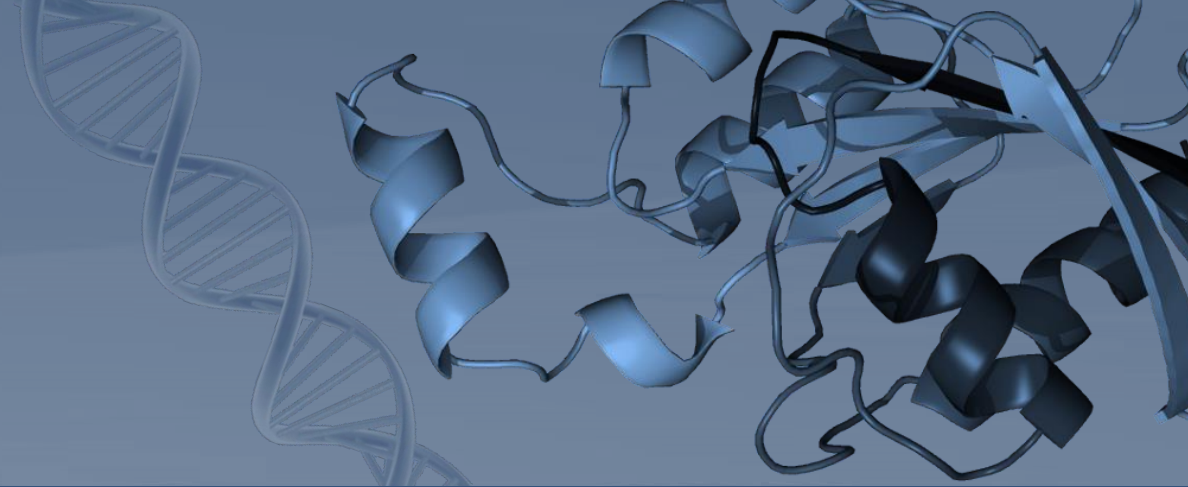




OFFICE OF CANCER CLINICAL
PROTEOMICS RESEARCH



Opportunities for CPACHE Investigators within CPTAC

Chris Kinsinger, PhD

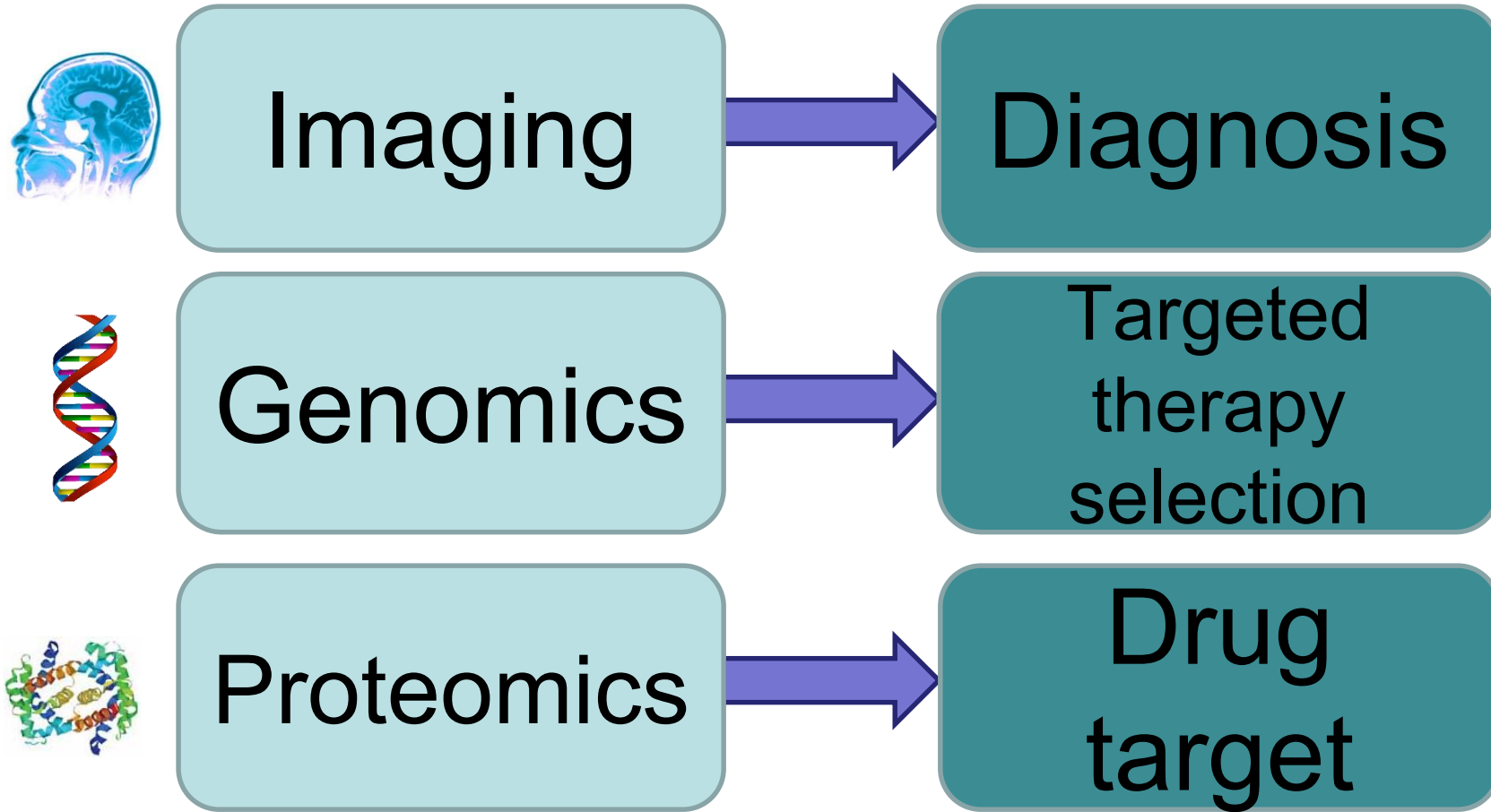
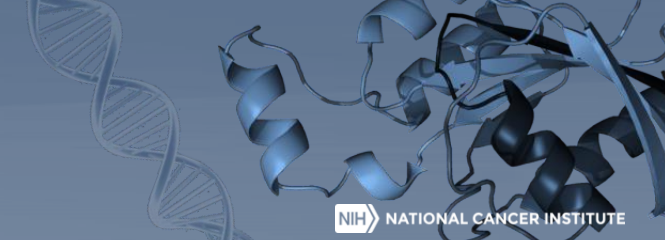
Program Director

