Navigating Collaborative Science

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“As you navigate through the rest of your life, be open to collaboration. Other people and other people’s ideas are often better than your own. Find a group of people who challenge and inspire you, spend a lot of time with them, and it will change your life.” - Amy Poehler

Although this quote is from a Hollywood star and not a scientist, the sentiment rings true in our profession as well. Like actors, scientists who can think outside the box and push the limits can make paradigm-shifting discoveries. But we can’t do it alone.

Good collaborations can be incredibly fruitful. In practical terms, collaborations can allow the addition of complementary expertise to a project, allowing one to work more efficiently, removing the time it would take to establish new techniques or build novel reagents in your own lab. In less tangible terms, collaborators can be sounding boards that you can bounce ideas off and who push you to consider concepts you might not have otherwise. Good collaborations can also motivate, inspire and encourage all participants. Collaborations often originate from friendships and mutual interests. Nobel laureates Michael Brown and Joseph Goldstein are a great example of this. In the 1960’s, they became friends during their fellowships, started collaborating as junior faculty, and eventually merged their groups in 1974 into one lab that has been productive for more than 40 years.

Although most collaborations are not this intertwined, mutual respect, trust and effective communication are hallmarks of successful partnerships of any scale. In a highly competitive environment, it is sometimes difficult to fully trust other scientists. However, this is the essence of collaboration and long-term it is worth the effort.

In order to establish a foundation of respect and trust, it is important to understand what your colleagues goals are, and whether your goals are well aligned. You need to have a clear understanding about who will do what and about timeliness or urgency of the work. Consider discussing authorship issues in advance- if not specifics, then general approaches like what constitutes co-first authorship. These upfront discussions can be motivating to the trainees who are in the trenches doing the science. That said, fixing authorship in advance could be problematic since the direction of the science changes as the project progresses, so some flexibility is warranted.

Along these lines, be generous with giving credit. When we are working hard on something, we usually assume we must be putting more hours in than the other side. But they probably feel the same way. And if they bring distinct expertise, we may not have a clear sense of how

much effort they are contributing. So when it comes to discussing authorship and attributing effort, err on the side of being generous in acknowledging the efforts of your collaborators both in talks and publications. This will pay off in the long run.

In my experience, establishing effective and frequent routes of communication is critical. Instituting regular meetings or phone calls will force all participating members to see the progress of each other toward the common goal. This will help keep everyone on track and continue to envision the end products.

Hearing what isn't said is also critical to successful communication. When collaborating it is key to pay attention to your colleague's actions as well as their words. When things are good, collaborations propel science forward in a synergistic and dynamic way and both sides work hard towards the common goal. But like any relationship, sometimes it is not a good fit and even previously productive partnerships can simply fizzle out. When things just don't work out the way you expect, be sure to have an open discussion to determine the best steps forward. If you have to completely abandon the project, don't drag out the "break-up". Explain the reasons to your collaborator in a timely fashion. There is always a positive and friendly way to say "this isn't working", or "we have decided to take another direction", so work on your diplomacy skills when navigating a collaboration!

Whether your past collaborative experiences have been good, bad or ugly, don't shy away from trying again. In addition to moving science forward, scientific collaborations are also a great way to make new connections and new friends who share common interests. The fruits of effective collaborations and friendships are littered among the pages of notable journals and Nobel Prizes. Keep trying until you find the right fit!

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