

## • ABSTRACTS FROM SCIENTIFIC FORUMS •



### Academic Entrepreneurship (Ae)

#### AE 001 Development of a Screening Battery for Alzheimer Dementia: a Pilot Study with Puerto Rican Elderly

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**Purpose:** In terms of psychopathology, dementia is one of the most prevalent conditions in the elderly. Dementia is defined as a decrease in memory, thinking and reasoning being its most common form in old age Alzheimer dementia (AD). In addition, the economic cost to society is around 100 billion dollars annually. Unfortunately, at this point Puerto Rico, have neuro-psychopathology instruments limitations to perform valid and sensitive screening of DA. **Method:** This study was directed to begin to evaluated a battery of neuropsychological screening instruments for Puerto Rican elderly (60 to 100 years, n = 50) with Alzheimer's dementia, in addition to calculate the sensitivity and specificity of the instruments. The tests were composed as a screening battery and included CERAD (Instruments created by the Consortium to Establish a Registry for Alzheimer's disease), MMSE (Mini mental Status Evaluation), EIWA-III (specifically the digit retention and similarities subtest that try to evaluated memory, concen-

tration and abstract thinking) and the Tuokkos' test (clock drawing in order to evaluated visual-constructional skills). **Results:** As show by ROC Curve (Receiver Operating Characteristic Curve) for our research, the sensitivity for CERAD was 95.7% with an specificity of 49%; MMSE (Mini Mental Status Evaluation), account for 89 sensitivity and 60% specificity; EIWA-III (specifically the digit retention and similarities subtest), respectively was 80.4% sensitivity and 44.7% specificity; and sensitivity of 82.6% and specificity of 44.7%. Tuokkos' Clock Test account for 76.1% sensitivity, and 23.4% specificity. **Conclusion:** Reported indexes were within acceptable limits for test screening. We suggest a sample increment and new testing with additional instruments. **Key Words:** Alzheimer dementia, Screening Test, Hispanics/Puerto Ricans.

#### AE 002 An Affordable Solution to Develop Laparoscopic Skills

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**Purpose:** The idea behind the development of the laparoscopy-training box is to facilitate the development of psychomotor skills and dexterity among medical students within their clinical years. The ability to work in an enclosed space with a modified and limited field of vision makes this training tool valuable and worthwhile. **Methods:** The training materials are notoriously expensive, but fortunately we were able to build a serviceable laparoscopic trainer with Plexiglas, an acrylic material that is easy to work with and clean, and an economical alternative. We chose Plexiglas in particular due to its ability to not absorb substances, making it a hygienic alternative. Since, the main idea of the box is to gain skills while practicing, each side has been cover with a piece of white fluted Polypropylene, this color was chosen because it enhances the light reflection provided by the fluorescent lamp. **Results:** Here we will describe how to build such a device, and we will attempt to set up a close representation of a real surgical experience in a safe environment for our students. **Conclusion:** The potential value of this simulator is to enhance surgical education in a cost-effective matter. The laparoscopic simulator holds great promise for incorporation into the curriculum of a clinical skills course, and as a tool to gain valuable hands-on experience.

#### AE 003 Relation between Dentition Status, Prosthetic Status and Satisfaction, and Fruit and Vegetable Intake among Puerto Rican Elderly

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Masticatory function is impaired in people with complete or removable partial dentures when compared to intact dentition. However, it is unknown how the number of teeth and ill-fitting prostheses affect food intake in Puerto Rican elderly. Purpose: To evaluate the relation between dentition status, satisfaction with dental prosthesis and fruit and vegetable intake in Puerto Rican elderly. Methods: Puerto Rican Elderly Health Dental Study was a cross-sectional study among 184 participants of Puerto Rican Elderly Health Conditions cohort, who were residents of San Juan metropolitan area ( $\geq 70$  years old) during 2007. Tooth count and quality of dental prosthesis (clinical satisfaction) were evaluated by calibrated dental examiners; 176 participants also answered questions on fruit and vegetable (FRV) intake and satisfaction with dentures. We used multivariate logistic regression models to explore the associations between dentition status ( $>20$  teeth without prosthesis,  $<20$  teeth without prosthesis, patients with prosthesis), patient and clinical satisfaction with the prosthesis, and consuming  $>5$  FRV/day, adjusting for age, gender, smoking (ever/never) and diabetes. Results: Dentition status was not significantly associated with FRV consumption (OR  $<20$  teeth without prosthesis vs. patients with prosthesis = 0.37, 95% CI: 0.04-3.11; OR  $>20$  teeth without prosthesis vs. patients with prosthesis = 1.31, 95% CI: 0.51-3.35). Among 70 patients with dentures, having a clinically unsatisfactory denture and patient self-reported satisfaction were also not associated with FRV intake (OR clinically unsatisfactory denture = 1.86, 95% CI: 0.33-10.45; OR patient dissatisfaction = 1.77, 95% CI: 0.70-4.51). Conclusion: Fruit and vegetable intake among Puerto Rican non-institutionalized elderly is not significantly associated with dentition status, clinical or patient satisfaction with prosthesis. These patients consumed similar amounts of fruits and vegetables regardless of dentition status. NIH grants R01AG1620904, K24DE16884 and 5S21MD001830.

### Community Engagement And Leadership (Ce)

#### CE 004 Relational & Autonomous Selves in the Patient's Activation of Health & Mental Health Care among Latinos: Does Gender Matter?

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Purpose: The purpose of this study was to explore gender differences in the way participants talk (learn) and act (patient activation) upon their world in the context of a mental health care encounter. This study is part of the DECIDE Project, a study that evaluates an intervention that teaches patients a set of skills needed to facilitate active participation in their care. Methods: Sixty Latino males and females, age- and site-matched, were recruited for the present study. The answers

to two ended questions were given to 3 independent blind coders who coded them as autonomous or relational. The questions were related to the participants' confidence on asking questions and making decisions. Each of the coders was given a list of traits that responded to the "separate" or "connected" manner of knowing. The coders assigned a learning/communicative style. Results: Results showed that Latinas use a relational perspective as part of their activation process, while men engaged in more separate manners. When gaining confidence to ask questions females relied more in separate manners and male in connected manners. Females placed more emphasis on male traits of autonomous skills such as formulating questions before the appointments, and learning ways to make questions. Men placed more emphasis in female traits of relatedness with their provider in order to feel confident to ask questions. Conclusion: In conclusion, decision making and asking questions differ between Latino females and males. Connection serves for activation and empowerment for decision making for females, and for asking questions for men. National Center for Minority Health and Health Disparities NIH (P60 MD002261-03).

#### CE 006 Bridging the Gap Between Community and Academia: a New Research Paradigm

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Purpose: Benefits of incorporating community members in research has been reported by studies framed into Community Based Participatory Research (CBPR). CBPR is an approach that equitably involves all partners in the research process and recognizes their strengths (Minker & Wallestein, 2008). This work shows the impact of integrating community members in a qualitative study directed towards identifying the needs and coping skills of people living with HIV/AIDS (PLWHA). Methods: Grounded in the CBPR principles, an Academic/Community Partnership (ACP) was developed. The focus group approach was used to identify the needs of PLWHA. The ACP served as team during the data analysis. This partnership is setting the bases for the development of an intervention model for PLWHA. Results: Following a training phase consisting of basic knowledge generated to felt stigma, the ACP were involved in different stages of research. This capacity building process and the ACP's experiential knowledge led them to substantially contribute to the design, recruitment, and the data interpretation stages for the focus groups. The following categories were considered: support from family, society, peers, professionals and representatives of faith; education and orientation for PLWHA; responsiveness to emotional reactions, self-acceptance and self-esteem. Conclusion: Traditional research models often portray scena-

rios that create distance and distrust within the community. The principal innovation of this study was to build a relationship among community and academia as research partners. This work confirms that CBPR is an appropriate framework to facilitate the integration and mutual transformation of academic and community investigators with a common goal. RCMI G12 RR003050.

**CE 007 Community-Based Organizations Service and Capacity Needs Assessment**

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**Purpose:** In an effort to form and sustain community-campus partnerships to enhance clinical and translational research, an assessment of needs for selecting and implementing evidenced-based programs was conducted among a selected group of community-based organizations throughout Puerto Rico. **Methods:** The survey was based on an instrument developed by the Cancer Prevention and Control Research Network. It assessed specific service information (e.g. services offered, health condition(s) addressed, target population, location), program selection/implementation processes, knowledge and perception of EBPs, funding venues, evaluation processes, and capacity and training needs. Recruitment process consisted of contacting 100 non-profit organizations in Puerto Rico that work or address specific health areas: cancer, neuroscience, HIV and cardiovascular. **Results:** The survey revealed support in training needs for building a productive translational research process. Prominent among these were utilization of data for decision making, development of collaborations, management of information services, conducting community needs assessments, and program evaluation. **Conclusion:** These findings point to important implications for promoting community-campus partnerships for advancing clinical and translational research. NIH: U54 RR 026 139.