Office of Cancer Clinical Proteomics Research

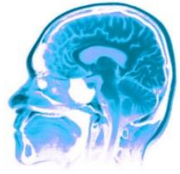
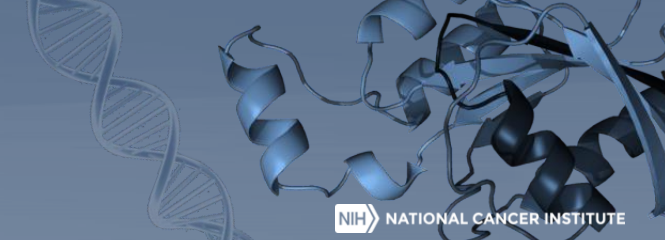


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INSTITUTE

CPTAC in context



CPTAC in context



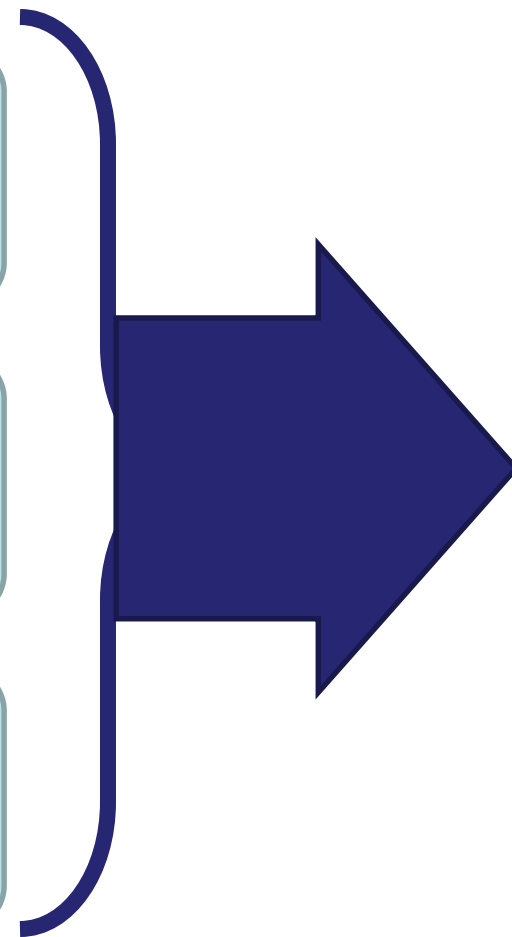
Imaging



Genomics

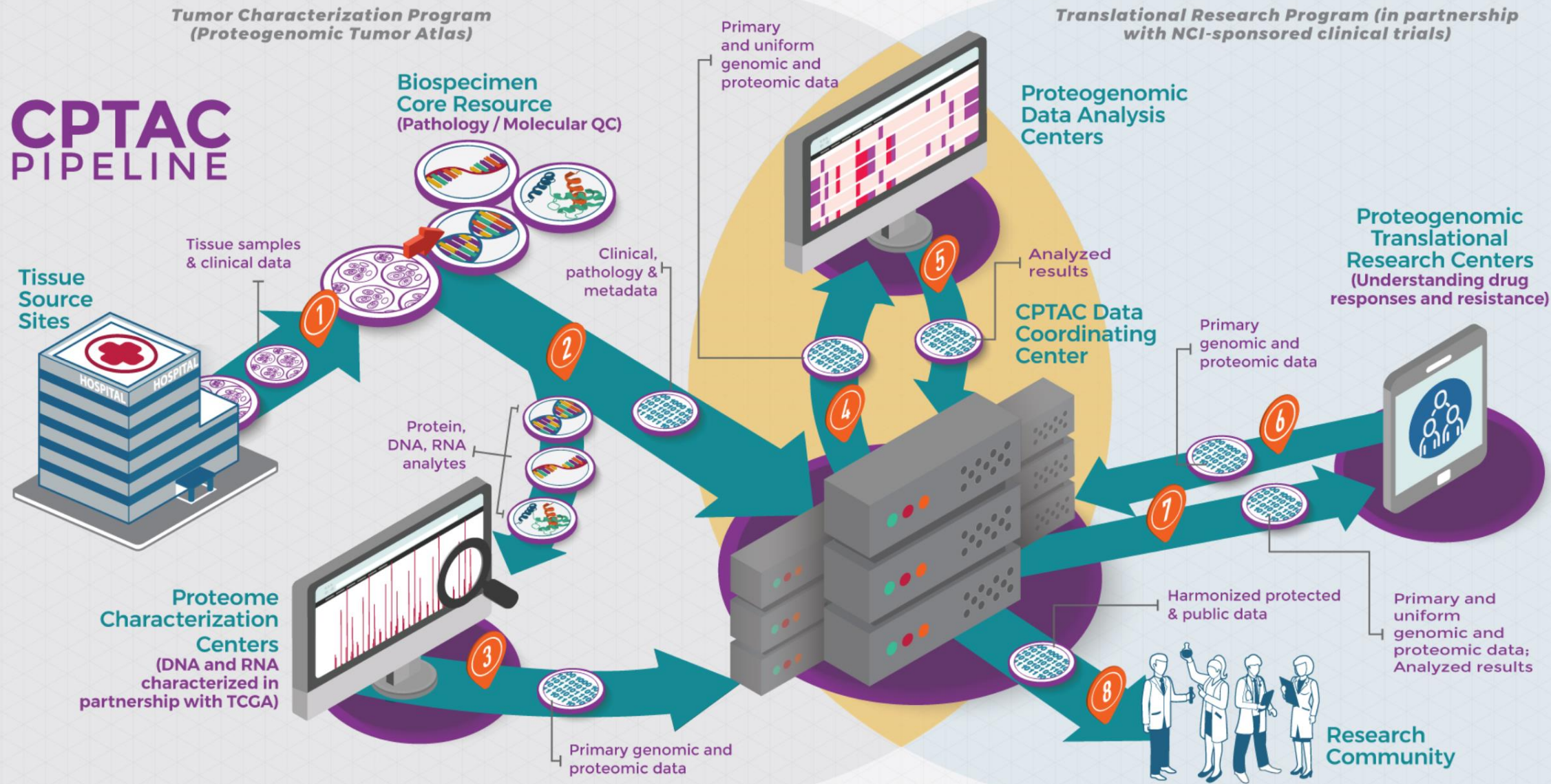


Proteomics

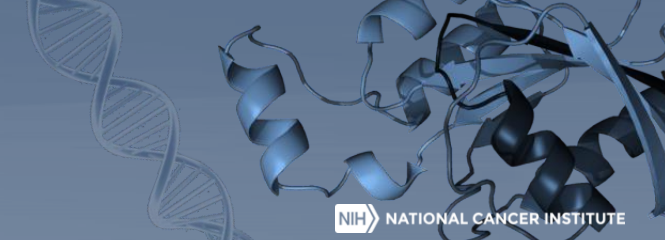


Improved
Prevention,
