Bruce Whitney, Ph.D., **Associate Vice President for Research Compliance, Responsible Official, and Biological Safety Officer, Texas A&M University**

Regarding the question of "**who should be the institutional champion,**" there needs to be multiple champions. Obviously the CEO of your institution has to be one of the champions. If it's not important to him or her, everything else is a battle, an uphill battle. There are a few other critical champions. First is one or more PIs. Ideally, all the PIs, but if we have one champion PI that can be a leader, a peer leader, you've really started to develop that culture of responsibility. And then the biosafety officer and the RO are critical. They both are the point of the spear of the institution itself to demonstrate their culture of responsibility.

In looking at an example of a culture not of responsibility but of safety (this concept really probably took off after the Chernobyl accident) we have had recent examples in the Gulf where institutions or companies believe they have a culture of safety, but they don't. It's easy to talk about a culture of safety or responsibility, but it's more difficult to have one and keep it going. It was previously mentioned that you can't just do it at the point of entry. The culture of responsibility is the same thing. It's not a one-off. If it's a true culture, it's a daily activity that becomes ingrained in everyone's activities. And so, as the NSABB pointed out, we have to develop and enhance this culture of responsibility.

"**What are specific ways institutional leaders can convey their commitment?**" The best way to show commitment is money, and I think that's not all of it but that helps. So if it is serious to the federal government, if it is serious to the CEO or to the vice president for research, then there is money. That's how we show we're serious.

I think the other component also mentioned previously is that there has to be commitment to communicating expectations and to training on an ongoing basis so that everyone understands that this is important to the institution. At the basic level, we don't want to get in trouble, we don't want to be shut down, but at a more fundamental level is that we want to do the right thing. Good science and good safety all go together. Showing the communication, showing the commitment, and showing our expectations are critical.

The first requirement really is to have trust. Trust among all those involved--the CEO, vice president for research, biosafety staff, PIs, and research staff. Trust means you can work within the system, you can go in and talk to each other freely. If you develop that trust, that's the first part of the culture.

Then you need to have a "just" culture. And what is meant by "just" culture? Yes, we may hear reports of people doing things wrong, so you handle it fairly, equably, and to the appropriate level that it needs to be handled. Maybe it is something we have to report to outside agencies, maybe it is something we can handle internally with counseling; whatever it is, it needs to be "just."

Once you have "trust" and "just," then you can have a "reporting" culture. And the institution has to ensure that this concept of reporting is not negative. It needs to be seen as you doing what you need to do. Why do we report? First off are federal regulations that we may need to fulfill, but I think more than that, we want to show that by these reports we want to improve the system.

Compliance works best the easier it is. Sometimes we can have the same amount of security but maybe putting in some money to make more automatic methods or other methodologies we can reduce the

burden on individuals. It takes money, but that shows a commitment and facilitates compliance.

There is some information that articulated what is a good safety culture, but it replaced the word "safety" with "security" and this was articulated by an oil service helicopter firm. They wanted to publicly state "zero accidents" and they fly in the North Sea. It's not easy flying helicopters to offshore oil rigs, especially in the North Sea. And they came up with what they call a "Leadership Charter" and some of these points I think are really important points. Their point:

- **Leading by example** is critical. Part of that is to show that the CEO cares, the vice president for research cares, the biosafety officer cares, and the PI cares.
- **Building trust and confidence** in the staff is critical.
- **Continually seeking improvements in methods and effectiveness**. This shows it matters. We're doing it on a daily basis. It's a culture. We're not stamping something once a year and saying, "Oh, you've had your training, fine." Culture means it's there every day.
- **Keeping people informed.** We've heard this from all the speakers; it is critical.
- **Set expectations** and expect people to meet those expectations.
- **Being accountable.** Everyone needs to be accountable for their actions and to hold others accountable for theirs. Clearly articulate those accountabilities and then ensure they are followed.
- **Involving people to hear their input.** The BSO can work with the PI, hear their input, really hear it, maybe they can do it and maybe they can't, but that goes back to the trust. It shows we're working as a team.
- **Being clear on what is expected and providing feedback on the progress.**
- **Showing tolerance of people's differences and then dealing with issues fairly.** Everyone is going to look at things differently. Yes, we may have federal regulations that say you must do this. There may be different ways of meeting that. Let's look at what works best. The view of the BSO/RO may be different from a PI, but we'll try and find what works best.
- **Acknowledging and recognizing people for their contributions and performance.** This is one thing the BSO/RO can do. If you have a PI champion, if you have a PI that follows--not just follows but leads in the biosecurity--I think it's critical that you tell your upper administration this guy is a champion. But words are cheap. So I think there needs to be some type of, as we heard earlier, a carrot, and I think that can be done in multiple ways. It could be money. It could be in returning their calls before anyone else. It's whatever works in that case. If they're a champion for you, you need to be a champion for them.
- **Weighing alternatives.** Look at both the short-term and long-term effects of those changes. And then once decisions are made, we need to follow them. So we need to set our expectations, follow them, but continuously review them to look for improvements.

"**Who should be the champion?**" We need everyone to be a champion. And then specific ways to incentivize; money.

"**Are there any lessons to be learned from other arenas?**" Other areas to be learned from: we can look to safety, the culture of safety. There are both positive and negative examples that we can learn from. We don't want a culture of responsibility just to be one of those cute signs you buy from the catalogue with the little smiley face on it. It has to be something that's real.