**CE 008 Pink (Professional Women Inspire, Nurture, and Share their Knowledge with other Women): Women helping Women**

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**Purpose:** PINK (Professional women Inspire, Nurture, and share their Knowledge with other women) is a student-governed coalition of women from three generations with the mission to create a forum where professional women serve as mentors and provide support, education, and outreach to the community through a two-step process. **Methods:** First, professional women pledge to share their expertise, gained through work and pro-

fessional experience, with women who are in professional/graduate academic programs. Second, professional/graduate female students pledge to provide psychological support, education, and outreach to adolescent girls at risk through a mentoring program, and serve as positive role models for them. Medical students, professors and community members at Universidad Central del Caribe (UCC), are dedicated in discussing, promoting, and enlightening on health and wellness issues pertaining to women. **Results:** Throughout the year PINK offers health fairs and conferences to raise community awareness and knowledge about themes regarding women's health. Through PINK's mentorship and resources, several medical students further developed their professional career by presenting their independent research work in various national conferences. Recently, members traveled for a presentation sponsored by the Association of American Medical Colleges (AAMC). Furthermore, they have collaborated with other organizations in Puerto Rico, in outreach activities and workshops educating women in all possible facets of their professional careers, and specially working with girls facing difficulties in reaching their expectations. **Conclusion:** Cultivating supportive and strong interpersonal lines of communication is essential to their professional development. In essence, our goal is to inspire women to become competent personally and professionally.

**CE 009 Experiential Curriculum in Professionalism and Cultural Competence for Pediatric Residents**

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**Purpose:** Professionalism is an essential competency of a practicing physician which must be developed and nurtured along the continuum of medical education. Traditionally this competency has been taught through what has been called the "indirect curriculum" of hospital wards and clinics. To assure that learners at the residency level achieve this competency, we must develop the strategies to teach it in a structured manner and to evaluate it, both for improvement (formative), as well as for promotion and graduation (summative). **Methods:** Our Residency Program at the Hospital Episcopal San Lucas has implemented a curricular innovation with experiential activities (standardized patients) to foster the development of professionalism. The resident must achieve the following: demonstrate adherence to ethical principles; use patient-centered, respectful and sensitive communication; and demonstrate awareness of cultural differences and values. **Method:** The professionalism curriculum innovation offers: pre-activity interactive presentation on patient-centered communication, ethics, and addressing cultural differences, followed by a formative Objective Structured Clinical Examination (OSCE) with communication and professional challenges. The OSCE is developmental in na-

ture with more challenging cases as the resident progresses in training. Residents are video-taped to watch their performance during feedback. The PL3 level OSCE is summative. Results: All (100%) residents passed the OSCE with results over 70% (Accepted Level of Performance). Communication skills improved from the PL1 level (33% pass) to the PL3 level (60% pass). On the other hand, passing scores for ethical and cultural challenges were variable (100% PL1; 40% PL2; 100% PL3). Longer term outcomes are based on the analysis of reflective pieces one year after the OSCE. These reveal sustained changes in attitudes towards ethical and professional challenges. Course evaluation revealed high levels of satisfaction. Conclusion: The results of our curricular innovation suggest that it is possible to teach professionalism in experiential activities that are effective and satisfactory to the learner. Long-term assessment suggests that the professionalism and cultural competence gains remain in resident professional behavior.

**CE 010 Community Awareness on Cardiovascular Disease's Risk Factors**

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Purpose: Cardiovascular diseases (CVD) are the number one cause of death in Puerto Rico. We seek to explore Puerto Rican's knowledge on CVD risk factors and the impact an educational intervention have on this awareness. Methods: This was a cross-sectional study with a pre and post questionnaire assessing participants' knowledge on CVD and associated risk factors. The participants were men and women ages 18 and up attending a health fair held at Universidad Central del Caribe sponsored by PINK, a professional women's group dedicated to serving the community. Additional intervention and surveys were collected on a health fair at Isabela P.R., where PINK was invited. A 24-item pre-survey was given to participants after consenting to participate. After the educational intervention was given, which consisted of a 5-minute video and a one-on-one intervention emphasizing CVD's modifiable and non-modifiable risk factors, the participants completed the 13-item post-survey. Results: There was a significant increase ( $p < 0.05$ ) in participant's knowledge regarding CVD's risk factors between the pre and post survey; knowledge of depression increased from 64.4% to 94.5%; knowledge of diet rose from 67.6% to 93.2%; knowledge of anger increased from 72.6% to 91.8%; knowledge of alcohol drinking increased from 74.3% to 97.3%; and knowledge of diabetes rose from 76.4% to 95.8%. Conclusions: The educational intervention showed a positive impact by increasing the community's awareness on CVD's risk factors. An aggressive educational campaign addressing this issue should be started, emphasizing on those modifiable risk factors found with lower initial response: depression, anger, diet and alcohol.

**Research Career Development (CD)**

**CD 011 From Clinical to Forensic Medical Research: applying Clinical Experiences with Acetic Acid and Magnification to a Teen Cadaver**

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Purpose: Forensic evaluations are an important part in the identification and intervention in situations of sexual violence. The purpose of this report is to demonstrate the importance of applying routine procedures in a clinical service to other settings. Objective: Identify the impact of acetic acid and magnification in a cadaver. Goal: Detect other forms of identifying sexual contact in cadavers. Acetic acid and magnification have been used to identify human papilloma virus (HPV) in women and men, is this use possible in cadavers? Methods: Our clinical service uses acetic acid and magnification in the evaluation of patients. Due to the circumstances of a teen cadaver, application of acetic acid and magnification was used to evaluate the vulva. Its result required a tissue analysis. Results: Demographics are not described to protect the identity, except for female and menstruating. The cause of death had been asphyxia by suspension and the manner of death was suicide. The tissue analysis reported soft fibroma and overlying epithelium showed koilocytotic and mild dysplastic changes, suggestive of HPV. Conclusion: The use of acetic acid and magnification used in live patients can produce findings in the cadaver important to the investigation of a forensic medical evaluation. This is important because violence, especially sexual violence, is a preventable public health crisis. Translational operational basic clinical sexual violence research has relentlessly been lagging behind. The rape kit, colposcopy and DNA have been the only major advances for physical evidence in more than 50 years. Our research career is focused on contributing to this field. With this finding, new doors for research are opened in the work to identify and prevent sexual violence.

**CD 012 Access and use of Cardiovascular Surveillance Data Facilitates Conceptualization of a Post-Doctoral Master of Science in Clinical Research Scholar Project**

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Worldwide, cardiovascular diseases (CVD) are the main cause of death and disability, and population residing in Latin American and Caribbean countries including Puerto Rico, are not the exception. Unfortunately, in Puerto Rico the incidence or prevalence rates for CVD are either absent or outdated. Thus

the availability of evidences to determine health disparities and implement public health policies is quite limited. For this reason, the Endowed Health Services Research Center at the University of Puerto Rico established as a priority the conduction of a CVD surveillance study. Purpose: To describe the initial process to become an independent researcher and to utilize the information available from the Puerto Rican CVD surveillance study to initiate a Post-doctoral Master of Science in Clinical Research scholar project that examines the impact of secondary prevention therapy on mortality in Puerto Rican patients hospitalized with the diagnosis of acute stroke. Methods: The electronic database of the CVD surveillance study will be accessed to obtain information from 2,900 Puerto Rican patients hospitalized after an initial acute stroke during 2007 and 2009. The impact of secondary prevention therapy (antiplatelets, anticoagulants, lipid-lowering agents, antihypertensives and lifestyle modifications) on mortality in the study population will be examined. Mortality will be assessed in-hospital, at 3 months, 6 months, and at 1-year after discharge. Results: The acceptance as a scholar in the Post-Doctoral Master of Science in Clinical Research has been the first step in pursuance of an independent research career. Three national and international experts have agreed to act as mentors. Conclusion: The access and utilization of current and reliable data regarding demographics, clinical and therapeutic management of patients hospitalized with an acute stroke by Post-Doctoral Masters of Science in Clinical Research scholars is a suitable significant step towards the beginning of an independent research career.

### Research Curriculum Development (RC)

**RC 013 Employment Status: the Effects of Employment on Depression Syntomatology in Puerto Rican Women**

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Purpose: Puerto Rico is presently in a period of economic weakness which has instigated a growing and troublesome unemployment rate. Many studies show that the stressors created by unemployment have negative consequences on mental health, but few studies have evaluated the recent psychological impact of employment status in the economically bothered Puerto Rican population. Since Puerto Rican women are the majority of those looking for employment, heading single parent households, and living under the federal poverty line, the effect of employment status on their depressive symptomatology is of interest. Methods: This expo facto design targets a sample of employed and unemployed women. The Center for Epidemiologic Studies Depression Scale (CES-D) is used to assess depressive symptomatology. At test is selected to compare the

symptomatology between the groups. The investigators hypothesize that the unemployed sample will present a statistically significant higher depressive symptomatology. Results: The results of the investigation indicate that there is a statistically significant difference between the depression symptoms of employed and unemployed women (T-Value = -4.76; 204 degrees of freedom, Sig. 0.00). Unemployed women have statistically significant scores that meet the criteria for possible depression indicators as outlined by the CES-D (mean = 21). That profile shows a statistically significant difference between a prior diagnosis of depression in women and current depressive symptomatology (Spearman's Rho: -.474, Sig. 0.000). Although women seem to be the primary support and caregivers in their family irrelevant of employment status, it seems that unemployed women have the most burden and carry it more often without a domestic partner (mean = 64%). The difference in education between both women is marked. Unemployed women have higher drop-out rates and less higher education. Interestingly enough, although employed women have more years of preparation and have statistically significant higher earnings, only five thousand dollars separates one group of women from the other in terms of classifying under the federal poverty line. Conclusion: There was not enough evidence in this study to support self-perceived empowerment or spirituality as deterrents to depressive symptomatology. This study is a stepping stone for further research and collaboration in trying to understand how women are being affected by the current economic crisis in Puerto Rico. The hope of the researchers is that this work will start to empower government agencies to collaborate with additional research and add mental health services in the repertoire of resources offered to unemployed women.