Diagnosis,
Treatment

Clinical Proteomic Tumor Analysis Consortium



CrCa: Global proteome reveals 2 new subtypes

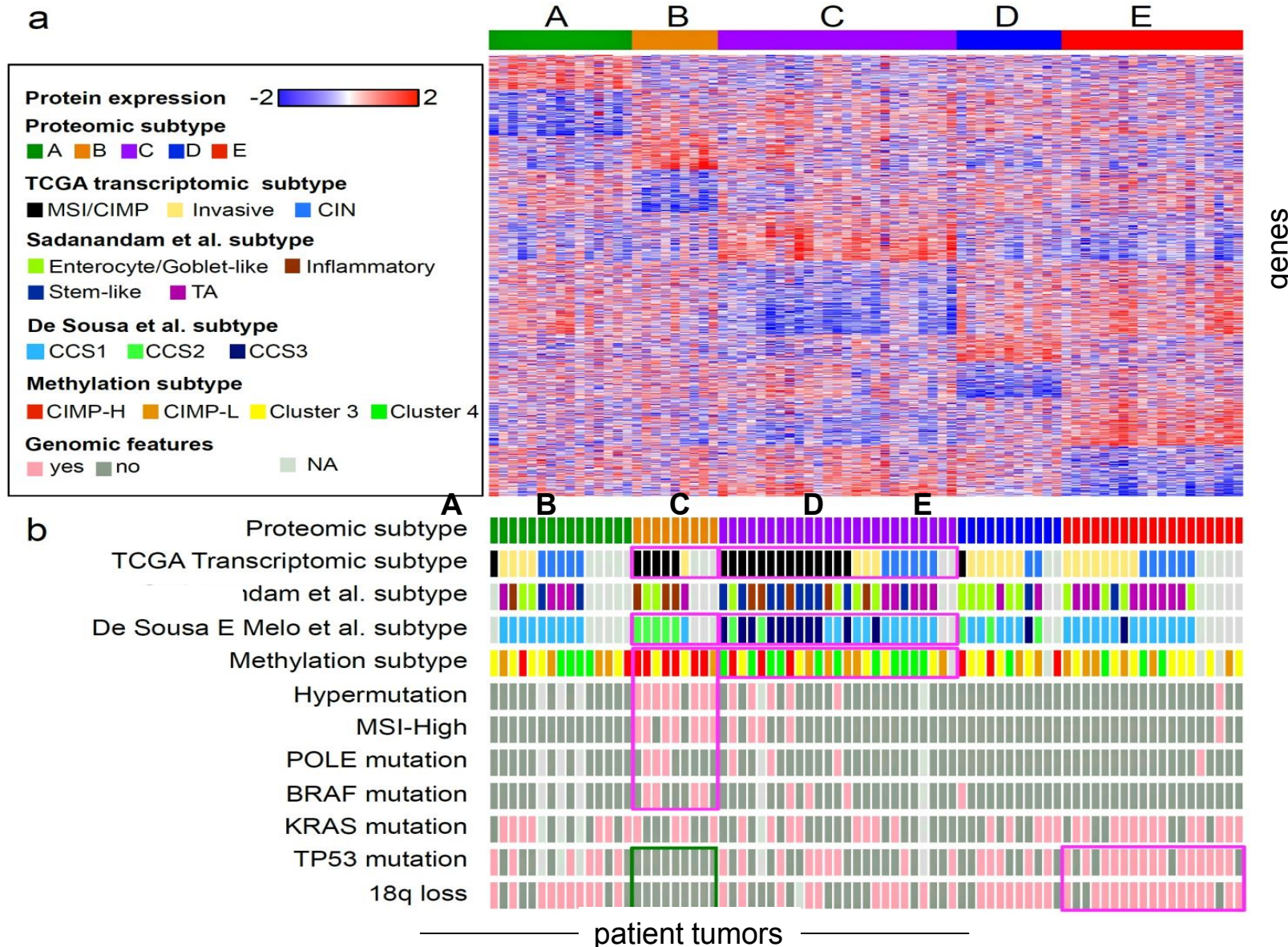


Transcriptome Subtypes

- MSI/CIMP
- Invasive
