

## Transcript: Season 2 Episode 1

### *0:00 – Introduction*

This podcast has been brought to you by the Center for Mathematics, Science, and Technology at Illinois State University.

COURTNEY: Hello and welcome to Season 2 of STEAMTalk. This is Courtney Ossola, and you may not know this but I've been with you since day one behind the scenes as both the graphic designer and podcast manager of the show. So, it's great to be in front of the microphone for a change this season.

KARA: Hello everybody. My name is Kara Baldwin. I graduated from Illinois State University with my Ph. D. in Biology, and I'm excited to explore the world of STEAM here at Illinois State with you. Whether that's a new research topic, or jumping into and learning about some really great organizations on campus that are supporting STEAM.

COURTNEY: Normally we only record with faculty. But starting this semester, we are going to be introducing some graduate students as well to our show. How do you think about that?

KARA: Sounds like a lot of fun and we're going to jump into our first episode of this season, which is going to be focused on graduate students. And we are going to learn all about SACNAS. Can you tell me a little bit more about what that means Courtney?

COURTNEY: Yes, SACNAS or the Society for the Advancement of Chicanos/Hispanics, and Native Americans in Science is an organization on campus here on campus at Illinois State University run by some really awesome students in the sciences, including our guest today, who is the president of Illinois State's chapter, that is Rosario Marroquin-Flores. We also have with her, contributor to the SACNAS research journal, Ian Rines.

KARA: So first we just wanted to have you guys tell us about yourself and your journey to Illinois State University and your current research projects.

IAN: So, my name is Ian Rines. I'm currently a PhD student at Illinois State University in the biology tract. I came from South Carolina where I did my undergrad. My current research involves looking at sexual conflict in decorated crickets, which I'll talk more about later. And generally, I'm interested. You know in the fields of behavioral ecology and genetics within biology, but through SACNAS I also developed more of an interest in scientific communication as well.

KARA: All right, and then we have Rosario. Would you care to tell us a little bit about yourself?

ROSARIO: Sure. My name Rosario Marroquin-Flores. I am also a PhD candidate here at the ISU in the Biology department. I work with Dr. Bowden and Dr. Paitz. Our research focuses on temperature dependent sex, determination, which again I can also talk about later but essentially how animals respond to their environments and more kind of ego physiology stuff. And I'm also really interested in science communication. That's one of the projects that I'm going to talk about today, and I am the president of the Society Advancing Chicanos/Hispanics and Native Americans and Science or SACNAS.

### *3:34 – What is SACNAS?*

COURTNEY: Wonderful. It's so great to have both of you here today, and we're going to jump right in, let's talk about SACNAS first. Rosario please explain to us what SACNAS is.

ROSARIO: SACNAS ISU, is an on campus organization that supports underrepresented students or students from underserved populations, and we provide a lot of professional development programming we do science communication projects, basically to support the students here, but SACNAS is a larger organization is kind of a national program that supports diversity in STEM fields in it's really common out in the southwest where I'm from, but people know less about it out here.

COURTNEY: Okay, so you said it's more common out west. Is that how you got involved in SACNAS, is out west?

ROSARIO: Yeah, yeah, I first got involved with SACNAS as an undergraduate at the University of New Mexico, I was in an undergraduate research program and that was the first conference that I went to and they help us present there, and they have a really active organization.

I believe I went to two maybe three or four conferences in California for SACNAS.

And then I was really, you know, that was kind of my first introduction to the sciences in this kind of larger organization and so when I came over here to ISU. I expected to be able to talk about it. But no one really knew what it was. So, I had to, kind of, bring SACNAS to ISU.

#### *4:59 – Research Spotlight Journal*

COURTNEY: So, you are the Illinois State University face of SACNAS, and you brought it here with you, like that. And that's awesome. So, Ian is your involvement different, I'm assuming, So how did you get involved in the organization?