**RC 014 Designing a Course to Engage Clinical Scholars in Healthcare Disparities Research**

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Purpose: Providing formal training opportunities is an important mechanism to expose and recruit new clinical scholars to the field of healthcare disparities. We therefore designed a graduate-level course to provide advanced health professional trainees with knowledge and skills to understand and apply the basic principles of healthcare disparities research. The objective of this course was to equip clinical trainees with the foundational knowledge necessary to develop a research proposal focused on a healthcare disparity of their choice. Methods: The course was organized around a 3-phase conceptual framework for advancing disparities research that includes detecting (Phase 1), understanding (Phase 2), and reducing/eliminating (Phase 3) disparities. Course content covered methodological and conceptual issues pertaining to each of the three phases. Course activities included didactic lectures, interactive discussions,

and homework assignments to establish basic knowledge of research on disparities in health care. Students were also exposed to real-world examples of research through guest presentations by faculty conducting research on a wide range of disparities in health care using diverse research methods. Results: The class was well-received by students in a variety of clinical disciplines including primary care, radiology, nursing, and psychology. Students successfully developed research proposals that could be developed into future grant proposals. Conclusion: Developing this initial course on healthcare disparities has paved the way for engaging future trainees in the field of disparities. This course now serves as the core course for a Disparities Specialization within the Clinical and Translational Science Institute at the University of Pittsburgh, School of Medicine.

**RC 015 The Success Case Method: Evaluating the Impact and Usefulness of Trainings Efforts**

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Purpose: An important outcome of the Office Community Research and Engagement (OCRE) of the PR Clinical and Translational Research Consortium is to encourage research and its clinical application in communities. Efforts toward achieving this outcome during 2011 included sponsoring two trainings targeting researchers and community based organizations members. The Success Case Method (Brinkerhoff, 2003) was used to determine the impact and usefulness of the trainings sponsored by OCRE. This method seeks to understand why things worked and why they did not. Methods: OCRE staff contacted participants 3 months after the trainings. A Follow-Up Interview was used to track information about the participants, whether or not they had used skills learned during the training sessions, and, if so, in what context. A qualitative data analysis was used to identify emergent themes. Results: Thirty-three (92%) of the trained participants were successfully contacted during the follow up. More than 40% had used the skills learned either for practice or in their main work setting. Trained participants (30%) met criteria for success cases. This was much higher than expected, as these individuals represent innovators and early adopters (Rogers, 2003) in the process (expected percentage = 16%). Conclusion: Based upon our higher-than-expected rate of adoption, we can conclude that our recruitment and selection efforts for the training, along with the quality of the training itself were successes for promoting the adoption and implementation of new technologies among a group of professionals. This 3-month follow-up focused primarily on adoption. Our next follow-up will be at 6-months and will focus on assessing impact of the training in participants' professional careers and the continued implementation of learned skills and resources acquired with training. NIH Grant: U54RR026139.

**Clinical And Translational Research -  
Health Disparities Research (HD)**

**HD 016 CXCL12 $\alpha$  induces Proliferation and Migration of Human Endometrial Epithelial Cells Expressing CXCR4**

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Purpose: Endometriosis defined as the presence of endometrial stroma and glands outside the uterus, is associated with chronic pain, inflammation, and increased levels of chemokines. We reported high CXCR4 mRNA levels in endometriotic lesions in a rat model and protein expression in human endometriosis tissues vs. control endometrium. The CXCR4-CXCL12 axis plays roles in angiogenesis, migration/invasion, and cell proliferation. We hypothesize that CXCR4 protein will be differentially expressed in endometrium from endometriosis patients and endometriosis localized in the ovaries, compared to endometrium from disease free participants. We also hypothesize that the CXCR4-CXCL12 axis may be dysregulated in endometriotic cells leading to increased proliferation, migration, and angiogenesis via the Akt signalling cascade. Methods: We determined expression levels of CXCR4 protein in endometrium of endometriosis patients, in lesions, and in endometrium from controls included in a tissue microarray composed of 164 tissues: ovarian, endometrium from patients (EE) and controls (proliferative - PE; secretory endometrium - SE). CXCR4 expression was analyzed by immunohistochemistry and staining intensity was blindly scored. Cell proliferation and migration of EEC treated with CXCL12 $\alpha$  was analyzed by BrdU proliferation and wound healing assays, respectively. Results: CXCR4 protein expression was significantly higher in glands of ovarian endometriosis compared to PE and SE. Lower CXCR4 levels in both nuclei and cytoplasm of stromal cells were observed in EE compared to SE. The expression of CXCR4 in EE was significantly higher in glands than SE, when the expression of this receptor is expressed at the maximal level. CXCL12 $\alpha$  increased proliferation and migration of EEC vs. media ( $p < 0.05$ ). Conclusion: These data suggests that the CXCR4-CXCL12 $\alpha$  axis can be activated as shown by Akt phosphorylation, which may result in promotion of cell proliferation, migration and angiogenesis. These biological functions have been previously shown to be dysregulated in endometriosis, by still undefined mechanisms, leading to survival and growth of ectopic endometrium. Our findings may have implications on the therapy of this incurable disease, by targeting the inflammatory component with pathway-specific drugs. R01-HD050509, S06-GM08239, 1R25-GM082406, R25GM096955-01

**HD 017 The Voice Handicap Index: a Translation and Cultural Adaptation to Puerto Rican Spanish Dialect and its Validation**

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**Purpose:** The purpose of the present project was to translate, culturally adapt, and validate a Spanish language version of the Voice Handicap Index, a statistically robust instrument to quantify the psychosocial consequences of voice disorders. This work is of great importance for public health in Puerto Rico, since there exists a great need for a psychometrically robust voice disability/handicap inventory in the Spanish language spoken in Puerto Rico that could be used with patients that exhibit a variety of voice disorders in Puerto Rico and in United States. If a questionnaire or instrument is to be used in another country in a different language, translation and cultural adaptation are required. **Methods:** For the translation and adaptation of the Voice Handicap Index to Puerto Rican Spanish dialect, the cross-cultural adaptation process recommended by the American Academy of Orthopaedic Surgeons was followed. **Results:** Two forward translations to Spanish were made of the original version of the Voice Handicap Index by two bilingual translators whose native language is Spanish. To assure that the translated version accurately reflected the item content of the original version, the instrument was translated back into the English language, by native English speakers. An expert committee worked on internal consistency reliability, and consolidated all the versions and components of the instrument, and developed the pre-final version of the instrument for field-testing. The validation process consisted of pre-testing and testing procedures followed by appropriate statistical analysis (Pearson product-moment correlation coefficient and Cronbach's alpha coefficient). Graduate students collaborated with the PI with pre-testing and testing procedures. Final content validity as well as test-retest reliability will be discussed.

**HD 018 Characterization of HPV Infection in Hispanic Colorectal Cancer Patients**

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**Purpose:** The association between Human Papillomavirus (HPV) infection and the development of cervical cancer and anogenital cancer has been established. Viral genes expression and multiplication occur exclusively in the nuclei of the infected cells and are tightly linked to the state of differentiation of the cells. Integration of viral DNA into host genome is essential for carcinogenesis since it promotes disruption of HPV E2 gene,

leading to abnormal expression of E6 and E7 oncoproteins. Both E6 and E7 can form specific complexes with tumor suppressor gene p53 and pRB respectively. Our objectives were to evaluate the presence of HPV infection in patients with CRC; to probe the viral integrations status of HPV 16 in CRC and its adjacent normal colonic mucosa, and to determine the mRNA expression levels of the viral oncogenes HPV-16 E6 and HPV-16 E7. **Methods:** To determine the association of HPV and CRC, we conducted an age-and-gender matched case-control study using tumor and tumor-adjacent colorectal tissues from patients with CRC (cases) and without CRC (controls). Presence of L1, E2, and E6 genes was analyzed to determine whether a full-length HPV genome existed in tumor and normal tissue samples. Head-to-tail junctions of HPV-16 genomes were analyzed to determine the integration the HPV-16 genome in the HPV-16 (+) cases. **Results:** A total of 45 ( $\beta$ -actin+) CRC patients (mean age 61  $\pm$  11 years, 24 males) and 47 controls (mean age was 60  $\pm$  9 years, 18 males) were evaluated. Tumors were located in proximal colon (n=7) and distal colon (n=38). HPV DNA was identified in 19 of 45 (42.2%) patients with CRC and in 2 of 47 (4.3%) controls (OR = 16.4; 95% CI 3.5-76.3, p < 0.001). HPV-16 was identified in 12 of 19 (63.2%) HPV (+) CRC patients and in none (0%) HPV(+) controls. The twelve HPV-16 CRC cases showed integration of HPV-16. Three of 12 (25%) HPV16 (+) cases expressed E6 and E7 mRNA. Among the 12 CRC cases where both tumor and adjacent tissue was available, 2 of 9 (16.7%) exhibited HPV-16 DNA in both tumor and tumor-adjacent tissues. **Conclusion:** These results suggest that colorectal HPV infection is common among patients with CRC. The presence of HPV in tumors located proximal to the rectum suggests that this infection might not result from direct spread from anogenital sites. Moreover, our finding of highly frequent integration of viral DNA and the active expression of E6 and E7 viral oncogenes in the host strongly suggests that HPV oncoproteins may play a role in the pathogenesis of colorectal carcinogenesis. U54RR026139-01.

