SCTR Research Retreat:
Collaborating with the Sea Islands/Gullah Communities

- GOAL of RETREAT:
- Provide an opportunity for researchers and community representatives of the Sea Islands/Gullah Community to identify common interests in community health issues and in collaborative research projects to address those issues.

Overview

Sea Islands Family Project

- The Sea Islands Family Project (SIFP) is an umbrella to support and embrace genetic research conducted by Principal Investigators among residents on the Sea Islands of South Carolina.

Project SuGAR

- Project SuGAR (Sea Island Genetic African American Family Registry)
- Community based research study focusing on families with affected by SUGAR diabetes (Type 2 Diabetes)
- 1995-2004
- Purpose – identify genes that cause the expression of diabetes, obesity, and related diseases and complications in African Americans

Dr. Blake-Socio/Cultural Research


Sea Islands Family Project

- Systemic Lupus Erythematosus
- SC COBRE
- Oral Health
- Project SuGAR

Overview of Past & Current Research

Sea Islands/Gullah Communities

Jeannette O. Andrews PhD, RN
SCTR Community Engagement Core
Center for Community Health Partnerships
Project SuGAR

- Genetic Data obtained on **652 Families**
- Linkages on Chromosomes 14q and C7 for Type 2 Diabetes
- Identified polymorphisms in the uncoupling protein 3 gene as a "thrifty gene" and susceptibility gene for severe obesity

**Admixture Estimates in African American Populations: Autosomal Markers**

<table>
<thead>
<tr>
<th>Population</th>
<th>Admixture Estimate (±SE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gullah Sea Islanders</td>
<td>3.5 ± 0.8</td>
</tr>
<tr>
<td>Charleston</td>
<td>9.8 ± 1.2</td>
</tr>
<tr>
<td>Mississippi delta</td>
<td>13.3 ± 1.9</td>
</tr>
<tr>
<td>Chicago</td>
<td>18.8 ± 1.4</td>
</tr>
<tr>
<td>New York</td>
<td>19.8 ± 2.1</td>
</tr>
<tr>
<td>Pittsburgh</td>
<td>25.2 ± 2.7</td>
</tr>
<tr>
<td>Baltimore</td>
<td>15.5 ± 2.6</td>
</tr>
<tr>
<td>New Orleans</td>
<td>22.5 ± 1.6</td>
</tr>
<tr>
<td>Jamaica</td>
<td>6.8 ± 1.3</td>
</tr>
</tbody>
</table>

Parra et al., Am J Physical Anthropol, 114:18, 2001
Parra et al., Am Hum Genet, 61:1839, 1998

**Health of Gullah Families in South Carolina With Type 2 Diabetes**

- Dr. Ida Spruill
- Sample/Methods = Interviews with 1276 persons with Type II Diabetes using the Family Health History Questionnaire
- DM self management were not consistent with recommendations from the American Diabetes Association
- 55% report exercising
- 27% report self-glucose monitoring
- 41% report referral to a diabetic class/diet
- 32% report annual visits to ophthalmologist
- 22% report visiting dentist
- 12% report visiting podiatrist

**Quality of Diabetes Care to Gullah Families of South Carolina**

- Dr. Ida Spruill
- Secondary Data Analyses from participants in Project SuGAR
- **N=1057**
- When compared to the national sample in the CDC report card
  - HbA1c greater than 9.5% mg/dl higher among Gullahs (30.2% vs. 18%)
  - Blood Pressure greater than 140/90 was lower (29% vs. 34%)
  - 45.9% of the Gullahs self reported neurovascular complications such as foot pain, claudication, and renal complications of kidney infection and dialyses
**Project SLEIGH/ MUSCLE**

- Systemic Lupus Erythematosus in Gullah Health (SLEIGH)
- Medical University of South Carolina Lupus Erythematosus (MUSCLE)
- Exploring genetic and environmental factors contributing to disparities in SLE in African Americans
  - 240 patients with SLE
  - 170 unrelated controls
  - 230 related controls

**Determining the Role of Persistent Organic Pollutants as Environmental Triggers of Autoimmunity in Genetically At-Risk Individuals**

Dr. Brandi Eastman Stevens

Assessment of Exposure to Persistent Organic Pollutants and Heavy Metals in first-degree Relatives of SLE patients

Dr. Kristen French

**South Carolina COBRE for Oral Health**

- Center of Biomedical Research Excellence (COBRE) for Oral Health
  - Renata Leite, C Hudson, Lynne West, Beth Carpenter, Jeannette Andrews
- Periodontal Disease Progression and Glycemic Control among Gullah African Americans with Type 2 Diabetes
  - Dipankar Bandyopadhyay, Nicole Marlow, Iyokika Fernandes, Renata Leite

**Cancer**

- Cancer in the Sea Island Populations of South Carolina
  - Marvella Ford, Debbie Bryant, Ida Spruill, Anthony Alberg
- Hollings Cancer Center has made it a strategic priority to initiate cancer-focused studies in the Sea Island population
- Multiple small scale pilot studies are being conducted
- *Need information on cancer rates to document incidence and prevalence of cancer rates and evaluation of cancer mortality outcomes*
Breast Cancer
Rita Kramer

1) Tailoring therapies for breast cancer (targeting estrogen and progesterone receptors)
2) Collaborating with HCC and Dr. Carola Neumann to explore role of obesity and metabolic syndrome in breast cancer mortality in Sea Island population

Telemedicine in the Evaluation of Alzheimer’s Disease in a Rural, African American Population
Dr. Jacobo Mintzer

Use of telemedicine (videoconferencing) for the evaluation and diagnosis of African Americans suffering from Alzheimer’s Disease and other cognitive disorders

MUSC Alzheimer’s Research and Clinical Programs
- Offers a wide range of clinical drug trials for older adults with Alzheimer’s disease, other types of dementia, behavioral disturbances, depression, and other psychiatric disorders

If You Build It, Will They Really Come?
A. Martin, J. Bellinger, M. Matney, K. Schuller
Univ. of South Carolina

- Dental visits are most ambulatory care sensitive condition for ER visits in rural counties
- Misconceptions about roles of FQHC, rural health clinics, and free clinics contribute to poor care accessibility
- Examples of innovative solutions that use existing health infrastructure to bridge access for uninsured

MUSC Sea Islands Collaborative
Jeannette Andrews, Ida Spruill

- Potential New GRANT APPLICATION
- Need to identify community priorities for research
- Need to coordinate infrastructure
  - Provide resources to Sea Islands Comm Advisory Committee
  - Project Coordinator
  - Inventory of Projects
  - Calendar of Activities
  - Communication Exchange – website, newsletter, social media forums
  - Link/merge databases
  - Identification system
  - Training
  - Pilot Funds

Intro to Remainder of Retreat

- After short BREAK……..
- SCTR Pilot Projects – Randall Davis
- Open Discussion
  - Community Priorities/Feedback
  - Needs Assessment from Participant Registration
  - Infrastructure Needs
  - NEXT STEPS
- Networking Lunch