IAN: Well, so part of what Rosario did with SACNAS here is she made something called the Research Spotlight. The idea behind that is scientific communication specifically making science, accessible for people that, you know, don't necessarily have the training that graduate students do. A lot of science gets communicated in formal literature that's hard to decipher, like scientific articles. And she basically wanted to, you know, do a different version of that while highlighting research here at ISU, and so she, I think she sent out an announcement to like the biology grad list serve. And it's like, 'Hey, I'm making this journal so anyone want to contribute or edit.' And I first, I think started contributing. I was like, 'This is really cool,' and I also think I might want to do some future. So, I was like, 'Hey, can I help edit as well.' That's basically it.

COURTNEY: That's awesome. You just dove right into a project to get involved, which is really cool. That's an awesome aspect of SACNAS for sure; that you can just get involved in projects.

KARA: What inspired you to start the spotlight Research Journal? How did you decide on like the formatting and was there any inspiration there as you were thinking about creating this new journal space for science communication?

ROSARIO: Yeah, I initially actually got a lot of help from other students. I guess what first brought me to it was one of my friends in the program, Pooja, she wanted to do some science communication stuff and I'm always on board for outreach and science communication, I'm super into it. So, I told her, 'Yes,' and I would go help. And so, we actually did something called *Ask a Biologist*, which is kind of similar, but targets a younger group. And basically, they have a published paper and then they write, kind of, more of a narrative format that gives you

information and kind of about the basic topic and goes over a couple figures. And I did that with her [Pooja], and I really enjoyed it. And so, we kind of talked about it and we decided to bring something like that here where we target specifically our graduate and undergraduate students, and the research coming out of ISU. But then, you know, organized it differently to feature the author more. So, to really kind of put the spotlight on the student researcher, and then also to describe, specifically, the contents of the individual paper. So, an individual author might produce multiple papers and each paper says something different. And so, then we can create an article that represents the data from that individual paper so that essentially the research that students are putting out is kind of going directly to a community that that might not regular regularly be exposed to it.

7:48

COURTNEY: That's such a great idea to condense and produce like the most clear-cut topics from the research and to focus on the person who did the research that's really awesome to me too I loved reading about the scientists behind the experiment. It's a really empowering thing.

KARA: Yeah, I love the hobby sections too. Cause that's just this like, you've got the career goals, I'm looking at the journal right now, so you've got your career goals and your hobbies and your favorite things about science and so you're, kind of, getting to know the person behind the research. What inspired you to add that component in?

ROSARIO: Yeah, that part was very intentional. So, one of one of the things was to kind of again to highlight student researchers but also. Research has shown that when students read more about the science and learn more about the scientists they can connect more to the research and can see themselves in that role, and when it's been used in the classroom, it can help them learn. So that was also something that was really intentional because we thought that it would be able to help people connect more with the science itself. Plus, it's really fun to learn about people's favorite hobbies.

COURTNEY: Absolutely [laughs].

KARA: [laughs] Absolutely. So, tell me a little bit more about kind of what kind of roles or how does somebody get involved in SACNAS here at Illinois State University?

ROSARIO: Yeah, definitely. I mean anyone can get involved really, we, we are not an exclusive group at all so if anybody wants to ever participate, they basically just have to let me know. We have a Reggienet page; we are on Red Bird Life; we have a Facebook page, an Instagram, a Twitter. Basically, if people reach out to me, I'll just add them in one of the most common roles and one of the roles that Ian has for the research spotlight is as an editor so we have the primary author of the scientific paper contribute an article. And then we have editors read it and help edit it and to get it down to a 12th grade reading level at or below a 12th grade reading level so most of our volunteers who work on the spotlight are involved in editing, but we've also had people who participate in copyediting and then the actual journal design so kind of media arts type of stuff so there's a lot of room for people to participate.