**HD 019 Translational Research in Neuro-Aids and Mental Health**

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HIV infection of the CNS frequently results in neuropsychiatric complications and increase disability. Despite effective antiretroviral treatment, nearly 80% of patients still have asymptomatic

cognitive impairment. HIV disproportionately affects racial and ethnic minorities and several barriers must be overcome for a significant impact on this illness to be realized. A better understanding of how social, cultural, and genetics impact the pathophysiology of disease and the development of new therapies is needed. Another barrier is the dearth of scientists from racial and ethnic minority groups in the field of Neuro-AIDS research. Purpose: Establish a web-based interactive course to overcome the limitations of traditional education. Methods: The NIMH R25 program was designed to address these barriers by 1) supporting the education and training of minority graduate students, post-doctoral fellows and junior faculty, and individuals who are not members of minority groups but are engaged in Neuro-AIDS disparity related research through a web-based didactic course; 2) to promote innovative Neuro-AIDS research, through pilot grants and 3) to provide long-term mentoring relationships to further career development. Results: Since program inception 12 university partnerships have formed, 127 trainees have completed the course, 8 trainees were research scholars and/or received pilot grants, 11 independent grants were obtained by trainees, and more than 50 manuscripts have been published. Conclusion: This course share a common venue where students can advance their educational experiences and career goals by long-term learning, foster mentees to pursue a career or research in Neuro-AIDS, and encourage and facilitate networking and collaborations. R25MH080661; U54NS43011; G12RR03051; U54NS56883; U54RR026139; U19MH081835; and U54NS043049.

**HD 020 How Reliable is Self-Reported Information about Cancer among over 60 years old Population?: Puerto Rico-Proyecto Prehco: 2002, 2008**

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Purpose: Even though self-report population based studies are representative, the data gathered is not always reliable because it depends on the information and understanding of the respondent and the knowledge that the patient may have on the subject. Cancer patient in particular the older person, are not necessarily aware of the disease. The study Puerto Rican Elderly: Health Conditions, known as PREHCO, is the first longitudinal study of the population over 60 years of age. PREHCO was conceived as household survey through face-to-face interviews using a laptop. The objective of this study is to verify the information provided by respondents in PREHCO regarding cancer with the Central Cancer Registry of Puerto Rico.

Methods: The variables considered for this study were: sex, age at diagnosis, type of cancer and treatment. Results: Cancer is the second leading cause of death among the elderly in Puerto Rico. Data collected in PREHCO show that 7.1 per cent of men and 5.4 per cent of women were diagnosed with cancer.

**HD 021 Suicide Risk in a Group of Inpatients with Mental Health Disorder in a General Hospital in Puerto Rico: Preliminary Results**

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Purpose: Suicide is a public health concern worldwide, causing nearly half of all violent deaths. Often, a patient at risk goes unnoticed by the medical staff, which endangers the patient's life if not identified and addressed soon. This translational research study seeks to identify the frequency of suicide risk in patients with mental health illnesses who attend a general hospital. The outcomes evidence the need to incorporate behavioral professionals in the multidisciplinary team at general hospitals in PR. Methods: Using a cross-sectional exploratory design, 300 patients who visited the Damas Hospital in Ponce, from October 2010 to April 2011, were recruited. A Socio-demographic Questionnaire and Mini International Neuropsychiatric Interview were completed for patients located on different Clinical Units. Results: According to DSM-IV-TR, 46% met criteria for any psychological disorder (73% women). Mental health disorders were common: Major Depression (74%), Generalized Anxiety Disorder (26%), Panic Disorder (22%) and Agoraphobia (17%). Suicide risk was identified in 43% of patients who met the criteria for a psychological diagnosis. Suicide risk was identified in 48% of patients 41 to 60 years of age who had a mental health condition diagnosis. The most common medical diagnoses were cardiovascular conditions (54%) and diabetes (41%). Conclusion: The findings show a high frequency of suicide risk in patients with mental health diagnoses in the study population. They also suggest the need to incorporate mental health professionals to the multidisciplinary team working in general hospitals, and the need to make a shift toward models of integrated health care services.

**HD 022 Possession and Use of Removable Partial Dentures in Relation to Number and Position of Remaining Natural Teeth: a Cross-Sectional Study of Puerto Rican Elderly Patients**

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**Purpose:** The reported lack of patient compliance with removable partial dentures (RPDs) represents a considerable waste of time and resources. This study aims to better identify dental factors (number of missing teeth per arch and missing  $\geq 1$  anterior tooth) that are associated with the possession and use of RPDs in the Puerto Rican elderly. **Methods:** Puerto Rican Elderly Dental Health Study (PREDHS) was a cross-sectional study, which included clinical examinations and interviews among 184 Puerto Rican elderly ( $\geq 70$  years old) living in the San Juan Metropolitan area in 2007. Tooth count was assessed as part of the clinical exam. We used multivariate logistic regression models to evaluate the associations between tooth loss patterns in each arch, and possession/use of RPDs, adjusting for age, gender, smoking, diabetes and depression. Analysis on RPD possession was limited to partially edentulous arches (1-13 teeth, N=316 arches); the analysis on RPD use was limited to arches with RPDs (N=104). **Results:** 47% of the study participants had at least one RPD, with 17% having two RPDs. Arches with missing 7-13 teeth had more than 6-fold higher odds of RPD possession, compared with those missing 1-6 teeth (OR=6.59, 95% CI: 3.83-11.33). Missing at least 1 anterior tooth was also associated with RPD possession (OR=2.80, 95% CI: 1.50-5.23, additionally adjusting for number of teeth). Tooth loss patterns were not associated with the RPD use (ORmissing 7-13 vs. 1-6 teeth=1.55, 95% CI: 0.56-4.25; OR missing  $> 1$  ant.tooth=0.73, 95% CI: 0.23-2.29). **Conclusion:** The results of this study indicate that tooth loss patterns affect the possession but not the use of RPDs in the Puerto Rican elderly. It appears that use of the prescribed RPDs was fairly consistent (75-79%) regardless of the arch's tooth loss pattern. This implies that the Puerto Rican elderly are generally compliant with the use of a prescribed RPD and that the prescription of RPDs in this population was appropriate. NIH grants R01AG1620904, K24DE16884 and 5S21MD001830.

**HD 023 Communication about HPV Infection and HPV Vaccine between Young Women and Parents in Puerto Rico**

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**Purpose:** The objective of this study was to explore communication mechanisms by Puerto Rican parents and young women in discussing topics on Human Papilloma Virus (HPV) infection and the HPV vaccine. **Methods:** Eight focus groups were conducted between April and June 2010. Five of these were conducted with young women ages 16-25 and three groups with parents of daughters in the same age range. Discussions focused on parent-daughter communication about HPV, HPV vaccine

and sex topics. **Results:** A number of young women mentioned that their parents never have discussed HPV or the HPV vaccine with them. Among the young women affirming that such a conversation had occurred with their parents, the main topics discussed were: preventing infection with the virus, vaccine's safety, and the cost of the vaccine. Both parents and young women expressed that parent-daughter communication regarding HPV and the HPV vaccine is important. Particularly, a majority of the young women indicated that parents are responsible for talking about these topics and that parents need to get accurate information in order to communicate more effectively. Young women recommended that parents approach discussing these topics in an indirect way, such as using other people's stories and that they respect their daughter's privacy. **Conclusion:** Results show that communication between parents and daughters about HPV and the HPV vaccine is limited and constricted. This highlights the need to develop interventions to improve parent-daughter communication about HPV and the HPV vaccine and health promotion initiatives aimed at disseminating accurate information to parents. US4 CA 96300/US4 CA 96297.

**HD 024 Detection of the Daidzein Metabolite Equol in Puerto Rican Women as a Potential Risk Factor for Metastatic Breast Cancer**

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**Purpose:** Hispanic women are more likely than non-Hispanic women to die of breast cancer. This health disparity may be attributed to many factors, including environment and diet. We recently reported that treatment with the bean isoflavone daidzein increased breast cancer metastasis in nude mice by increasing the expression of protein synthesis initiation factors and synthesis of cancer promoting proteins. Interestingly, these effects of daidzein on cancer malignancy could not be recapitulated using the same breast cancer cell line in vitro; but by the daidzein metabolite equol. Daidzein is chemically transformed into equol by intestinal bacteria found in rodents and humans. Gut physiology, genetics, and diet contribute to inter-individual differences in conversion of daidzein to equol. A recent study reported that Hispanic women were more likely to be efficient equol producers than Caucasians. Therefore to test the hypothesis that high equol production by Hispanic women may contribute to increased breast cancer malignancy, we initiated a cross-sectional characterization of the equol production efficiency of a clinic-based sample of premenopausal Puerto Rican women. Aim1) Evaluate equol effects in vitro, Aim2) investigate if there is an association between urinary equol, fecal

equol producing bacteria, and epidemiological data. Methods: Aim1) Metastatic breast cancer cells were treated with equol and immunoblotted for pro-metastasis proteins. Aim2) Recruited premenopausal women 25-50 years old, no previous cancer history, no intake of hormone or contraceptives in the last 2 years, no antibiotics in the last 3 months, are Puerto Rican and have lived in Puerto Rico for the past 10 years. Results: Equol treatment to breast cancer cell lines demonstrated a ~1.8-fold increase in eukaryotic initiation factor eIF4G and related cancer malignancy proteins. We have recruited 34 of 80 patients at the Ramon Ruiz Arnau University Hospital and Puerto Rico Hematology and Oncology Group clinic. Epidemiological data have been collected for average age, height, BMI, income, onset of menses, child bearing age and numbers, bean consumption, and exercise frequency. Urine and feces have been collected for determination of equol producing efficiency. Conclusion: It is possible that the daidzein in leguminous diets may become converted to equol, which can promote breast cancer malignancy via regulation of synthesis of specific proteins that control breast cancer cell survival, and invasion. Previous research studies conducted in the US have found a positive association between the production of equol and women's educational level, ethnicity, and physical activity. Because biological sample assay protocols are being optimized, the data for association studies is yet to be determined. This project was sponsored by US Army/BCRP W81XWH-11-1-0199, NIH/NIGMS SC3GM084824, NIH/RCMI 2G12RR003035, and U54RR026139-01.

