

The University of Arizona Cancer Center

**The National Cancer Institute-Designated
Comprehensive Cancer Center serving the
State of Arizona**

David S. Alberts, MD
Director, The University of Arizona Cancer Center
Regents Professor of Medicine, Pharmacology,
Nutritional Sciences, Public Health, and BIO5 Institute





The Human Tumor Cloning Conference - 1979

UACC Multidisciplinary Cancer Specialty Clinics

- **BMT-Leukemia**
- **Breast Cancer**
- **Gastrointestinal Cancers**
- **Genitourinary**
- **Gynecologic**
- **High-Risk Cancers**
- **Lymphoma**
- **Neuro-Oncology**
- **Pediatric Hematology/Oncology**
- **Sarcoma Skin Cancer**
- **Thoracic Oncology**



UACC Growth and Development Timeline

1972

1976

1978

1982

1986

1987

1990

1998

2003

2005

2006

2007

2008

2014



2008: Opening of Orange Grove Cancer Clinic (UACC in partnership with UMC)



2014: Opening of UACC Ambulatory Care Research Facility (250,000 sq ft); to break ground in 2013 downtown Phoenix

The University of Arizona Cancer Center Offsite Offices, Community Affiliates, and Clinical Affiliates



- With an annual research budget of more than \$60 million, UACC research facilities employ more than 450 Arizonans statewide
- Nearly 1,000 Arizonans participate in UACC studies annually