COURTNEY: So, it sounds like you're encouraging some interdisciplinary majors, to come in and join and help with this project because I can say from experience working on the journal last year as a senior in a graphic arts program and Illinois State, I was able contribute myself and my work to the cover art, which I'm happy to do again this year. So that's just saying like you can do a lot of different things through this organization, even if you're not in the STEM field.

ROSARIO: Yeah, definitely. I think that this is an inter disciplinary projects and we, we also feature, researchers who are not necessarily in you know biology or chemistry. We also have people who are in you know anthropology, political science, hopefully we can bring people in from other fields as well so it's, the goal is to make it more interdisciplinary, and we'd love to bring in artists to help with the display. It's a, that's a really fun part of it too that's not necessarily associated with the research.

### *10:58 Science Communication and Graduate Life*

KARA: Can we think a little bit about how SACNAS has kind of enhanced your experience at Illinois State University?

ROSARIO: Yeah, SACNAS has been really big for me. For me, more culturally than anything else, When I first moved up to, Illinois, I had a really hard time. I was really used to my community back home and my culture, and my family, and there were a really different kind of demographic. And so, when I came to Illinois I struggled. Initially, a lot. And anytime I went to the SACNAS conference I felt a lot better. I felt like I was surrounded by people from my community; people that I felt comfortable with. And that really made me feel better about being a scientist with that community. It helped me to identify more with the position that I was in. So, when I was able to bring that here. It's almost like I was able to build a community here as well so I was able to build a group that I felt comfortable with and so it's been really helpful for me in that way.

COURTNEY: That's wonderful. You're empowering others through a group that helped you empower yourself, which is exactly what we want to see on campus, and that's amazing. What about you, Ian, how is that enhanced your experience here?

IAN: Well, mainly I'd say it was enhanced slightly different way, of course. Starting graduate school is like, 'Well I'm going to focus on my research, and that'll be the main thing I do,' but you quickly learn that not like the only thing you can do. You should do what interests you. Scientific communication was something that's always interested me. And this has really helped facilitate that interest and make it more of an interest.

COURTNEY: Awesome.

KARA: How has your involvement in SACNAS influenced your experience in graduate school?

ROSARIO: Um, For me it's kind of shifted my trajectory. So, you know, I came here to do a really specific type of research with eco physiology and with turtles and do this particular type of research but at the same time I started doing more of this outreach more of this science communication and this is stuff I've always been interested in because I benefited from so much of it as an undergraduate. But how this program has developed and grown has really encouraged me to do this work, moving forward. So I mean I think that being part of this project and expanding this project specifically with the science communication aspect has completely changed the trajectory of my career. So it's been it's, it's been great [laughs], different, but it's been very useful.

KARA: So, when you say like change of trajectory, like, how do you see this then fitting into your future career?

ROSARIO: Well, it's going to become my research focus. So, you know, I've been working on. Again this this kind of eco physiology direction and now I'm going to transition into science communication, and you know biology education research and seeing how we can use these spotlights in the classroom, and how we can use these articles to enhance student learning. And that is a completely different field of research and so that's I guess the direction that it's going now.

KARA: Have you had a chance to start that research?

ROSARIO: Yes. Yes. So we started in the fall semester we started integrating articles from the research spotlight into the classroom so we take it into freshman level biology classes, we have the students read them and then do you know some homework assignments and we give them a series of surveys. And the goal is to see kind of how interaction or engagement with the research spotlight might affect things like science identity interest in participating in research and how it might affect how students think about science related issues. So, we started the pilot last semester and now we're continuing it in the spring and we've added more dimensions to it.

COURTNEY: Cool. That's great.

KARA: Ian, how has your involvement with SACNAS kind of influenced your experience in graduate school?