**HD 025 Barriers for Equity in Daily Activity Participation of Hispanic Men who Live Alone**

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Purpose: Men elders who live alone are at greater risk for restrictions in daily life activities participation than those living with others due to the presence of higher levels of disease, disabilities, and social risks. Participation in daily life activities is a significant prerequisite and goal for healthy living. However, it was unknown what factors restricted participation of Hispanic men elders who live alone. This study's aim was to identify factors that contributed towards the experience of challenges in participation in daily life activities of Hispanic live-alone men elders. Methods: Twenty Hispanic live-alone men 70 years and older were included. A concurrent nested mixed method design was used. The quantitative phase consisted of the administration of a tool to measure participation restrictions. The qualitative phase consisted of in-depth interviews with a phenomenological approach with a subsample of the quantitative phase to facilitate interpretation of the results. Data analysis included descriptive statistics and thematic content analysis. Results: The experience of physical health conditions, fear of criminality, limited space and resources,

economical constraints, reduced perceived social support, and social interactions conflicts were the main themes that emerged from the data. Conclusion: A complex interaction between personal, environmental, and activity-based factors contributed to the experiences of challenges in daily life activities. Appropriate public health interventions for Hispanic older adults who live alone should address gender differences, the complexities of activity participation contributors, and cultural determinants of activity engagement to reduce the existent health disparities.

**HD 026 Health Related Quality of Life does not Correlate with Cardiorespiratory Fitness in Adults Living with HIV in Puerto Rico**

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Purpose: The association between cardiorespiratory fitness (VO<sub>2</sub>max) and health related quality of life (HRQoL) among adults living with HIV infection is not known despite both being critical factors influencing the impact of chronic diseases on people's lives. Lipodystrophy is another factor known to influence HRQoL in HIV infection but unexplored in relation to VO<sub>2</sub>max. The purpose of this study was to test the hypothesis that, VO<sub>2</sub>max would be correlated with HRQoL among Hispanics living with HIV infection regardless of their lipodystrophy status, and the correlation would be similar in a non-HIV comparison group. Methods: A group of 60 Hispanic adults living with HIV infection (30 with and 30 without lipodystrophy) and 30 non-HIV adults similar in age and gender distribution volunteered for the study. HRQoL was assessed with the SF-12 self-administered questionnaire and VO<sub>2</sub>max with indirect calorimetry during a graded exercise test using the modified Bruce treadmill protocol. Results: A one-way ANOVA revealed that VO<sub>2</sub>max and the physical component of HRQoL were lower in the HIV (both with and without lipodystrophy) compared with the non-HIV group (26.8±6.9, 32.1±8.1 and 33.7±9.2 ml·kg<sup>-1</sup>·min<sup>-1</sup>, P=0.004; and 39, 38 and 42, P=0.009; respectively). However, correlation and regression analyses revealed no association between VO<sub>2</sub>max and the physical or mental components of HRQoL (r= 0.17 and 0.03, respectively, P>0.05 for both). Conclusion: Results suggest that lipodystrophy is not a factor influencing VO<sub>2</sub>max or HRQoL, and that contrary to previous observations; VO<sub>2</sub>max does not influence HRQoL in this population. NIH/CTSA KL2-RR024151.

**HD 027 Vitamin D and Cardio-Renal Risk Factors among African American Children**

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**Purpose:** Prevalence of 25-hydroxyvitamin D (25[OH]D) deficiency is high in children, particularly in the African American (AA) population, who also have higher prevalence of various cardio-renal risk factors (CRRF) beginning in early childhood. Therefore, we looked into the relationship between 25 [OH] D deficiency and CRRF in AA children. **Methods:** This is a retrospective cross-sectional analysis of data from the NHANES 2001 - 2004. Serum 25 [OH]D deficiency was defined as < 15 ng/ml. CRRF were determined using the standard guidelines. **Results:** There were 1506 AA children, boys 51%, tall 72%, obese 22%, high blood pressure (BP) 9%, with abnormal lipid profile (LP) 41% and those with high fasting blood sugar (FBS) 6%. There were significant differences in the prevalence of 25 [OH]D deficiency with p values at <0.001 noted with: 6-12 yrs 47% vs 13-17 yrs 23%, boys 26% vs girls 45%, non-obese 32% vs obese 45% and normal 32% vs abnormal LP 39%; p<0.01. Similarly, there were significant differences observed in the mean 25 [OH]D levels among the same groups of children. The odds ratio (OR) of having 25 [OH]D deficiency was significant when obese, normal BP children were compared to non-obese, normal BP children. When obese children had high BP the OR was 2 folds higher than non-obese, high BP children (OR; non-obese and normal BP vs obese and normal BP 1.5 (CI 1.2-2.0) and obese and high BP 2.6 (CI 1.5-4.3). **Conclusion:** There was no significant association between 25[OH]D deficiency and CRRF independently. Analyzing two variables in various combinations, risk of 25[OH]D deficiency is significantly higher in the obese with high BP compared to obese with normal BP. This implies that in AA children, 25 [OH]D deficiency may become more imperative when obesity and high BP appear concomitantly, suggesting weight being a predominant component. These findings are more consistent with diet related effects as opposed to genetic predisposition.

**HD 028 Use of Screening Tests in Women for Colorectal Cancer among Gynecologists and Family Physicians in Puerto Rico**

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**Purpose:** In PR, colorectal cancer (CRC) incidence in women is 38.8 per 100,000; in USA is 41.9 per 100,000. It is the second most common cancer in women in PR and the US. **Methods:** This study evaluates the screening practices by gynecologists in PR to diagnose CRC. A self-administered anonymous questionnaire was mailed to 440 practicing gynecologists through the College of Physicians and Surgeons of PR. The questionnaire included general and specific questions like: Use of screening tests to diagnose CRC in women. A total of 102 respon-

ded. **Results:** Routine screening for CRC: 77.5% do screening, while 22.5% do not. The majority (28.4%) of participants use FOB as a first screening test; 27.5% use colonoscopy. Of the gynecologists, 49% start screening for CRC at age 50, 7% stop screening at 75 years and 31% never stop. CRC Screening interval was: 35% annually, 6% at 2-3 years, 10% every 5 years, 6% every 10 years and 6% at 5-10 years. **Conclusion:** Data for CRC Screening reveals 7% gynecologists comply with the USPSTF guidelines as compared to 61% primary physicians who follow the guidelines at US. The recommendations are not followed by most of the gynecologists in PR; in US they are followed by 61% of primary physicians. Hispanic women have a higher incidence of CRC than white, black and American women. Further research should be directed towards the reasons for not complying and strategies to educate the PR gynecologists to improve compliance with CRC screening guidelines.

**HD 029 Characterization of Histone Modification Patterns in Endometriosis**

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The importance of epigenetic changes in the etiology and pathogenesis of endometriosis has been increasingly recognized. However, the role of epigenetic alterations such as histone modifications and how they influence this pathology are still not clear. We identified and assessed correlations among selected Histone modifications as a first step to identify epigenetic profiles that could be used to better understand the underlying mechanisms of this enigmatic disease. **Purpose:** To identify key histone modifications (e.g., acetylation and methylation) and study how selected changes may interplay with each other in endometriosis. **Methods:** Tissues from cases and controls were mechanically dispersed. Total histone and concentration were measured by spectrophotometry. Global histone acetylation, methylation and phosphorylation were determined using specific quantification kits (Epigentek). Tissues studied included lesions (17 cases of endometriosis), endometrium (8 from women with endometriosis and 12 from controls). **Results:** We observed that in endometriotic lesions global H3 acetylation had a positive correlation with H3K27 methylation: ( $\rho=0.580$ , ( $\rho^2$ )100=34%,  $p=0.015$ ). H4K8 acetylation levels were negatively correlated with H3K9acetylation ( $\rho - 0.524$ , ( $\rho^2$ )100=28%,  $p=0.031$ ). Also, in endometrium from patients with endometriosis, global H3 acetylation was positively correlated with H4K16 acetylation ( $\rho=0.850$ , ( $\rho^2$ )100=72%,  $p=0.007$ ); global H4 acetylation had a positive correlation with H3K27 methylation ( $\rho=0.881$ ,

(rho<sup>2</sup>)100=78%, p=0.004). In addition, in endometrium from controls global H3 acetylation had a negative correlation with H4K8 acetylation (rho=0.580, (rho<sup>2</sup>)100=34%, p=0.048), a positive correlation with H3K27 methylation (rho=0.839, (rho<sup>2</sup>)100=83%, p=0.001). Conclusion: This is the first time that the interplay of epigenetic changes in endometriosis is being reported. The only correlation that was characteristic of lesions was the negative correlation between H4K8ac and H3K9ac. Because unique histone acetylation combinations involving combination of hyper- and hypo-acetylated lysines may be used as surfaces for specific protein-histone interactions, these results suggest a mechanism for coordinated regulation of gene expression in endometriosis. These findings show that endometriosis lesions have unique histone modification patterns and provide support for the epigenetic basis of this disease. NIH-NICHD Grant # R01-050559, NIGMS S06-GM 08239 and ARRA supplement to R01-050559.