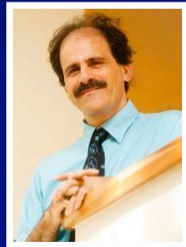


The University of Arizona Cancer Center Research Programs

Therapeutic Development



Robert Dorr, PhD



Michael Bookman, MD

Cancer Biology



Setsuko Chambers, MD



Joyce Schroeder, PhD

Cancer Imaging

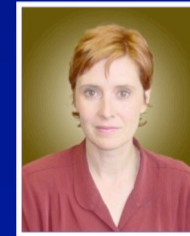


Arthur Gmitro, PhD



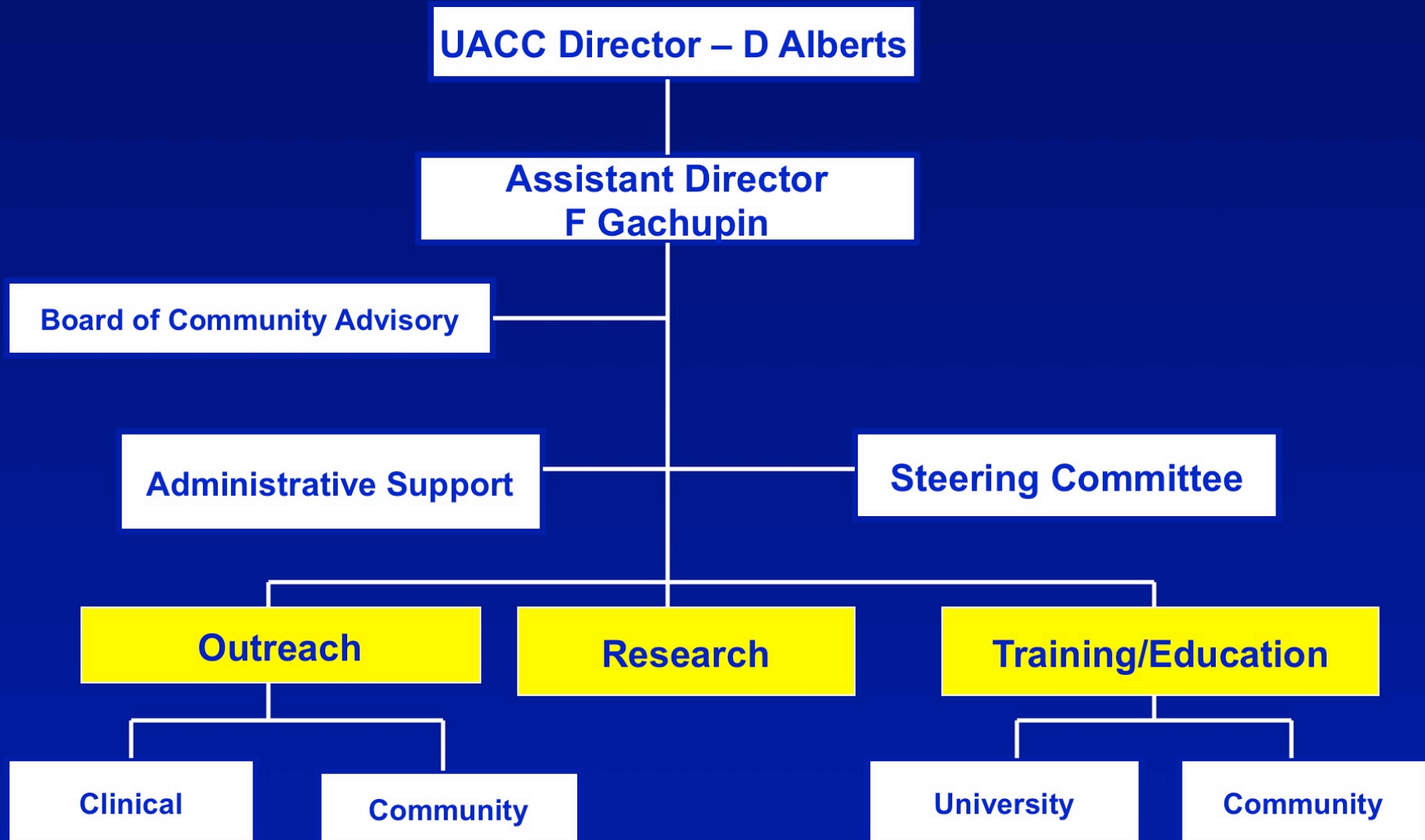
Evan Unger, MD

Cancer Prevention & Control



Patricia Thompson, PhD

Cancer Health Disparities Institute: Organizational Structure



CHDI Board of Community Advocates

Andrew Pacheco (co-Chair)

Frank Valenzuela (co-Chair)

Edith Auslander

Jacob Bernal

Peter Chan

Nelba Chavez

Clara Curiel

Richard Elias

Judith Gordon

Hirsch Handmaker

Doug Hirano

Nancy Johnson

Tsianina Lomawaima

Ned Norris

Kendra Sabol

Fred Taylor



Elle

Binational Breast Cancer Study Estudio Binacional de Cáncer de Mama

US PIs:
E. Martinez
P. Thompson
M. Bondy



Mexico PIs:
A. Daneri
M. Meza
L.E. Gutierrez



***Funded by the Avon Foundation and
The National Cancer Institute***

The Partnership for Native American Cancer Prevention (U54)

David S. Alberts, MD - Principal Investigator, UACC

Laura Foster Huenneke, PhD - Principal Investigator, NAU

Jesse Martinez, PhD - Research PI, UACC

Diane Stearns, PhD - Research PI, NAU

Margaret Briehl, PhD – Training, UACC

Jani Ingram, PhD - Training, NAU

Teshia Solomon, PhD (Choctaw) – Outreach, UACC



What is NACP?

- **Collaborative Partnership** with NAU and NCI
- **Leverages expertise at UACC** in order to enhance cancer research and training at NAU
- **Provides community education programs** for cancer prevention that meet the unique needs of the Hopi Tribe and the Navajo and Tohono O'odham Nations
- **Increases Native American students** in cancer-related careers



Research Projects

- Molecular mechanism in thrombospondin-1 mediated antiangiogenesis; Bill Montfort/Matt Gage (full)
- Cancer Risk Factors and Screening Behaviors of the Hopi Tribe; Sylvia Brown/Priscilla Sanderson (pilot)
- Prostate Cancer Risk: Role of Genetic Variation in the microRNA Stress Response to Arsenic Exposure; Ron Heimark/Jason Wilder (pilot)



Community Outreach Program Aims

1. A Native American tribal liaison will increase cancer prevention and control programs and research in Hopi, Navajo and Tohono O'odham communities.
2. A Native American tribal community expert network will expedite the cultural adaptation of cancer prevention and control programs.
3. Educational preparation for Native American tribal community lay health workers for their respective Hopi, Navajo and Tohono O'odham communities.
4. Delivery of clinical education programs tailored to Indian Health Service (IHS) physicians, nurses and health education staff of the Hopi, Navajo and Tohono O'odham.



