and video. Only pharma guidance recommended multilingual PLS. Actual PLS included many common trial elements, including study purpose, treatment description, results, and adverse events. PLS in our analyses were 10-12 pages, and contained many infographics, including flow charts of study phases, visual explanations of treatment and participant demographics, and adverse event tables. None were multilingual, and most were readable at the 7th grade level, although one used undergraduate-level language. DISCUSSION/SIGNIFICANCE: General guidance was similar across sources. In our analyses of PLS, we found novel recommendations, such as including auditory pronunciation guides, and personalized thank you letters to participants. In future research, we recommend focusing on novel dissemination methods such as short interactive videos and patient-actor testimonials.

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Diversifying SC CTSI's Message: Successfully Leveraging Multi-Platform Social Media for Multi-Audience Dissemination

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OBJECTIVES/GOALS: We explain our multi-platform, multi-audience approach to stakeholder engagement/communication, discuss KPIs for our Instagram accounts, and highlight five top performing posts. Finally, we provide tips to Hubs who would like to tailor and optimize their social media approach. METHODS/STUDY POPULATION: We employed Uses & Gratifications theory and formative research with stakeholders to inform our social media strategy. We run two Instagram accounts (main CTSI & Community Engagement [CE]), one Facebook page (CE), and one Twitter/X page (main CTSI). To understand impact, we collected social media analytics on both Instagram accounts (main CTSI and Community Engagement-specific accounts) to ascertain four social media-related Key Performance Indicators since the inception of the two accounts: reach, impressions, growth rate, and engagement. Additionally, we examined the five top-performing posts on each account that gave us insights into trending topics and ideas for future content. RESULTS/ANTICIPATED RESULTS: From January 2023 to October 2023, the reach for the main account was 3,578 and 38,235 for CE. The number of profile visits for the main account was 474 and 2,703 for CE. Engagement data on Instagram is only available for the last 90 days. For the main account, the number of post likes, comments and shares was 622 and 2,700 for CE. The views and reach for the five top-performing posts on the main and CE accounts ranged in the thousands. The content of the top-performing posts for the main CTSI account varied between highlighting our KL2 scholars' accomplishments, recap of campus-wide research events, and advertisements for upcoming educational webinars. CE's top posts varied between highlighting their work in a South LA housing community, recaps of large community health events, and interviews with local key leaders. DISCUSSION/SIGNIFICANCE: CTSA Hubs have an ethical obligation to keep their local academic and community audiences apprised of their activities. Creating a formative research and theoretically-informed social media plan that varies by platform, and regularly evaluating performance insights allows us to track the type of content that appeals to our multiple audiences.

Team Science

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A Framework for Multicultural and Multidisciplinary Near-Peer Mentoring for Artificial Intelligence in Healthcare Education: A University of Florida Friend Group

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OBJECTIVES/GOALS: This work aims to explore how citizen science serves as a transformative frame work to bridge scientific knowledge, focusing on its potential to enhance transdisciplinary learning in artificial intelligence (AI) biomedical and clinical sciences by facilitating near-peer mentoring. METHODS/STUDY POPULATION: Our group of eight friends comprise a multicultural and multidisciplinary cohort including students from the USA, Philippines, Indonesia, and Guatemala pursuing PhD degrees in electrical and computer engineering, epidemiology, physics, and MD, PharmD, and DMD degrees. We engage in shared online courses, collaborative projects, and abstract submissions. Employing our collective knowledge, we design interactive learning experiences, support each other's initiatives, and collaboratively develop lectures and presentations. We in tend to expand collaborations in biomedical AI education while fostering principles of experiential and collaborativelearning, constructivism, and authentic inquiry. RESULTS/ANTICIPATED RESULTS: Our recent successes include submittedconference abstracts on data science and AI education in pharmacy and the facilitation of a guest lecture in health informatics. Additionally, we are currently collaborating on seven biomedical machine learning projects in radio frequency engineering, aiming for conference submissions. Moving forward, our goal

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is to expand our group, support the formation of similar communities, and promote data science and AI literacy in biomedical and clinical contexts. We aspire to extend this knowledge to families, classmates, and eventually patients, facilitating a broader understanding of the role of AI in healthcare. DISCUSSION/SIGNIFICANCE: We believe diverse expertise and pedagogical theories can help demonstrate the potential of citizen science to democratize scientific experience. By nurturing collaborative networks our efforts aim to bridge gaps between disciplines and enhance the broader public's understanding of AI in healthcare.