IAN: Similarly, it kind of changed my like view of what I wanted to do after I was done with graduate school like I definitely started graduate school it's like, 'Oh, I'm gonna become a professor after this,' and kind of, you know, the same thing that I think a lot of people start graduate school, thinking they're going to do but it definitely opened my view of like, you know, I don't just have to become a professor there's other things out there that you know are sometimes even more interesting than, you know, having to teach classes and other stuff like that. So, I mean it's definitely not shifted as dramatically that I'm becoming biology education or anything like that but it's definitely made me take a step back and think like is this, you know, what do I actually want to do after I'm done with graduate school. And I don't know yet still so [laughs]

KARA: [laughs] So don't ask that question, is what I'm hearing [laughs].

IAN: Yeah, please don't. [laughs]

COURTNEY: That's actually a really good thing to hear, personally. I feel like someone currently in graduate school pursuing something big and knowing what they want to do kind of in that like you want to do science communication you want to work on cool projects and gain insight along the way, but you still aren't sure what you want to end up doing.

IAN: Yeah.

16:15

COURTNEY: And, I think that's really encouraging to hear that, like, not everybody has it figured out you know and I don't have it figured out.

IAN: [laughs]

COURTNEY: So, like, I'm here for it you know I'm here for other people not having a figured out either.

KARA: And I just graduated and I still don't have it figured, so, we're all good.

IAN: [laughs] I was going to say, you should tell us, if you know what the secret is. [laughs]

COURTNEY: Yeah [laughs].

KARA: As a follow up then like I know it's you know still trying to think about it but what potential pathways has this science communication opened up, or like ideas or things that you hadn't thought about potentially pursuing the scientific communication idea opened up for you? Opened your eyes to?

IAN: Although it's still pretty hard scientific communication it kind of opened my eyes up to like being an editor for a journal or something like that or just generally working with papers and maybe not necessarily doing the research in the paper but trying to get it pared down to something that's communicable to other people, which think, I don't think any of any article or journals that really do something like this, spotlight, that actually pairs it down to something that's communicable to you know anyone with a high school degree. But yeah, so

KARA: Awesome, Rosario anything else that kind of has opened up, how this science communication has really like opened ideas or concepts or things that you hadn't thought of before, beyond the science education, biology education research?

ROSARIO: Yeah, I feel like doing this work I've started to really meet a lot of people and get in touch with a lot of kind of existing organizations and I'm realizing that there's a whole framework that there's a whole community that is doing this kind of work and the jobs are really different and it seems like everyone seems to get there in a different way. So, I mean, I'm not sure, because there's I'm just learning so much and finding out about all of these different communities but now I know that there are like science communication jobs out there. There also are nonprofit groups out there. And then, you know, on the other side of this there's also positions that you could have where you just do professional development. So, I've been part of some of these professional development programs and participated in them. So, you know, given now that I have this experience doing professional development with students at ISU as part of SACNAS I potentially have the capacity to build programs for other universities to help students to be successful in that program, so there's also that other direction to go as well so I'm not sure, but there's a lot of stuff out there so part of it I think is just gaining these experiences, and being prepared when an opportunity opens up.

18:50

COURTNEY: That's great. It seems like there's a common theme amongst those and that is outreach and helping other people, and I feel like that's definitely where your heart is and that's what you're trying to do and that's something that you can promote through any field you're in. Absolutely. Especially the science literacy thing that is so wonderful. In this day and age we need, we need more accessible literature, so people can empower themselves and learn new things about being intimidated by the field, that's what's really important here. And I think that's any of those positions you take in your life you're going to put your heart into it no matter what, so I'm excited for you.

ROSARIO: Yeah, I have to say. It's been really nice I've been getting a lot of positive feedback about the spotlight and you know about pub navigator which I think we're going to talk about at some point, which but basically the science communication projects. They've really developed into programs, and I've been getting a lot of really positive feedback from, from peers from former advisors, from science communication institutions, so it's been going. It's been going really great.

19:54 – PubNavigator

KARA: Yeah, well, since you brought it up let's jump into pub navigator let's talk a little bit more about that program through SACNAS at Illinois State University. So, What is pub navigator?

