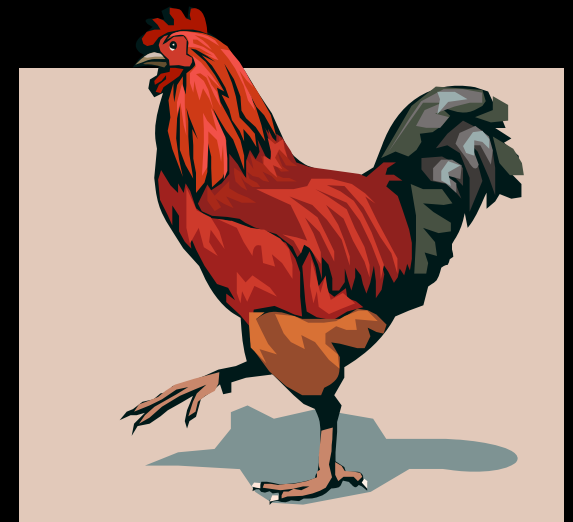


**Franklin G. Berger**

**Cancer Research Center of USC**

**Center for Colon Cancer Research**

**Department of Biological Sciences**



# WHY COLORECTAL CANCER?

- \*\*\*\* 4<sup>th</sup> highest in cancer incidence and 2<sup>nd</sup> highest in mortality.
- \*\*\*\* Diagnosed in ~152,000 Americans each year; kills ~53,000.
  - 18 new cases per hour and 6 deaths each hour.
  - Equivalent to 18 plane crashes per month.
- \*\*\*\* Diagnosed in ~2,300 South Carolinians each year; kills ~800.
  - 6 new cases and 2 deaths each day.
- \*\*\*\* Ethnic disparities: Incidence and mortality higher in the African American community

# CENTER FOR COLON CANCER RESEARCH

- \*\*\*\* Established in Oct. 2002 as a NIH funded research center focused on colorectal cancer.**
- \*\*\*\* Involves numerous entities:**
  - USC (Arts and Sciences, Pharmacy, Medicine, Public Health)
  - Cancer Research Center of USC
  - Dorn VA Hospital
  - MUSC
- \*\*\*\* Basic and translational research focused on the biology, diagnosis, prevention, and therapy of colorectal cancer.**

## **PRIMARY FUNCTION of the CCCR:**

**To build a network of interactive investigators studying various aspects of colorectal cancer**

- \*\*\*\* Increase the critical mass of interactive investigators studying colorectal cancer.**
- \*\*\*\* Support the development and research of young investigators.**
- \*\*\*\* Promote collaborations and creative synergies.**
- \*\*\*\* Support the operation of core, multi-user facilities.**
- \*\*\*\* Manage an outreach program to increase education and awareness on colorectal cancer.**

## **REPRESENTATIVE PROJECTS:**

**D. Smith**: Microtubules and cell movement

**T. Baudino**: Regulation of tumor angiogenesis by C-MYC

**P. Buckhaults**: Genes involved in cancer progression and metastasis

**L. Hofseth**: Mechanisms linking IBD and colon cancer

**J. Lavigne/P. Thompson**: Novel methods for detection of colorectal tumors

**D. Dixon**: Role of COX-2 and prostaglandins in tumor development

**J. Carson**: Genetic and molecular analysis of cachexia

**M. Wyatt/D. Pittman/A. Waldman**: Genome stability and DNA repair

**M. Peña**: Bone marrow stem cells in modulating chemotherapy

**W. Outten**: Microbiome and CRC

**H. Brandt**: Knowledge, attitudes, and beliefs relating to CRC

## OUTREACH

### *[CRC Workgroup of the SC Cancer Alliance]*

- \*\*\* BlueCross/BlueShield (\$100,000; 2008-10 with SCGA):**  
CRC screening in Laurens, Abbeville, Greenwood, and Anderson counties
- \*\*\* State of South Carolina (\$1 M; 2008-09 via DHEC):**  
CRC screening in Orangeburg, Greenville, Richland, and Horry counties
- \*\*\* Duke Endowment (\$599,000; 2009-11):**  
CRC navigation in Lexington and Richland counties
- \*\*\* ACS (\$70,000):**  
CRC education (“Shop Talk”)

## Interactions with agencies around SC and beyond:

- \*\*\* Greenville Hospital System Cancer Center (translational research collaborations)**
- \*\*\* MUSC (Statewide GI research program)**
- \*\*\* CEO Roundtable for Cancer (cancer awareness and prevention in the workplace)**
- \*\*\* Colonial Life (messaging clients in the workplace)**
- \*\*\* Abbott Diagnostics (IBD research)**



## UNMASKING COLORECTAL CANCER

2007	Charleston	\$35,000
2008	Columbia	\$60,000
2009	Spartanburg	\$65,000
2010	Charleston	?????



# Racial & Ethnic Disparities in CRC Incidence and Mortality

According to the American Cancer Society

**Table 1. Colorectal Cancer Incidence and Mortality Rates\* by Race/Ethnicity and Sex, 2001-2005**

Race/Ethnicity	Incidence		Mortality	
	Male	Female	Male	Female
African American	71.2	54.5	31.8	22.4
White	58.9	43.2	22.1	15.3

## **South Carolina:**

Race/Ethnicity	Incidence		Mortality	
	Male	Female	Male	Female
African American	<b>74.9</b>	<b>52.6</b>	<b>33.4</b>	<b>21.1</b>
White	<b>60.2</b>	<b>42.1</b>	<b>21.3</b>	<b>14.3</b>

**Disparities  
in 10 yr  
Trends**

**Figure 2. Trends in Colorectal Cancer Incidence and Mortality Rates by Race/Ethnicity and Sex, 1975-2005**