- CIN

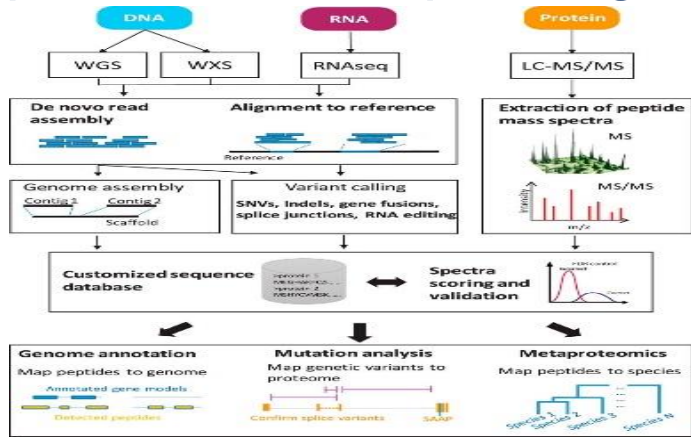
Proteome Subtypes

- A
- B
- C
- D
- E

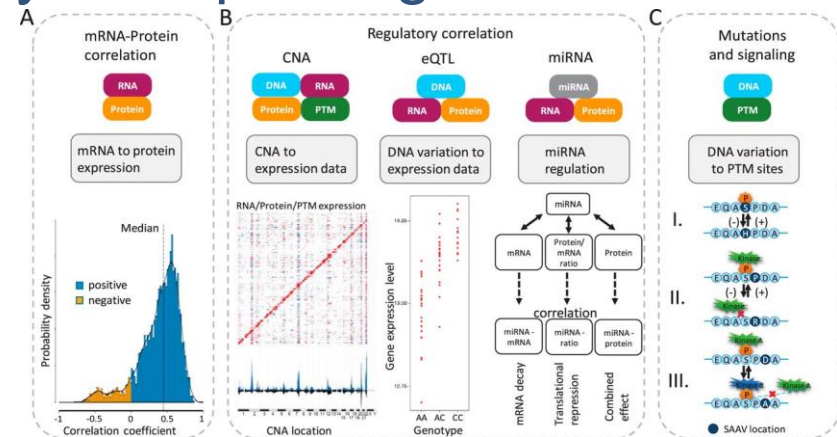


Proteogenomic Data Analysis

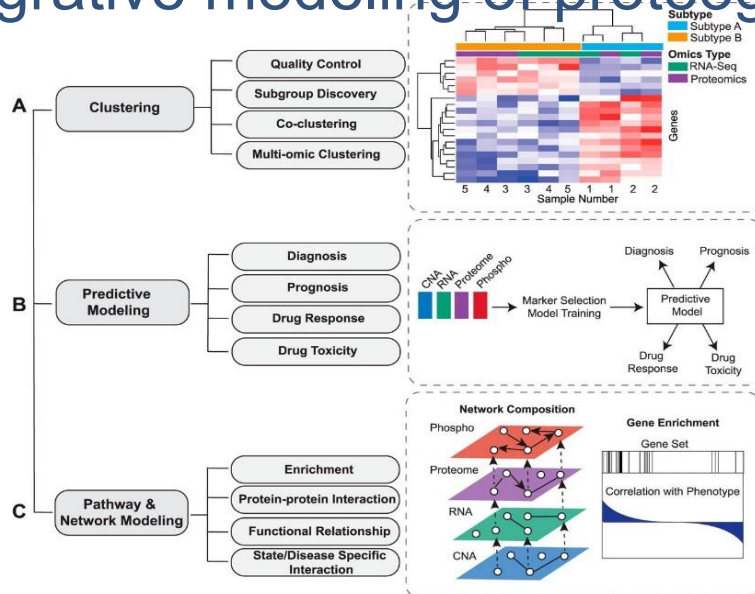