As an example - Tohono O'odham Cancer Partnership



- Established in 2008, the Tohono O'odham Nation Division of Health addresses the problem of cancer on the Nation
- Tohono O'odham Nation's first comprehensive cancer plan was ratified by the Council on June 18, 2010 (Resolution No. 20-188)
- Partners include;
 - Arizona Cancer Center Partnership for Native American Cancer Prevention
 - Arizona Department of Health Services
 - Tucson Area Indian Health Services
 - Others



Tohono O'odham Cancer Plan & Implementation Priorities



- Prevention- Obesity, Tobacco Control
- Early Detection- Breast, Cervical, Colorectal, Prostate
- Quality of Life- Case Management, Palliative Care



NACP Training Program



Training Outcomes (in the previous 2 years)

<u>Education Level</u>	<u>UA</u>	<u>NAU</u>	<u>Native Americans</u>	<u>Degrees</u>
Doctoral	8	1	9	1
Masters	4	17	4	9
Undergraduate	21	54	45	33
Tribal College	1	19	20	0
Totals	34	92	79	43

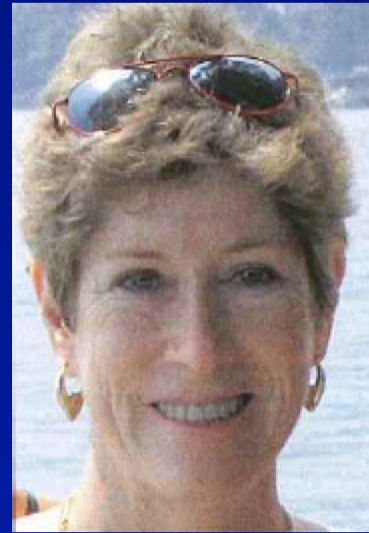
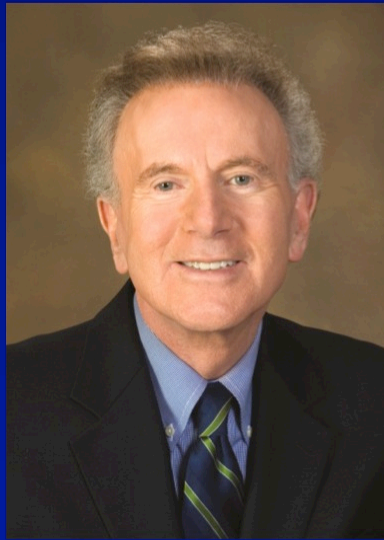


Sustainability for Native American Outreach & Education Activities

- **Cancer disparities in Native American communities require long term multi-sector investments with**
 - **Tribal government**
 - **Academic partners**
 - **Cancer advocacy organizations**
 - **State government**
 - **Federal government**
- **Priorities must be determined by communities themselves which requires ownership and capacity building**



Personalized Medicine in Oncology: An oncologist and his patient team up to share their major success against the odds



Alberts DS and Crano SL. *The Journal of Southern California Clinicians*, 6:32-34, 2012

In the year 2001, I received a call from my dear friend and colleague, Dr. Suellen Crano, who told me about her newly discovered peritoneal mesothelioma, which had become resistant to standard chemotherapy and was immediately threatening her life.

I asked for and received the formalin-fixed, paraffin-embedded tissue block from her original exploratory laparotomy and did a search for druggable molecular targets.

Her cancer scored intensely positive in more than 90% of the tumor cells for the same protein (c-Kit) that drives the growth of CML and GIST.

I immediately prescribed Gleevec. She remains alive, way against the odds, on the personalized therapy, that I prescribed more than 11 years ago based on the molecular targets in her own cancer.