



University of Colorado **Anschutz Medical Campus**

Head & Neck Cancer Research Cluster

Department Research Retreat



What are the focal points of the research program-current (Lu Lab)

- **Saliva Liquid Biopsy for HNSCC**

- Current support: NCI UH2/3 grant “Validation of a saliva test using methylated microRNAs for head and neck cancer recurrence
- Past support:
 - SPARK award
 - Colorado Advance Industry Award
 - Cancer League of Colorado
 - UCCC
 - Whedon Cancer Foundation
 - HNC Philanthropic fund
 - Royalty from patent licensing
- Collaborators: Julie Goddard, Brian Cervenka, Dexiang Gao, John Song (Atlanta HNA), Jose Zevallos (U Pitt), Neil Gross (MD Anderson), Sophia Bornstein (OHSU), Nishant Agrawal (U Chicago), David Wong (UCLA).

What are the focal points of the research program-Current (Lu Lab)

- **Oral Microbiome and HNSCC**

- ❑ Current support:

- NIDCR R21 grant “Functional roles of the human microbiome and metabolome in oral cancer”
 - Cancer League of Colorado “Microbiome in the immunotherapy response of oral squamous cell carcinoma”

- ❑ Pending support:

- NIDCR R01 grant “Role and mechanism of the oral microbiome in initiation and progression of oral squamous cell carcinoma”

- ❑ Past support:

- NCI Colorado HNC SPORE Pilot “Functional assessment of human microbiome in head and neck cancer mouse models”
 - NIDCR R56 :Modulation of tumor microenvironment by microbiome in head and neck cancer”
 - NIDCR R21 “Oral microbiota and Toll-like receptor pathways in head and neck cancer”
 - HNC Philanthropic fund
 - Royalty from patent licensing

- ❑ Collaborators: Daniel Frank, Kristin Kuhn, Nichole Reisdorph, Eric Clambey, Julie Goddard, Brian Cervenka, Dexiang Gao, Carissa M Thomas

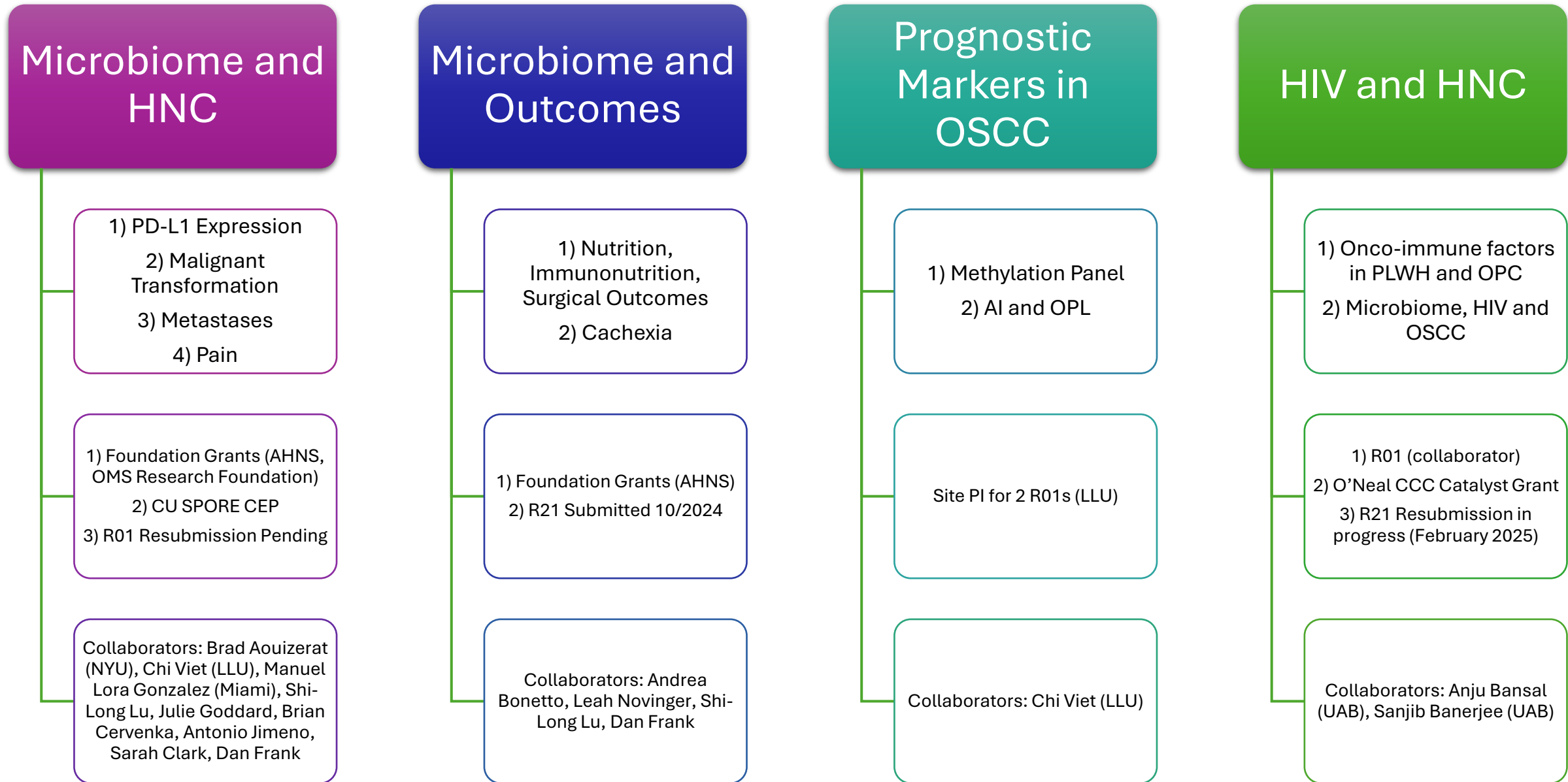
What are the focal points of the research program-Pending/to be developed (Lu lab)

