility, ombuds office, and confidential counseling services several times a year! These services provide a safe and confidential mechanism for sharing frustrations and talking through difficult situations. A recurring concern among all of the surveys conducted was that postdoctoral fellows were not aware that these services were available to them.
2. Provide outlets for physical, mental, and social wellness without placing fees or limiting access to a particular subset of trainee, faculty, or administrative staff. Offering recreational or extracurricular activities provides opportunities to get out of the work environment as well as bond with co-workers or expand your personal network.
3. Encourage faculty to explore training opportunities about positive mentorship and advising to increase healthy dialogue between mentors and mentees.
4. Encourage graduate and postdoctoral trainees to take an active role in their own training and learn how to advocate for their needs in a productive manner.
5. Promote further research. Institutional surveys are an important step to identifying the specific needs of trainees, and provide a method for obtaining institutional support.

#### Suggested plan of action:

- **Recommendations 1 and 2 can be implemented by making the postdoc orientations, organized by the Office of Postdoctoral Affairs, mandatory to all incoming postdocs. Similar orientations are already mandatory at our peer research institutions in New York. Being provided with a flyer and having heard that there are options for everybody to reach out to, and events that stimulate mental well-being to attend, can make a major difference. CUPS is always represented at these orientations and can help facilitate to create a supportive environment.**
- **Addressing recommendations 1, 2, 3 and 4, we would like Columbia University to encourage faculty members to explore training opportunities about positive mentorship and advising them to increase healthy dialogue between mentors and mentees. For example, PI's should not be demanding postdocs to work long days and every weekend. A postdoc should be self-motivated and happy to do so! Second, department chairs and administrators should be encouraged to address mental well-being in a department-wide setting. A 10-15 minute presentation during a departmental meeting could be a good suggestion.**

- **Addressing recommendation 4, CUPS plans on setting up a peer-mentor (buddy) system in which new postdocs are brought into contact with a more experienced postdoc, to whom they can reach out if they have questions or concerns of any sort. In addition, CUPS is planning on organizing a series of ‘Growing Up in Science’ events. This is a conversation event during which a well-established faculty member or industry professional shares their life story, with a focus on struggles, failures, doubts, detours, and weaknesses. Common topics will include dealing with expectations (their own and others’), impostor syndrome, procrastination, and the role of luck, rejection, and conflicts with advisors; these topics will be embedded in the speaker's broader narrative. The ‘Growing Up in Science’ series will provide young scientists with insights and help them realize that they are not the only one dealing with any form of struggles during their training period.**<sup>12</sup>
- **As suggested in recommendation 5 and in line with peer research institutes across the nation, CUPS would like to send out a fully anonymous online survey addressing this topic. This should include a section concerning cases of PI misconduct, as discussed during an earlier meeting with Chris Brown (Vice Provost for Faculty Affairs) and Mike Purdy (Executive Vice President for Research). Serious cases of PI misconduct have been heard of by CUPS members and the OPA. All reported incidents have a strong negative effect on the mental well-being of postdocs and some reported incidents can negatively affect the reputation of Columbia University. Fear for reprimands, blacklisting, loss of visa, and negative recommendations to future employers are the most common reasons for a postdoc never to report any incidents. As agreed with Chris Brown and Mike Purdy, a fully anonymous survey will lower the threshold for postdocs to express and share their concerns and report any issues relevant for the mental well-being of postdocs as well as Columbia University’s reputation. The outcome of this survey will provide all involved parties with crucial information for future projects.**

Pursuing a career in academia is highly competitive and that is naturally accompanied by high levels of stress for many valid reasons. It is also acknowledged that being able to deal with these stress levels is considered to be ‘part of the job’ and applies to everyone ambitiously climbing up the academic career ladder. However, this does not mean we should not try to create an environment in which young scientists can find the proper tools and channels to deal with their issues and should feel free to reach out to provided resources in case they are needed. By creating a positive environment in which a young scientist is stimulated and encouraged, she/he can be much more productive. Getting help should be a sign of strength, not weakness, and we should strive for an environment which enables that. Both the OPA and CUPS can help facilitate the creation of such an environment by providing young scientists with tools and information at the beginning of and throughout their careers at Columbia University. For realization of these plans, support from the University is needed.

COLUMBIA UNIVERSITY POSTDOCTORAL SOCIETY (CUPS)  
Jeroen Bastiaans, Postdoctoral Research Scientist, Ophthalmology  
Anna Cieslak, Postdoctoral Research Scientist, Medicine  
Regina Martuscello, Postdoctoral Research Scientist, Pathology and Cell Biology

## References

1. Mental health: Under a cloud – Virginia Gewin (Nature 2012)
2. The Stressed-Out Postdoc – Carrie Arnold (Science 2014)
3. Mission possible: putting trainees at the center of academia’s mission – Viviane Callier and Nathan L Vanderford (Nature Biotechnology 2014)
4. Towards sustaining a culture of mental health and wellness for trainees in the biosciences – Jessica W Tsai and Fanuel Muindi (Nature Biotechnology 2016)
5. Relationships Among Positive Emotions, Coping, Resilience and Mental Health - Christian T. Gloria and Mary A. Steinhardt (Stress & Health)
6. Graduate Student Happiness and Wellbeing Report 2014. University of California, Berkeley. University of California, Berkeley 2014
7. The human cost of the pressures of postdoctoral research – Pete Etchells (The Guardian 2017)
8. On functional representations of the conformal algebra – Oliver J. Rosten (The European Physical Journal C. July 2017, 77:477)
9. Mahadeo A. Sukhai, Ph.D., Research Fellow and Team Leader, University Health Network, Vice Chair, National Postdoctoral Association (NPA) Board of Directors
10. Website American Association for Suicide Prevention - January 2018
11. Promoting Mental Health Wellness in the Postdoctoral Community – National Postdoctoral Association
12. [www.growingupinscience.com](http://www.growingupinscience.com)

## Other related and interesting reading

- Presentation: ‘Mental Health Issues and the Postdoctoral Training Environment’ – National Postdoctoral Association Annual Meeting, April 4, 2014, by Jennifer R. Cohen, Ph.D., Policy Fellow, American Association for the Advancement of Science (AAAS) Science & Technology
- The postdoc series: The plight of the postdoc – Julie Gould (Nature 2015)
- Trainees and mental health: Let’s Talk! – Elisabeth Pain (Science 2016)
- Work environment: When labs go bad – Chris Woolston (Nature 2015)
- Occupational stress in Australian university staff: Results from a national survey – Anthony H Winefield, Nicole Gillespie, Con Stough, Jagdish Dua, John Hapuarachchi and Carolyn Boyd, (2003) International Journal of Stress Management, 10(1), 51-63
- Young, talented and fed-up: scientists tell their stories – Kendall Powell (Nature 2016)
- Mental Health Crisis in Graduate Education: The Data and Intervention Strategies - Teresa Evans, Lindsay Bira, Jazmin Beltran-Gastelum, L. Todd Weiss, and Nathan Vanderford (Biochemistry and Molecular Biology 2017)