Sequence-centric proteogenomics



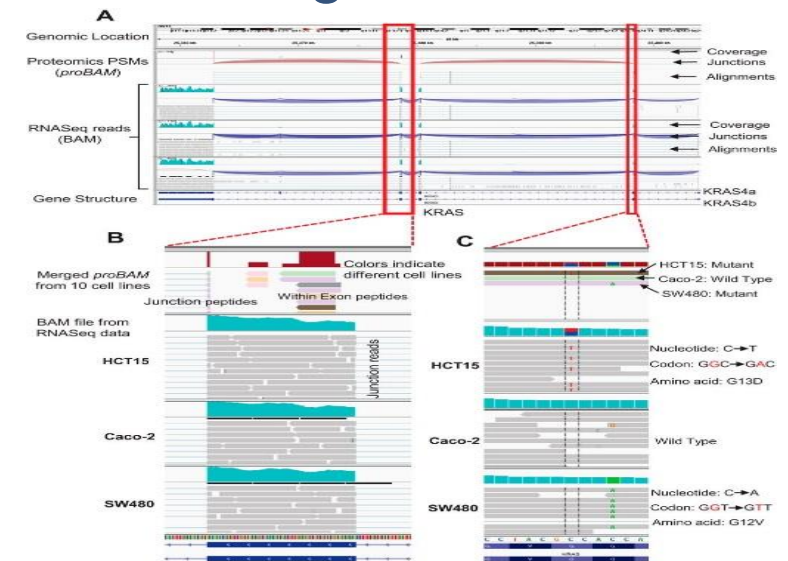
Analysis of proteogenomic relationships



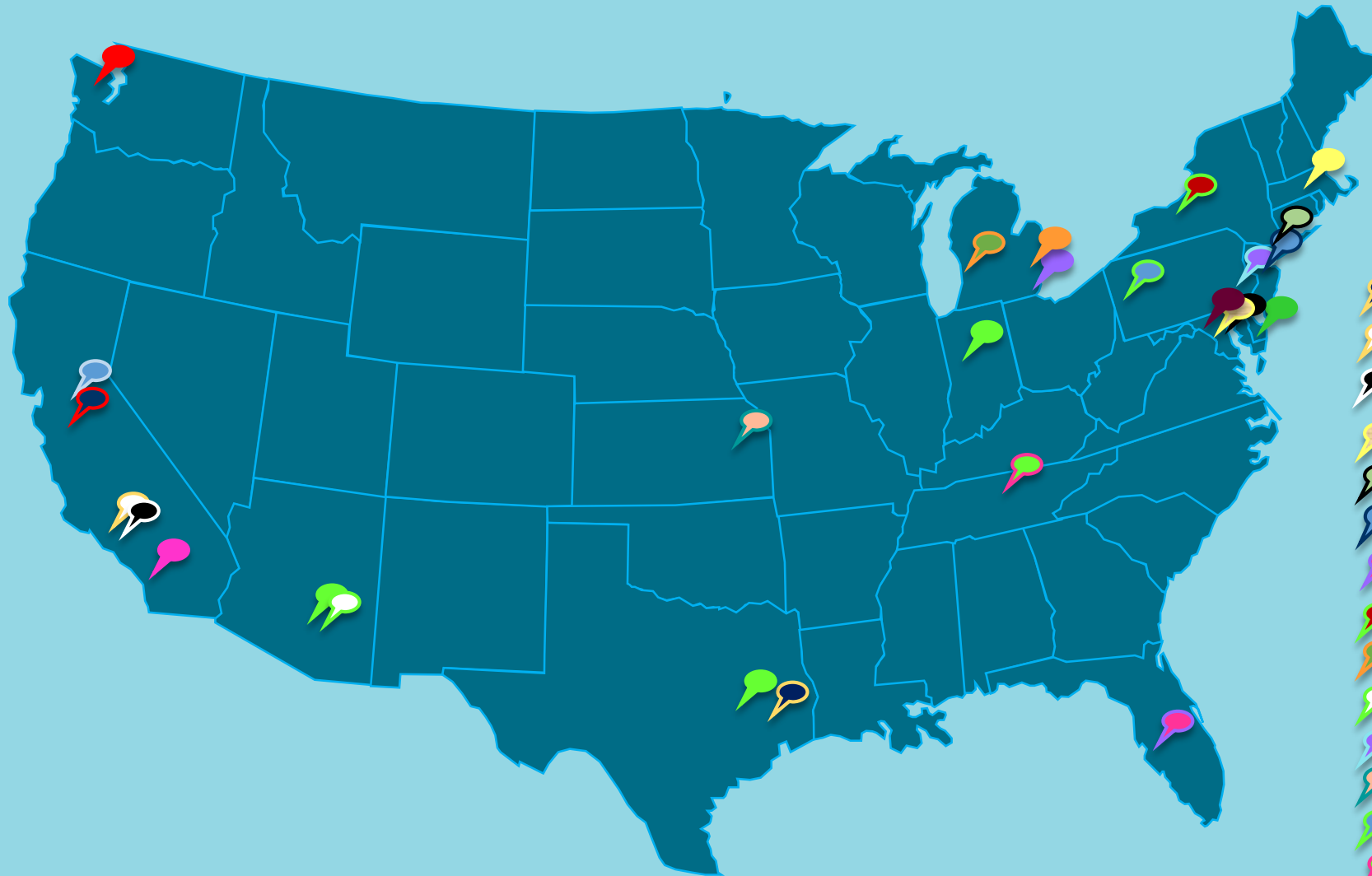
Integrative modeling of proteogenomic data