ROSARIO: Yeah, thank you. Um so pub navigator is essentially an expansion of the research spotlight. So what we did with the research spotlight is we're taking student papers and highlighting those and specific to ISU, right. And we've produced a journal we take research publications, kind of digest and translate the information contained in those publications and then write these articles that essentially mirror the content, but using accessible language so basically anyone with, you know, a 12th grade reading level should be able to read it and understand it, or at least that's the goal. Right. So what we've done now is we with the Research Spotlight we've collated them into our own SACNAS journal. And then we distributed that across. You know the department so we have an actual journal, the limitations of the journal are that we can only reach the people that can physically access the printed journal or who can access and use the PDF which is not super easy to share electronically. Last fall, I applied for a fellowship with the science advocacy Institute. And I was part of the C four cohort, science communication development program and they helped me to develop my program and they get stronger and learn more about funding structure and all this stuff and they helped me to create a website, which is the pub navigator website, and essentially it expands the reach of the research spotlight so we take these articles that were previously in this printed format and put them online so that now instead of just students here at ISU who can physically hold the book. Now we have now we can share the same content to everyone who has access to the Internet, And that's what pub navigator is. Oh, and we take articles from multiple different people not necessarily just students from ISU.

KARA: That's awesome. So you're really increasing the accessibility of science, and this science communication to just the world now, which is so amazing. That's just fantastic.

COURTNEY: Yes, and pub navigator has some really, really cool articles. I frequently visit that just to see what's going on whenever Rosario shares a new article. There was one posted yesterday about political science which was interesting to me.

22:22

ROSARIO: Yeah, and now I have some contributors will be coming in who are in a completely different field, I think. Oh, I don't want to say it if I don't totally remember what it is, so maybe I'll hold off.

COURTNEY: [laughs]

ROSARIO: We have some interesting stuff coming in, and I get really excited when I get like external contributors from fields that we haven't seen before.

COURTNEY: I'm reading through the, you know, overview of it, I was thinking how, how, it's kind of a similar thing where you want to read some more, maybe politically interesting pieces but you don't understand the language quite as well because there is another barrier there. So it's great that you guys are definitely breaking things down for everybody and exploring some really cool topics.

KARA: So, what if somebody wanted to get involved in either the research spotlight journal or pub navigator? How might somebody go about getting involved, contributing, helping to edit, etc.?

ROSARIO: Yeah. The best way actually now that we have a live website that's totally set up the best way is to actually go online. So if you go to the pub navigator page there's like a contributor portal where you can read all the instructions for how to contribute and then you can just actually submit right there. And I'm encouraging everyone who submits for the research spotlight to do the same. So we just have all of the articles in one place. And there's also another page for volunteers so if you want to be a volunteer editor, then you can we have a series of training modules. They don't take very long. It's just a couple pages that give you kind of a basic training of how to use language differently and how you how we get the language down to 12th grade reading level. And then once you've completed the training you just sign up as a volunteer, it pops into my email and I add you to the list.

COURTNEY: That sounds like great resume experience in my opinion, any undergrads listening. That is some solid research experience to put on any resume.

KARA: Or graduate student. [laughs]

COURTNEY: Or graduate student, you're right, I'm sorry.

ROSARIO: We will take you all! [laughs]

COURTNEY: There's training involved too that's a that's a skill. I mean like that's cool. And it's all online, nothing, nothing can be easier.

ROSARIO: Yeah it really has made it a lot easier to reach people.

COURTNEY: Yes, this 2021, and I guess we're still in 2020 part two, two I think [everybody laughs]

*24:50 – Yoga, Professional Development and Conferences, Oh My! What other opportunities does ISU SACNAS provide to students*

KARA: All right, is there anything else you want to share about the SACNAS organization here at Illinois State, and some other exciting projects that are maybe getting started.

