

Rick Evans Podcast

UNMC Chancellor Jeffrey P. Gold, MD: Hello, this is Dr. Jeff Gold, and I'm the chancellor of the University of Nebraska Medical Center, and I want to welcome you to "Health Care Heart to Heart," providing insights into the medical and the scientific issues of the day. As you may know, I'm a recovering cardiothoracic surgeon, a longtime medical educator, and a firm believer in the ability of science to change lives for the better.

Today, our guest is retired Gen. Rick Evans, who serves here as the executive director of the National Strategic Research Institute at the University of Nebraska. Hi Rick, how are you today?

Maj. Gen. Rick Evans (Ret.), executive director, NSRI: Hi, good morning, Dr. Gold. Doing great today. It's a nice day in Nebraska. It's great to be with you, and I appreciate the opportunity to talk about some things that are pretty important to me and to you both.

Dr. Gold: Well, thank you so much for being with us and for being with our audience. You and I know a good deal about the National Strategic Research Institute and the university-affiliated research centers of our nation. But I'm going to guess a lot of our listening audience today has never heard about NSRI or UARCs.

So, could you tell us a little bit about what the NSRI is and how it fits into the overall spectrum of the UARC designation by the Department of Defense?

Gen. Evans: Yes. So, you know, I'll start off by saying we are really fortunate here in Nebraska and with the University of Nebraska to have one of only 15 Department of Defense designated UARCS, as you mentioned, University Affiliated Research Center.

And UARCs have a long history, and they actually go back to the World War II era when the Department of Defense had needs for research and development activity and support and partnered with institutions like Johns Hopkins to meet some of those needs. And so over the years that evolved to the 1990s when the actual designation of a UARC was made, and they actually stood up the first group of UARCS. Now, our UARC here in Nebraska actually is, we just celebrated our 10th anniversary last fall. It dates back to 2012. And we found out that U.S. Strategic Command had a requirement for university support. The way that these work is, the Department of Defense has its own labs and other

relationships out there to meet its R&D needs, but it can't meet them all. And so it knows that academia has a lot of capability and capacity to support national security research in there. And so, when they identified a requirement at STRATCOM to access academia to support its research requirements, they put out a competition and then we actually competed with about six other universities and won the opportunity to operate STRATCOM's UARC.

So maybe we'll talk a little bit more about that down the road, but we are sponsored by U.S. Strategic Command just down the road here in Nebraska. We're one of 15, as I mentioned. There is a brand new one this year that's sponsored by the Air Force, and that's in the Washington, DC, area at Howard University. But it's really, in my estimation, pretty prestigious to be in the group of UARCs that include MIT, Johns Hopkins, Georgia Tech, Southern Cal, other Big 10 institutions -- Maryland, Penn State. So I'm really proud to be affiliated with the University Affiliated Research Center here in Nebraska. And I think it's a great asset for us and one that I'm sure we'll get a chance to talk about some of the details here shortly.

Dr. Gold: Well, thank you so much for that great explanation. I also understand that no two of the UARCS are the same. And what I mean by that is, they have different sets of task orders. They focus on anything from nuclear energy to, in our case, countermeasures and other related things that we do research in.

And maybe you could take that to a little bit more detail, sir.

Gen. Evans: Sure. And so, as we talked about, UARCS have a research focus in there, and it starts out with a requirement somewhere in the Department of Defense. Somebody has a need for academic support for its research requirements.

And so once that occurs, they check to make sure no other UARC already has the capability and that listed as what we call a core competency -- or, for a general audience, you could look at that as a research focus area -- to make sure that that need couldn't be met by an existing UARC.

When it, it isn't met by an existing UARC, that's when they have the competition that I mentioned to establish a brand new UARC. And so, in our case, we have some very unique mission capabilities. Some of them tied, for example, to U.S. strategic command and their strategic deterrence mission and nuclear programs that are tied to them. That's one of our key areas.

Also chemical and biological threat detection and countermeasures. Medical countermeasures, threat-based training and exercise support and other missions that fall into our specific areas that are actually designated in our contract with the Department of Defense as the areas we focus in.

And as you noted, there's not supposed to be overlap between any of the UARCS in these areas, which allows us to have a non-competitive contract with the Department of Defense to accept research work in these areas. And so, it's a very nice setup in terms of allowing us to rapidly meet Department of Defense needs and to access the University of Nebraska system in doing so.

Dr. Gold: Well, it's certainly, as I've learned, a very important part of the way we protect the freedom of our nation, and we work hand in hand with those who wear the cloth of our nation to protect that freedom every day. You know, here at the University of Nebraska, and certainly in my role today as the chancellor of UNMC, we've been privileged to work with the UARC with NSRI since its very beginning, back in 2012.

And maybe you could share with our audience just some examples of some of the projects that we've done in response to these task orders from the Department of Defense. Yes. So I was previously on active duty in the military, as you alluded to, and spent some time at STRATCOM and transitioned over to working with the UARC starting in 2019.

But the relationship with the university goes back to 2012, and if you look back at the history, about 55% of all of the work that's come through this UARC, over \$200 million in awards, over \$120 million in actual work, has actually gone to UNMC. So, the largest share goes to the medical center campus.