Data sharing and visualization



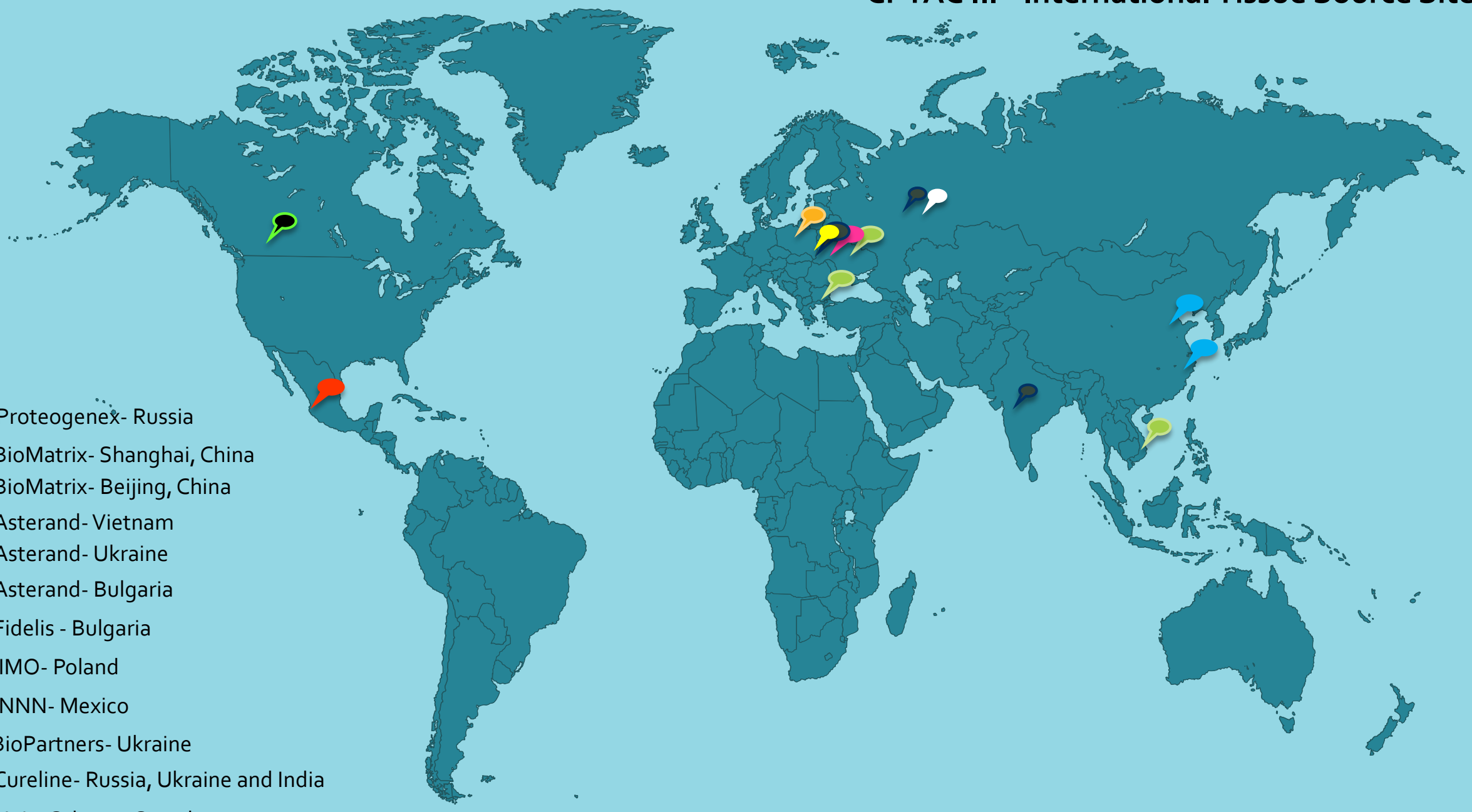
CPTAC III - U.S. Tissue Source Sites



- ABS
- Asterand
- Beaumont
- BioMatrix
- BioPartners, Inc.
- Boston Medical Center
- Cedars Sinai
- GBC
- IGC
- UCSD
- Walter Reed