- **HPV point-of-care detection**
 - Pending support: NCI SBIR phase I “Point of care detection of antibodies against HPV16/18 E6 and E7 oncoproteins in oropharyngeal cancer”
 - Collaborators: Carissa M Thomas, Vitan Biotech
- **Multi-omics and imaging for oral lesions**
 - To be developed– RM1/R01
 - Collaborators: Carissa M Thomas, Daniel Frank, Chaitanya Puranik, Katrina Kechris, Regie Santos-Cortez, Guillermo Monroy (UIUC), Arwa Kurabi (UCSD), Brian Harry (UM)
- **Immunotherapy using immunotoxin**
 - To be developed– R21?
 - Collaborators: Zhirui Wang

What are the focal points of the research program-Past (Lu lab)

- **Cell signaling-PI3K and TGFbeta pathways using HNC genetically engineered mouse models**
 - ❑ Past support: NIDCR R01 grant “The role of PI3K pathway in head and neck cancer progression”
 - ❑ Collaborators: Natalie Serkova, Dexiang Gao, Xiao-Jing Wang, Antonio Jimeno
- **Salivary gland cancers using genetically engineered mouse models**
 - ❑ Past Support: Cancer League of Colorado “In vivo modeling of salivary gland tumor formation and progression”
 - ❑ Collaborators: Mary Reyland, Mohamed Said, Tzu Lip Phang, Antonio Jimeno, Jacques Nor (UM), Jing Xiao (Dalian Medical University), Qing Zhou (China Medical University)

What are the focal points of the research program? Thomas Lab



What are the focal points of the research program? Bonetto Lab Collaborations with HNC Cluster

Cancer Cachexia

1) Clinical/Translational studies on cancer cachexia

2) Mouse models of cachexia

1) R21 Submitted 10/2024

2) SPORE DRP Grant Submission

3) R01 Submission in Progress

Collaborators: Shi-Long Lu, Brian Cervenka, Julie Goddard, Carissa M Thomas

Prevalence and Short- & Long-Term Outcomes/Complications Related to Cachexia

BFitBWell

Tissue Banking