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The link between preexisting hypertension and COVID-19 severity in a hamster model

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OBJECTIVES/GOALS: Hypertension is a major risk factor for coronavirus disease 2019 (COVID-19) severity. Our goal was to determine if hypertension worsens lung pathology induced by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection in hamsters. METHODS/STUDY POPULATION: Male hamsters (7-8 weeks old) were infused with angiotensin II (AII; 200 ng/kg/min via osmotic minipump) for 4 weeks to induce hypertension. During the last week of the infusion, the hamsters were inoculated intranasally with vehicle (V) or SARS-CoV-2 (S; 1 x 105 plaque forming units/ml). Half of the hamsters were sacrificed 1 day post-inoculation (dpi-1) and the other half on dpi-6. Two scoring systems were applied to lung tissue sections stained with hematoxylin and eosin to determine the degree and severity of lung pathology: the first system assessed all pertinent alterations in the lungs, while the second system only assessed the pathology related to the pulmonary vasculature. Lung histopathology scores were calculated as the sum of the airway and lung alveolar scores in arbitrary units (AU). RESULTS/ANTICIPATED RESULTS: Studies revealed that the SARS-CoV-2-infected hamsters exhibited a 76-fold higher total airway score compared to vehicle controls [(AU): V, 0.25 ± 0.1; S, 19.00 ±1.35; $p<0.05$; n=4]. Total lung alveolar scores (27-fold) [(AU): V, 0.30 ± 0.11; S, 8.0 ± 4.1; $p<0.05$; n=4] and total vascular scores (17-fold) [(AU): V, 0.35 ± 0.2; S, 6.0 ±1.4; $p<0.05$; n=4] were also markedly higher compared to controls on dpi-1. AII increased blood pressure, which was sustained through the 4-week infusion period. Under these conditions, body weight slightly dropped by 4.5%. Ongoing studies are assessing the effect of hypertension on the % of airway, alveoli and vessels affected, airway and alveolar severity, and bronchiolar epithelial and type II pneumocyte hyperplasia. DISCUSSION/SIGNIFICANCE: Establishing the hypertensive hamster as a small animal model of COVID-19 will facilitate investigations into why preexisting hypertension is a risk factor for disease severity. These studies could lead to the development of novel therapeuticsfor treating COVID-19 patients with hypertension.

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Interleukin-6 protects renal dysfunction in mouse models of hypertension and salt-sensitive hypertension

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OBJECTIVES/GOALS: We are investigating the role of IL-6 in regulating renal function by measuring mean arterial pressure (MAP), renal plasma flow (RPF) and glomerular filtration rate (GFR) in wild type (WT) and IL-6-knockout (KO) mice in established mouse models of angiotensin II (AII)-dependent- hypertension and -salt-sensitive hypertension. METHODS/STUDY POPULATION: Twelve-week-old male WT and KO mice on the C57BL6 background strain were infused with vehicle (V; saline) or angiotensin II (AII; 200 ng/kg/min) for 12-14 days. Half of the AII-treatment groups were maintained on a high salt (HS; 6% NaCl) diet for the duration of the experiment, while the other half of the AII treatment groups and both vehicle groups were fed normal rat chow. MAP was continuously measured by a fluid filled catheter in conscious mice for the duration of the experiment. RPF and GFR were measured on days 12-14 in anesthetized mice by the para-aminohippurate, and fluorescein isothiocynate-Inulin techniques, respectively. All data were analyzed by 2-way ANOVA; *$p<0.05$ vs. WT, same treatment; #$p<0.05$ vs.V, same genotype; ^$p<0.05$, AII vs. AII+HS, same genotype. RESULTS/ANTICIPATED RESULTS: MAP was 31% lower in KO vs WT mice. AII increased MAP (1.2-fold) in WT but not KO mice. HS diet magnified AII-induced increases in MAP in WT and moderately increased MAP in AII-KO mice: [MAP (mmHg): WT+V, 130±7.0; KO+V, 91.0+4.0*; WT+AII, 153±5.0#; KO+AII, 83.0±4.0*; WT+AII+HS, 150±11#; KO+AII+HS, 93.0±4.0#]. AII infusion reduced RPF in the KO but not WT mice. Addition of HS reduced RPF in WT and exacerbated AII-induced reductions in RPF in KO mice [RPF (ml/min/g): WT+V, 1.82±0.23; KO+V, 1.91+0.40; WT+AII, 3.16±0.75#; KO+AII, 1.65±0.42*; WT+AII+HS, 1.10±0.31#^; KO+AII+HS, 1.13±0.XX#^]. The HS diet reduced GFR in AII-infused KO but not WT mice [GFR (µl/min/g): WT+V, 756±XX; KO+V, 788±XX; WT+AII, 1010 ±63*#; KO+AII, 756±23*; WT+AII+HS, 1100±150#; KO+AII +HS: 540±210*#^]. DISCUSSION/SIGNIFICANCE: The absence of IL-6 in male mice attenuated AII- and/or AII+HS-induced increases in MAP; however, it exacerbated HS-induced reductions in RPF and GFR. These findings suggest inhibiting IL-6 has therapeutic potential as an antihypertensive but not as a renal protective agent in hypertension and salt-sensitive hypertension disease states.

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Factors that impact the success of community-engaged research: perspectives from experienced researchers and community partners

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OBJECTIVES/GOALS: Involving community partners in translational research improves impact. Yet, community-engaged research

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