**HD 030 Development of a Novel Pharmacogenetic-Driven Effective Warfarin dosing Algorithm in Puerto Ricans using an Admixture Index**

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Purpose: Warfarin is the standard-of-care for oral anticoagulation in thromboembolic disorders. Individual's unique genetic make-up (CYP2C9 and VKORC1 genotypes), in addition to known non-genetic covariates, account for approximately 50-60% of warfarin dose variability in different populations, but this information is currently lacking for admixed Puerto Ricans. This study was aimed at developing a customized pharmacogenetic (PGt)-driven warfarin dosing algorithm in Puerto Ricans using a derivation cohort of patients from the Veterans Affairs Caribbean Healthcare System (VACHS), San Juan, PR. Methods: This is a single-center, retrospective PGt study in 163 Puerto Rican patients on stable warfarin therapy who consented to participate. A multivariate linear regression analysis was performed using maintenance warfarin dose (mg/daily) as the dependent variable and following a stepwise procedure (p<0.15). Results: 69.9% of patients were carriers of at least one functional polymorphism in either CYP2C9 or VKORC1. Double, triple and quadruple carriers accounted for 23%, 4% and 1%, respectively. We developed a novel DNA-guided warfarin dosing algorithm for the VACHS Puerto Rican population that included age, CYP2C9 and VKORC1 genotypes, dose-adjusted INR at day 3, amiodarone and an admixture index as independent predictors. The model explained more than two-thirds of the observed variance in the therapeutic warfarin dose (R-square = 67.8%, p=0.033; SEE=0.23 mg/day). Our PGt algorithm

produced significantly better "ideal dose" estimates than both fixed-dose and clinical algorithms, with the greatest benefit seen in patients ultimately requiring ≤3 mg/day and within the intermediate range (3–7 mg/day). We also assessed the clinical validity of the model using a validation cohort of 37 Puerto Rican patients from Hartford, CT (R-square=58%). Conclusions: This PGt algorithm provides a robust basis for conducting a prospective trial of the clinical validity of incorporating DNA information for patients who require warfarin in the Puerto Rican population. Grant #HL11039301, NHLBI/NIH; Grant #G12RR-03051, RCMI-NCRR/NIH.

**HD 032 The Development of the Adolescent Quality of Life-Mental Health Scale (AQOL-MHS)**

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Purpose: A step towards understanding existing disparities in Latinos requires measuring mental health outcomes appropriately in these populations, since most available measures have been developed for English-speakers. In order to address this gap, we present initial qualitative data necessary for the development of a quality of life (QOL) instrument designed for Spanish speaking adolescents with mental health problems. Methods: Forty In-depth interviews and three focus groups (n=20) were conducted and analyzed using qualitative methods. A two-step process was performed 1) in-depth interviews were carried out and analyzed to qualify and quantify themes; 2) focus groups were conducted to refine results and their importance. Adolescents were recruited from outpatient mental health clinics in the San Juan Metropolitan Area. Results: Qualitative analysis revealed 36 distinct QOL themes for Attention Deficit Hyperactivity Disorder (ADHD), an additional 32 themes for Conduct Disorder/Oppositional Defiant Disorder (CD/ODD) and further 19 new themes for Generalized Anxiety Disorder/Major Depressive Disorder (GAD/MDD). We observed that in general the prevalent themes in each group were highly related to the symptoms of the diagnostic category to which the youth belonged. ADHD adolescents discussed being able to perform well at school and with others, CD/ODD adolescents discussed their ability (or lack off) to manage social relationships and MDD/GAD discussed how being able to control their emotions influenced their environment. Items using adolescents own words and targeting prevailing themes were created, and will be tested as part of the next step of instrument creation. Conclusions: This scale hopes to pinpoint specific areas of health related QOL for each psychiatric diagnostic group. This will assist both patients and providers: set, define and evaluate adequate treatment goals in clinical settings, and will aid in the evidence based assessment of clinical interventions for Spanish speaking adolescents, currently a vital assessment need.

**HD 033 Histone Acetylation Status at the Promoters Regions of Candidate Genes Differentially Expressed in Endometriosis**

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**Purpose:** Endometriosis, characterized by the presence of endometrial like-tissue outside the uterine cavity, is a benign gynecological disease affecting millions of women in their reproductive years. The etiology of endometriosis is unknown but genetic, inflammatory and environmental factors are thought to play important roles in this disease, and recently evidence has emerged that endometriosis may be an epigenetic disease. We and others have shown that histone modifications by deacetylases may be an important mechanism regulating gene expression in endometriosis. We have shown that histone deacetylases (HDACs), which are regulated by ovarian steroid hormones, are overexpressed in endometriotic tissues. Others have shown that HDAC inhibition decreases the migration and proliferation of endometriotic cells. The objective of this study was to determine the H3 and H4 global acetylation status of promoter sequences of candidate genes (SF-1, p21, E-cadherin, HOXA10 and ESR1) in eutopic and endometriotic tissues. Our hypothesis was that expression of HDACs is upregulated in endometriotic lesions leading to hypoacetylation and low transcriptional activity of candidate genes. **Methods:** Chromatin immunoprecipitation was done in flash-frozen tissues (n=11 endometriotic lesions; n =10 endometrium from controls) using H3ac and H4ac antibodies to pull down DNA-protein complexes. Standard PCR was performed using primers specific for each candidate gene promoter regions. **Results:** We observed that E-cadherin and p21 promoters regions had a hypoacetylated phenotype at H3 and H4 in endometriotic lesions compared to eutopic endometrium. More on what these results mean, according to the function of each gene. **Conclusion:** These data contribute to a better understanding of the role that histone modifications may play in the development of endometriosis. NIH-NICDH 1F31HD065431-01A1, NIH-NIGMS1R25GM082406, NIH-NICDH R01-HD050559.

**HD 034 Translational Research Activities to Develop Nanoscale Sensor Elements for Real Time Heart Attack Detection**

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**Purpose:** Heart failure is among the leading causes of death for both men and women in USA. Sensing cardiac biomarkers - molecules released into the blood stream following myocardial tissue damage - have great potential to become an aid in clinical decisions related to myocardial tissue damage and heart failure

detection. These include creatine kinase (CK), creatine kinase muscle and brain (CK-MB), myoglobin, cardiac troponins. The detection and quantification of these biomarkers have been the subject of several studies. **Methods:** In this presentation we discuss the use of functionalized carbon nanotubes and fluorescent nanoparticles for the detection of myoglobin and cardiac biomarkers in solution and blood samples, respectively. **Results:** We found that amino terminated single- and multi wall carbon nanotube remove myoglobin from aqueous solution. The position of the fluorescent band of 2 nm nanoparticles shifts toward longer wavelengths upon mixing with the blood of cardiac patients; an effect not observed when the nanoparticles are interacting with the blood of normal patients. **Conclusion:** Further translational research activities-including a larger population- with these nanoscale sensor elements are ongoing for the development of a fast response sensor for heart failure detection. National Institutes of Health, NIH-R25GM088023.

**HD 035 Proteomics Profiling and Cytotoxic Effect of Curcuma Longa on Prostate Cancer**

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**Purpose:** Curcuma longa (C.longa), a common Indian dietary pigment and spice has been used therapeutically for a wide range of ailments and in traditional medicine. It has been shown to possess anti-inflammatory, antioxidant and antitumor properties. **Methods:** Accordingly, in the current investigation, we have examined the antitumor effect of several extracts of C.longa using highly metastatic PC-3M prostate cancer cell line. The proteins modulated by purified turmeric fraction in PC-3M human prostate cancer cell line were identified using high-resolution two-dimensional gel electrophoresis (2-DE). **Results:** Proteomics analysis showed a total of 29 proteins altered by treatment with ethyl acetate fraction (EAF) of C. longa. Among the differentially expressed proteins proteins identified by Peptide Mass Fingerprinting are Elongation Factor 2 (eEF2), Stress-induced phosphoprotein 1, Glutathione S-transferase (GST), Succinyl-CoA: ketoacid, Lamin-A/C, Annexin A2, 78 kDa Glucose-regulated protein precursor (GRP78), Protein disulfide isomerase (PDI) precursor, Actin cytoplasmic 2, Calreticulin, Nucleophosmin, Vimentin, and Aortic alpha-actin (ACTA2). **Conclusion:** The identified proteins have diverse cellular functions such as ER stress, Unfolded Protein Response (UPR), cytoskeletal, structural, regulatory, and apoptotic proteins that will require further in-depth studies to understand the biological significance. This study was supported by grants from National Institutes of Health (NIH): 7 R01 DA 012366, 7 R01 DA021537, 5 R01 AA017405, 1 R37 DA025576 and the Uni-

Universidad Central Del Caribe NIH-RCMI Biomedical Proteomics Facility Grant 2G12RR03035.

**HD 036 Role of H2AX in Mammalian Embryogenesis**  
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Hypothesis: H2AX is phosphorylated during S phase of the mammalian one-cell embryo in the absence of DNA degradation. Purpose: The molecular mechanism of H2AX phosphorylation in DNA damage response has been explored intensely in somatic cells. The appearance of phosphorylated H2AX, or  $\gamma$ -H2AX, in somatic cells occurs mainly when they are exposed to replicative stress. However, it is interesting to note the appearance of  $\gamma$ -H2AX foci in normal mouse embryos immediately after fertilization and 4-cell stage (Ziegler-Birling et al., 2009). This phenomenon perhaps suggests that  $\gamma$ -H2AX signal is not associated with DNA damage response in mammalian zygotes and may have a different role in development. Our study proposes a model showing the association of  $\gamma$ -H2AX and male pronuclei during DNA replication in the first zygotic mammalian cell cycle. Methods: Androgenotes, parthenotes, mock injected parthenotes, clones, ICSI generated embryos and IVF generated embryos were collected at G1 and S phase of the zygotic cell cycle. They were incubated with EdU containing media for 30 min, and then fixed. Immunocytochemistry with antibodies to  $\gamma$ -H2AX, DAPI and EdU was then performed. Results: We found that the pronuclei in androgenotes, ICSI derived embryos, IVF derived embryos contains  $\gamma$ -H2AX in S-phase but not in G1. Parthenotes and mock-injected parthenotes had no or very little signal for  $\gamma$ -H2AX in either phase. The data from clones follows a pattern similar to that of Androgenotes. Conclusion: 1) The data suggest that the phosphorylation of H2AX in early mouse pre-implantation embryo is dependent on the presence of male pronucleus. In absence of the male pronucleus,  $\gamma$ -H2AX signal does not appear even during S phase of the cell cycle. 2) The occurrence of  $\gamma$ -H2AX in the clones containing somatic genome is possibly a result of the genomic programming of the zygote. Alternatively, it may suggest that the DNA from somatic cells is damaged during nuclear transfer. Clinical significance- The data suggests that the embryo is activating DNA damage response pathway as a normal course of DNA synthesis perhaps to ensure that the genomic integrity. Thus, while the human embryonic culture conditions in infertility clinics are still evolving, care should be taken to not augment this pathway. R25RR019321, NIH grant HD060722.