However, we are designed to work with the entire system in there. That's just the way it works out, with UNL being second and UNO being third in terms of that. So, the capabilities that UNMC provides are very nice fits for our core competencies. So if you think about, for example, medical countermeasures, a very important project we're working on right now that you're very fluent in is our drug discovery and development, led by Dr. Ken Bayles, on your team there. And that's been ongoing for about five years. We've got an almost \$11 million contract with the Defense Health Agency to develop prophylactic treatment for acute radiation syndrome, and that's focused on protecting our war fighters. And as we all know, the world and the threats around the world are very dynamic right now, and so we have to think about what would exposure to nuclear, radiation have an impact on our war fighting capability? And so that project is ongoing. In fact, we're expecting another increment of that, that'll be a

much larger funded project that will largely be focused on UNMC'S capabilities to do that. If you think about UNMC'S unique capabilities to do medical-based threat training and exercise support, our work on containment systems and other things, very nice fit for our UARC. So, we have some folks on our team that are more focused on the military aspects of that. UNMC has a very nice relationship in the medical community to talk about how we handle biohazards and contaminated patients, things along those lines. And so, we partner on training and exercise support with UNMC in that area as well.

And there's a whole broad range of other projects that we could go into. But, you know, the important part there is that the medical center plays a huge role in the work that the UARC does. And the UARC is a great avenue for the medical center and the researchers that you have on your faculty, and also your students, to get opportunities to contribute to national security research that maybe would not otherwise be so easy to obtain or maybe wouldn't even come here. So, I think it's a great asset and UNMC has been a great partner with the UARC really since day one.

Dr. Gold: Well, I appreciate you saying that. It's really amazing to me about how much of the work the Department of Defense needs to get done and wants to get done that has direct applicability to the civilian sector. And, by the way, the exact other way around, because, you know, when we talk about using radiation therapy, for instance, to treat cancer, there are syndromes that occur as a result of clinical radiation treatment to treat cancer that are not totally distinct from some of the radiation exposure considerations that you might get in the sense of a war fighter. And so those scenarios, you know, have a tremendous amount of overlap and, you know, I guess what's good for one of the partners is good for all of the partners.

Gen. Evans: The dual applicability to some of this work that you highlighted is really important. And you know, the Department of Defense likes to find off-the-shelf solutions that meet a war fighter need on there and some of the great work already being done -- you highlighted a couple examples in there -- but, you know, you think about, for example, some of the, the work we did with COVID at UNMC and, and how do we, you know, deal with that pandemic on there? But we were able to take some of the work already being done with UNMC, for example, bringing you back some of the first patients from the cruise ship over in Japan, and translate some of that work into looking at military aircraft, working with the National Guard here in Nebraska and studying how we move infected patients, whether they be military members or family members, on military aircraft.

And so those types of examples really pervade out there. And I think that's one of the great things, in my mind, that makes having a UARC here and NSRI a great partner for UNMC as we think about the future -- for example, like Project Next, as you and I have talked about in the past.

Dr. Gold: Yes, all very exciting. And that gives me an opportunity to ask you as to what do you think about the future for NSRI? I know, we've talked about it a bit, and at least I believe the future is extremely bright as the needs for the Department of Defense just continue to grow in the areas that the University of Nebraska system has expertise in.

Gen. Evans: Yes, you know, we're focused on national security research and the threat environment that we're seeing around the globe, whether it be Ukraine or, you know, the developments in China and other places. And they're making a pretty dynamic area that's probably going to see a lot of attention in terms of budgets and investments by the nation to make sure we can continue deterring strategic attack and make sure we're ready to respond to anything that happens out there. So, we see NSRI being a UARC as one of the avenues that the Department of Defense is going to look at, and we've heard that from the Department of Defense leaders, that they look at their UARCs and what are also termed as federally funded research and development centers as key assets in meeting national security requirements down the road.

And that includes things like workforce development, finding the next generation of scientists and workers that want to take on the national security challenges down the road. So, I think we provide a great avenue for the University of Nebraska to be involved in national security research.

You know, if you look at NSRI, I think we're poised to see about 10 or 12% growth in terms of our research revenue this year. We want to make sure that that continues to grow down the road, at least at about that same percentage in there. And I think we have a good opportunity to see that going forward.

And growth for us means growth for the University of Nebraska, and I think as we've started talking about, especially here recently, as we look at budgets and other things in the university system, that accessing opportunities to do more federal research is going to be important to all of us.

And so we are very fortunate to have one of only 15 of these assets here in the state that can allow us to tap some of that opportunity down the road and to provide opportunity to contribute to long-term national security for the university system. So, I think we're in a great position to see lots of benefits

down the road, and I look forward to working with you and others to take advantage of those opportunities.

Dr. Gold: Well, thank you so much. You know, on behalf of UNMC, and I'm sure the entire university system, I can tell you how proud we are to have this partnership, to be one of 15 UARCs. And of course, sir, thank you so much for your service to our nation.

Gen. Evans: Thank you, Dr. Gold. And let me offer just a personal thanks to you. I know you and I have been engaging for many years. Your interest in the UARC and helping me work through challenges in here has really been important to our overall team here at NSRI. And I know that relationship will continue. I think we're going to have great opportunities. We're looking at things like the military health system research symposium, and partnering with UNMC to do those things.

And so your leadership in making that partnership robust and allowing the team at UNMC to understand how important it is to you, I think, are critical to our growth. So thank you, and I appreciate the opportunity to be with you today.

Dr. Gold: The best is yet to come. Thank you.

Gen. Evans: Yes, sir.

Dr. Gold: Thank you for tuning into this episode of Healthcare Heart to Heart with Dr. Jeff Gold. And until next time, stay healthy.