ROSARIO: Yeah, certainly, so there's some stuff that we haven't, I get really excited about the science communication stuff but there's other things that SACNAS does that I haven't really gotten to talk about yet so one of them is professional development so we do monthly professional development sessions for both graduate and undergraduate students. We design them just kind of based on student needs. So I think the one that we have coming up next is not necessarily so much professional development, it's just kind of mindfulness, feeling better, when in January we have one on we're just going to do yoga together because it's been super stressful, this year. So the first one is just going to be trying to kind of relax together but moving forward, we'll do more professional development sessions. Every year we also try to take students to SACNAS conference. So our very first year, things worked out really well. The conference was in Hawaii. And we were able to fully fund five students to go to Hawaii, which was amazing. It was so much fun, some brand new experiences everyone got to present their research. So that went really well. This year we had full funding to send students to. And I don't remember where it was, I think it was California but I don't totally remember but we had a means to send them all there but then of course everything happened, But we are actively applying now for funding to send students next year to the SACNAS conference and every year it is at the end of October. So at the end of the spring, every April we do a grant writing session and an abstract writing session that are kind of workshops to help students submit competitive

travel scholarship applications and to submit competitive abstracts so that they can present to the conference because we only take students who are presenting because we think that that's really the best way for them to get the most out of the conference.

26:34

COURTNEY: Okay, you had me at the professional development because of the yoga sounds amazing. But then you talk about going to Hawaii, like that just sounds like a lot of awesome things happening. That's awesome. I'm excited for you guys

ROSARIO: That one was really great. [laughs]

COURTNEY: I hope the next one is also just as great if not better. You've definitely earned  
13:40:23 it after last year. we've all earned it after last year. [everybody laughs]

IAN: There is also going to be a second volume of spotlight, right?

ROSARIO: Oh my [everybody laughs] that is another thing we're actively collecting submissions right now for volume two of the spotlight so we try to do it on an annual basis, so that you know we're collecting papers from like last year, and then we'll wrap it up I believe in March, that's kind of when we're going to stop collecting them and then we're going to do a lot of editing and collating and then release everything, but we are yes actively collecting submissions for volume two right now.

COURTNEY: Volume Two active submissions until March. So, you have until March to submit your submissions and it sounds like. I can't wait to see what gets turned in, it's just gonna be like an even better than last time I bet.

KARA: Can you shout out the website to connect everybody to all of these different opportunities that SACNAS can provide?

ROSARIO: Yeah, so we don't have a website for SACNAS. But we are on the Red Bird Life page. And we do have a Reggiet site for SACNAS. And then, we're on basically every social media there is. So we try to share things widely. For Pubnavigator, it's pretty straight forward, it's pubnavigator.com and that's where you go to submit or to volunteer. And also, I'd be remised if we didn't mention our sponsor, which would be, The Science Advocacy Institute. They funded the C4 fellowship, and I'm currently a junior resident for The Science Advocacy Institute. So they have been continuing to help me with this project.

COURTNEY: Awesome. Thank you, Science Advocacy Institute for being so cool! And make sure when you look up SACNAS, you're looking up ISU SACNAS too, because there are other colleges with SACNAS, right?

ROSARIO: Right, that's a very important distinction. There are SACNAS-es everywhere! People in our exec board had different approaches when were signing up for social media, so sometimes it's ISU SACNAS and sometimes it's SACNAS ISU. So I apologize for that, but, that's just how it is. Sorry!

Episode Outro 29:00

Thank you for listening to Season 2, Episode 1 of STEAM Talk Podcast brought to you by CeMaST at Illinois State University. Tune next time for the other half of our interview with Rosario and Ian where they get to discuss their awesome research with us. If you enjoyed the show, please rate, subscribe, and follow us everywhere you can. We are on twitter

@STEAMTalkPod. We are available on Apple Podcasts, Spotify, Stitcher, and on our website [steamtalkpod.blurbrry.com](http://steamtalkpod.blurbrry.com). Also, be sure to follow SACNAS ISU on Facebook, Twitter, and Instagram.

End of episode: 29:54