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OBJECTIVES/GOALS: The Bench Program offers academically talented high school students a unique opportunity to engage in cutting-edge research. Students are paired with a UTMB graduate student or postdoc and mentored by faculty, gaining hands-on experience in a rigorous, research-focused setting. **METHODS/STUDY POPULATION:** The Bench Tutorials course is open to all Ball High students and pairs each student with a UTMB graduate or post-doctoral mentor based on scientific interests. Students commit at least four hours weekly to supervised research and instruction, totaling about 40 hours per semester. This 5.0-credit course mirrors college-level rigor, with regular lab meetings and mentorship. Students present their research at two symposiums annually, including a Year-End event. Successful completion is considered an advanced academic achievement. **RESULTS/ANTICIPATED RESULTS:** The Bench Program continues to serve as a model biomedical training program for qualified GISD high school students. Since its start, it has enrolled over 490 students, many of whom have pursued science-related college paths. For the upcoming year, we aim to maintain a high-quality, intensive experience by enrolling around 16 students, each paired with one of 8 dedicated mentors. This structure ensures personalized guidance and hands-on research training, helping to shape the next generation of scientific leaders. **DISCUSSION/SIGNIFICANCE OF IMPACT:** The Bench Program gives high school students hands-on research experience with UTMB scientists. It mirrors graduate-level rigor, requiring time management and independent learning. The program is expanding to reach more students through GGCTSA partnerships.

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Evaluating grant writing support programs to enhance faculty research funding success

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OBJECTIVES/GOALS: To evaluate the effectiveness of multiple grant writing support services – including workshops, one-on-one mentoring, and grant pre-review – in improving faculty success in securing research funding. **METHODS/STUDY POPULATION:** The study included junior faculty participating in the R Club Grant Program – a grant development program to assist junior faculty in the preparation of their first research grant proposal – within the University of Cincinnati College of Medicine (UC COM) and the Center for Clinical & Translational Science & Training (CCTST), as well as UC COM faculty who engaged in one-on-one mentoring, workshops, or the Grant Pre-Review Program. Data on participation, satisfaction, and grant submission outcomes were collected and analyzed to assess the impact of each grant writing support service.

RESULTS/ANTICIPATED RESULTS: More than 100 investigators participated in R Club Grant Program workshops and received supplemental grant development materials. Comprehensive support – including workshops, mentoring, and pre-review – has contributed to successful funding across multiple NIH mechanisms (K23, R01, R03, R21, R35, and R56). Based on positive participant feedback, future expansion will include online and on-demand resources to enhance accessibility to grant writing webinars and training materials. **DISCUSSION/SIGNIFICANCE OF IMPACT:** Comprehensive grant writing support improves faculty preparedness and funding success. Expanding to online and on-demand formats will broaden access, promote equity in research training, and strengthen institutional grant competitiveness.

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Development of students (S) and faculty (F) of undergraduate (Ug) programs in Puerto Rico (PR) in clinical and translational research (CTR) with an interdisciplinary approach (IA): Real-world impact from 2020 to 2025

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OBJECTIVES/GOALS: 1. To develop UgS and UgF in CTR with IA in PR. 2. To equip UgS and UgF with the necessary knowledge, skills, and mentoring and provide hands-on experiences for their academic and professional development. 3. To provide UgS and UgF with dissemination opportunities. **METHODS/STUDY POPULATION:** Main approaches: Restructure the Center for Research Education and Science Communication Opportunities (CRESCO), hub to provide support in CTR skills, statistics, scientific writing, and access to library resources; and organize/launch a training program in CTR to support student development in CTR. Main strategies: peer-mentoring with graduate students (GS), faculty (F), and health professionals (HP); a pilot project (PiP) program to offer UgS, GS, F, and HP hands-on experiences with participation in up-to-date research in CTR under the mentorship of a principal investigator-mentor; organization/offering the Title V Annual Symposium in CTR as a dissemination platform; and acquisition of supplies/equipment to support the research and infrastructure to the library and academic programs. **RESULTS/ANTICIPATED RESULTS:** CRESCO: Acquired 2-96' interactive monitors and refurbished 7 study rooms with technology, boosting distance learning. Developed a Web portal, offered 27,249 consultations, and 692 attended CTR workshops. Training program: INTD 5998 course had 74 students (64 UPR-MSc and 10 from other campuses/institutions). 190 Orientations offered to Academic Program in Health Sciences (APHS), reaching 36 departmental chairs (dc) and 129 UgS from 10 UPR campuses, and 23 dc and 2 UgS from other universities. Healthcare associations approved one Continuing Education Module, and two were submitted for approval. PiP: 32 PiP teams (32 primary researchers, 32 UgF,