**HD 037 Functional Interaction of Rab3a and Synapsin II during Epileptic Activity**

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Purpose: Several forms of epilepsy arise from disruption in excitation and inhibition balance within neural micro circuitry. In particular, such a mechanism has been hypothesized for epileptic activity produced by deficiency of presynaptic protein synapsin. Recently, our lab made the novel observation that seizures typical for synapsin II knockout (SynII(-)) mice is reduced by the deletion of the presynaptic protein Rab3a. To understand how Rab3a deficiency may balance overexcitability in SynII(-) synapses, we investigated excitatory and inhibitory activity at SynII(-), Rab3a(-), and Rab3a(-)/Syn II(-) DKO hippocampal synapses. Methods: Whole-cell recordings from CA1 neurons have been performed during the Shaffer collateral stimulation. To mimic the epileptic phenotype in vitro, we applied the epileptogenic agent 4-aminopyridine (4-AP). Excitatory and inhibitory transmission was monitored while blocking glutamatergic or GABAergic transmission. Results: We found that frequency of interictal and spontaneous neuronal activity is increased in SynII(-) upon 4-AP application, and this phenotype was rescued by the deletion of Rab3a. The difference between the wild type (WT) and SynII(-) phenotypes were abolished when inhibitory transmission was blocked. In addition, we found that the effect of 4-AP on evoked transmission is reduced in Syn II (-) GABAergic synapses and enhanced at glutamatergic synapses. In contrast, Rab3a deletion reduced the effect of 4-AP on glutamatergic but not on GABAergic transmission. Conclusion: Our results reveal that SynII deletion shifts the excitation/inhibition balance by affecting both glutamatergic and GABAergic transmission, and that Rab3a deletion balances this SynII action via glutamatergic synapses. NIH R01 MH061059 and U54 NS039408.

**HD 039 CpG Methylator Phenotype (Cimp) Methylation Pattern In Puerto Ricans Hispanics Colorectal Cancer Patients Population**

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Purpose: The CpG island methylator phenotype (CIMP), characterized by extensive promoter methylation, seems to be a distinct epigenotype of colorectal cancer (CRC). CIMP hypermethylation blocks transcriptional activation of several genes associated with tumor suppression, cell cycle, DNA repair, differentiation and apoptosis. Moreover, CIMP hypermethylation is an important epigenetic change associated with gene silencing, poor prognosis and lower response to chemothera-

py in CRC patients. However, prevalence of CIMP status and specific clinicopathological features has not been examined in Puerto Rican Hispanic CRC patients. In this study, we determined the CIMP status in PR Hispanics with CRC and examined its association with phenotypical characteristics. Methods: Methylation-specific PCR (MSP) was used to evaluate DNA methylation in eight CIMP-specific promoters (CACNA1G, IGF2, NEUROG1, RUNX3, SOCS1, hMLH 1, CRABP1 and p16) gene in eighty-nine CRC cases. No-CIMP status was defined as the absence of methylation, CIMP-Low status as one to four methylated loci, and CIMP-High status as five or more methylated loci. Clinicopathological characteristics were correlated with CIMP status using Wilcoxon rank tests, Chi square and Fisher exact t-tests, as appropriate using STATA 10.0. Results: Eighty-nine CRC cases (mean age at diagnosis 60.5 ± 10.3 years; 49 males) were evaluated. Tumors were mostly located in the distal colon (71.0%). The 5.6 percent (6/89) of CRC cases were CIMP-High, 88% (87.6/89) were CIMP-Low, and 6.7% (6/89) were No-CIMP. CRABP1 (69.7%), IGF2 (48.3%) and p16 (43.8%) were the three most commonly methylated genes. CIMP-High/Low tumors were more common among women and among individuals ≥ 60 y/o (borderline statistical significance). There were no significant statistical associations between CIMP status and tumor staging, differentiation, tumor location or survival. Conclusion: We report the CIMP status in Puerto Rican Hispanics with CRC. CIMP-hypermethylation may be less frequent among Hispanics than previously reported in other racial and/or ethnic groups, with a discrete clinicopathological phenotype and gene methylation pattern. A comprehensive understanding of the differences in epigenetic silencing of promoter regions by hypermethylation will shed light on the mechanisms resulting in colorectal tumorigenesis in Hispanic patients. Current efforts are underway to characterize a large number of Puerto Rican Hispanics CRC patients which may help tailor screening and therapeutic strategies for this population.

**HD 040 Familial Colorectal Cancer Registry in Hispanics: a Feasibility Study**

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Purpose: In Puerto Rico (PR), colorectal cancer (CRC) represents the second most common cause of cancer in men and women. (1) To prospectively identify and recruit 30 probands with a family history of CRC and 15 without family-history (2) To prospectively identify and recruit relatives from the 45 probands. Methods: Eligible cases are patients with incident diagnosis of CRC, aged ≥ 21 years. We identified the probands using the PR Central Cancer Registry (PRCCR) from July 1, 2007 to the present. Results: Seven hundred and fifty-one com-

munications were sent to the physicians, 374 (49.8%) communications responded. Three hundred and forty-one communications were sent to the patients, 147 (43.1%) responded and 16 refused. 159 participants (probands and relatives) were enrolled. 102 probands (mean age 56.9 ± 13.3 yrs., 54.9% male); 30 with and 72 without family history of CRC. Thus far, we have collected 153 (96.2%) risk factors questionnaires, 135 (84.9%) blood samples and 60 (52.6%) blocks of tissue. CONCLUSION: Successful implementation of logistics for identification of incident CRC through the PRCRR. We established the first Familial CRC island-wide registry in PR through the implementation of a network of community physicians, laboratories and professional societies. We are developing a tissue and blood bank with epidemiological, nutritional, and demographic data that will assist us to understand the genetic epidemiology of CRC in Puerto Ricans. U54RR026139 and U54 Grant- U54CA096297.

**HD 042 SCL 90-R Symptoms Checklist and Mini International Neuropsychiatric Interview (M.I.N.I.): a Study of Concurrent Validity in the Puerto Rican Population**

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Purpose: This study aims to determine the concurrent validity between the Symptom Checklist-90-R (SCL-90-R) and the Mini International Neuropsychiatric Interview (M.I.N.I.) for the Puerto Rican Population. This research will serve as a frame of reference for normalization and validity of the SCL-90-R for this population. Method: This is a cross-sectional descriptive design to determine the validity of the diagnosis of a mental health condition using two different questionnaires. A sample of 120 subjects has been recruited by availability throughout the community in different municipalities of Puerto Rico. Results: Subjects are males and females ranging between 21 and 70 years old. Participants fill a sociodemographic questionnaire, the SCL-90-R and the M.I.N.I. (by interview). This research is in the process of recruiting and analyzing data. We are able to present preliminary results, providing profiles based on standardized and raw measures for each different diagnosis. By 2012, we will have data for 350 participants.

**HD 043 Descriptive Analysis of Racial/Ethnic Disparities in Subject Enrollment for Cancer Clinical Trials**

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**Purpose:** Racial/ethnic minority group patients are underrepresented in cancer clinical trials (CTs). This situation leads to selection bias, disparities in cancer outcomes, and suboptimal applicability of CT findings to these groups. The objective of this study is to evaluate if recent CTs for the four leading cancer types in incidence in the US have a minority group subject composition similar to the incident cases of that group for the studied cancer. The hypothesis is that is that the higher the subject sample number of a CT, the more likely its subject composition will represent all racial/ethnic groups. **Methods:** Therapeutic interventional CT-articles published in 2003-2011 were systematically retrieved from PubMed and their inclusion was verified by review of the abstract or full article. **Results:** Twelve small (with up to 3000 subjects) CTs and 12 large (with more than 3000 subjects) CTs were included. All small CTs and one-third of the large CTs missed at least a minority group, most commonly Asian/Pacific Islanders and American Indian/Alaska Natives. One-third of the small CTs and all the large CTs included at least Whites, Blacks, and Hispanics. One out of 12 small CTs and all large CTs had a racial/ethnic minority group subject composition similar to the incident cases of that group for the studied cancer. **Conclusion:** The results of large and multicenter cancer CTs are more representative and applicable to all races/ethnicities. Racial/ethnic disparities in subject enrollment for cancer CTs are present and need to be addressed to tackle cancer health disparities. National Institutes of Health, National Cancer Institute Research Supplement to Promote Diversity in Health-related Research (PI Brian C. Lewis, PhD).

### Other Topics Related to Health Disparities (OT)

#### **OT 044 The ER as the New Medical Home: a Patient's View of a Primary Care Center**

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**Purpose:** There has been a growing trend of patients using the Emergency Department (ED) as their primary health care choice. Reasons for this may include: convenience, access to primary provider, lack of insurance, ignorance, and cultural reasons. The overuse of the ED is affecting the readability of services, available funds to pay for care, and the continuity of care. The American Academy of Pediatrics (AAP) believes that the medical care of infants, children, and adolescents ideally should be given in a medical home, which is accessible, continuous, and family centered, and coordinated. There is plenty of evidence on medical literature that the medical home can reduce unnecessary ED visits and excessive healthcare costs. Identify the reasons why parents bring their children to the Emergency Department at Hospital Episcopal San Lucas. Determine which of these visits to the ED are justified based on measurable data and the patients' clinical

picture. Determine the profile of the parents who use the ED as a primary care source. **Methods:** Convenience sample of parents visiting HESL-ED during April 2010, which included an interview assessing chief complaint, age and gender, primary medical physician (PMP), health insurance, past medical history, visit to PMP and/or ED in past 3 months, qualities of ED, parent perception of service. Record review consisted of vital signs, diagnosis/clinical criteria, and final disposition. **Results:** 82% of the patient population visited their pediatrician and also visited the ED as an alternate means of primary care. 93% of patients that visited the ED considered their visit an emergency; 25% had a real emergency as by measurable data. Of all the visits 68% were patients without a real emergency using the ED as a primary means of care. Approximately 75% of the parents seek a place of care that offers promptness, effective treatment and availability of lab work. **Conclusion:** These same parents are willing to visit another place of primary care if their qualities are met. Further studies are required to identify the qualities of the medical home in order to accomplish a better utilization of the ED.

#### **OT 045 Pediatrician's use of Anticipatory Guidance during Well-Child Visits at Southern Puerto Rico**

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**Purpose:** Well-child visits provide medical care and parent education through age-appropriate counseling, known as anticipatory guidance (AG), on established topics (biomedical health, social development, injury prevention), the latter significantly important as non-intentional injuries are the leading cause of death in children. **Objective:** Our study assesses the actual quantity and content of well-child visits pediatricians in southern Puerto Rico provide to infants and toddlers, and identifies barriers for delivering AG. **Methods:** A validated 14 question survey was administered to pediatricians: 7 inquired about personal and practice characteristics, and others asked about content of AG in their practice. Participants were presented with a list of AG topics in 3 groups (0-9, 10-18, 19-36 months). This study evaluates the number of topics pediatricians report discussing with parents in each group, using an established national benchmark of 75% of the time during visits. **Results:** Immunizations was the topic most discussed overall. Topics related to injury prevention were discussed over 75% from 0-9 months only. Among all groups, biomedical health and social development were the topics most and least discussed, respectively. 70% spend an adequate amount of time with patients, however over 90% agree time constraints are barriers to AG. 75% agree inadequate reimbursement and inability to bill are additional barriers. **Conclusion:** Our study shows pediatricians identify themselves as practicing adequate AG, focusing more on immunizations and feeding issues, but not on injury prevention. Financial difficulties are the leading barriers in delivering AG.



**OT 046 Maternal Knowledge of Gestational Age and Participation in Timing of Delivery in a Latino Population**

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**Purpose:** In 2008, 19.6% of neonates were born prematurely in Puerto Rico. Most of these (78%) were born during the late preterm period (34 to 36 weeks of gestation) and belong to the group that has experienced the largest increase overtime. Late preterm neonates have higher rates of neonatal and post-neonatal morbidity, but the reasons for the increasing rate of late preterm births are not known. The literature suggests that maternal understanding of gestational age and participation in the decision of delivery may play a role. No study has been conducted in a Latino population. The aims of our study are to assess maternal knowledge of the significance of gestational age and their participation in the decision of delivery. **Method:** Descriptive study based on a 3 item questionnaire administered to mothers (> 17 years) delivering at Hospital Episcopal San Lucas-Ponce in 2010. Maternal records were reviewed by pediatric residents for demographic variables. SPSS Program was used for statistical analysis. **Results:** Most mothers (88%) answered that a term delivery occurs between 37-40 weeks of gestation. Also 60% percent of mothers between 26-30 years old correctly selected the term period (37-40 weeks) as the gestational age without complications of prematurity. Forty percent of young mothers (18- 25 years) and 50% of older mothers (>31 years) incorrectly selected the late preterm period (34-36 weeks). Lack of knowledge of gestational age significance was seen in mothers with less formal education. Fifty seven percent (57%) of young mothers (18-25 yrs) claim that the Obstetrician made the decision of delivery, while 67% of older mothers (31-35 yrs) claim they made the decision. **CONCLUSION:** Many mothers in our study ignore the relationship between gestational age and prematurity complications, specifically regarding the late preterm period. Maternal age and education are important factors to consider when educating and counseling mothers regarding gestation and risks of prematurity. If older mothers participate more frequently in the decision of delivery it is critical that they are well informed.

**OT 047 Readmission of Healthy Newborns: Experience of a Tertiary Hospital in Puerto Rico**

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**Purpose:** Readmission of a healthy newborn during the neonatal period is a source of concern to pediatricians and parents

because it exposes the newborn to nosocomial infections, complications from procedures and even death. The medical literature associates neonatal readmission to several risk factors, some of which are preventable (feeding difficulties, jaundice and early discharge). Research on neonatal readmission has not been conducted in Puerto Rico, in spite of a higher neonatal mortality rate as compared to the mainland. The objectives of our research are to describe the demographic and clinical characteristics of healthy neonates readmitted during the neonatal period, and to identify preventable factors associated to readmission. **Methods:** A case study of 106 healthy newborns born and readmitted at Hospital Episcopal San Lucas-Ponce from 2008 to 2010. Demographic and clinical data was gathered from the maternal and neonatal records. **Results:** Most healthy newborns readmitted during their neonatal period were males (52%), of term gestation (87.8%) and born vaginally (67%). Most (74%) were born to mothers between the ages of 21-34 yrs who received adequate prenatal care and 89% were bottle-fed at birth. Readmissions for jaundice and dehydration were more frequent in the younger (<7 days), while infectious diseases were more frequent in the older neonates (8-30 days). **Conclusion:** Healthy newborns readmitted to our hospital have similar characteristics to those reported in the medical literature, which describes female gender and cesarean delivery as protective factors. Readmissions with preventable causes (jaundice and dehydration) occur in the first week of life. This information is important in developing preventive strategies to decrease neonatal readmission. Further studies using a case-control or cohort design are required to define factors that put healthy newborns at risk for readmission.

**OT 048 Forming a New Generation of Clinical and Translational Researchers**

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**Purpose:** One way to reduce health disparities is through increasing minority health research. To make a significant difference in health outcomes, scientific advances must be disseminated and transferred at a faster pace than current health policy and practice. To achieve this goal, a new generation of clinical and translational researchers is needed. **Methods:** Consonant with this vision, the UPR-MSc Schools of Health Professions and Medicine started a post-doctoral Master of Science in Clinical Research (MSc) in 2002 focused on health disparities and multidisciplinary minority training. Recognizing the need to institutionalize the program's infrastructure and to expand its reach outside the UPR-MSc frontiers, the MSc leaders, faculty and Scholars are actively engaged in establishing new collaborations and partnerships that will increase our capacity to diversify our education efforts. **Results:** 55 Scholars encompassing different disciplines have been admitted to the master program. Several

grant initiatives are integrated, working collaboratively to help in the offering of a revised MSc program in full compliance with the new 101 NIH competencies for clinical and translational research, the creation of new courses and tutorials, web-enhanced and online courses, a mentoring development program, a grantsmanship series, videoconferences and visiting professors among other activities. Conclusion: Sharing resources and best models among institutions will accelerate the changes that are needed to address the complexities of a multidisciplinary curriculum with competencies addressing translational research and health disparities, distance and adult –learning advanced approaches. It is our interest to create venues for collaboration and partnerships in research education and training. Program supported by NIH grants S21MD001830, R25 RR17589 and U54RR026139.

The following abstracts were presented at the 3<sup>rd</sup> Multidisciplinary Conference in Clinical Research and 3<sup>rd</sup> Summit of Translational Research in Health Disparities but also at the 32<sup>nd</sup> Annual Research and Education Forum of the University of Puerto Rico Medical Sciences Campus (March 28-30, 2012). They were previously published in the Puerto Rico Health Sciences Journal.

**CE 005    The Relationship between Stroop-Type Conflict Tasks and Fear Conditioning in Anxiety Disorders**  
*Dor Marie Arroyo-Carrero, MD; Polaris González, BS; Gregory Quirk, PhD; Karen G, Martínez, MD, MSc*  
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Ponce School of Medicine, Ponce, Puerto Rico  
(P R Health Sci J 2012;31:S62)

**HD 031    The Relationship between the Big Five Personality Traits and Emotional Dysregulation in Anxious and Healthy Subjects**  
*Laura López-Roca, BS; Carlos Morales, MS; Karen Martínez, MD*  
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(P R Health Sci J 2012;31:S10)

**HD 038    Childhood Trauma is Correlated with Impaired Conflict Resolution in Stroop-Type Tasks in Adults**  
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(P R Health Sci J 2012;31:S64)

**HD 041    PHQ-9 Adaptation and Psychometric Properties for Depression Assessment in Puerto Rican Cardiac Patients**  
*Vivian E. Febo-San Miguel, PhD; Juan C. Zevallos, MD; Guillermo Bernal, PhD; Luis R. Perich-Guerra, PhD; Sue Eisen, PhD*  
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(P R Health Sci J 2012;31:S13)