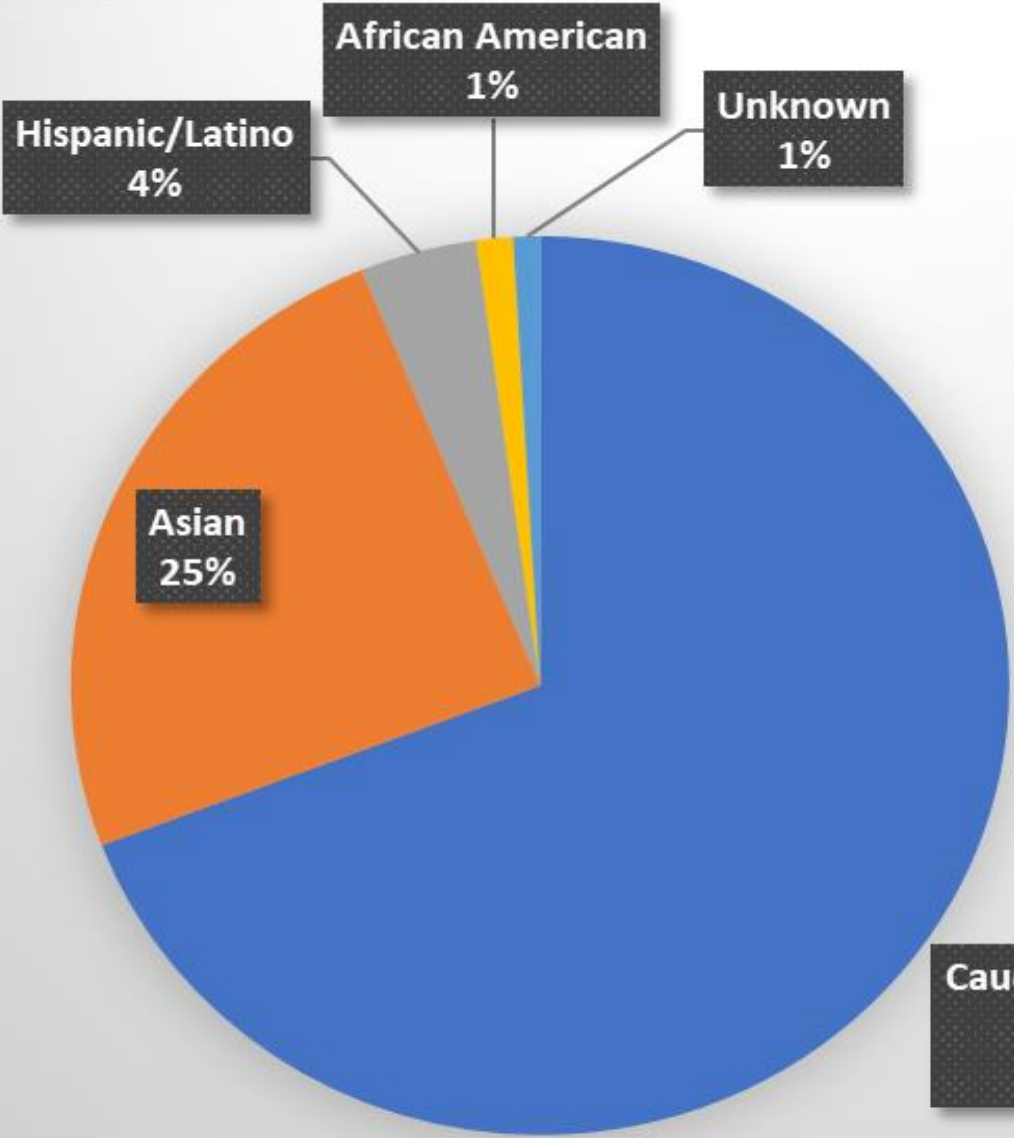
- Baylor College of Medicine
- BioCell Analytics
- Cedars Sinai
- Johns Hopkins Cancer Center
- Memorial Sloan Kettering
- Meridian Health
- Moffitt Cancer Center
- Roswell Park
- Spectrum
- St. Joseph's
- Thomas Jefferson Univ.
- Univ. of Kansas
- Univ. of Pittsburgh
- Vanderbilt Univ.

CPTAC III - International Tissue Source Sites



-  Proteogenex- Russia
-  BioMatrix- Shanghai, China
-  BioMatrix- Beijing, China
-  Asterand- Vietnam
-  Asterand- Ukraine
-  Asterand- Bulgaria
-  Fidelis - Bulgaria
-  IIMO- Poland
-  INNN- Mexico
-  BioPartners- Ukraine
-  Cureline- Russia, Ukraine and India
-  Univ. Calgary- Canada

Current Ethnicity Breakdown



CPTAC III Ethnicity



CPTAC Tumor Types : Retrospective collection

Completed Phases:

Phase I: Technology Assessment

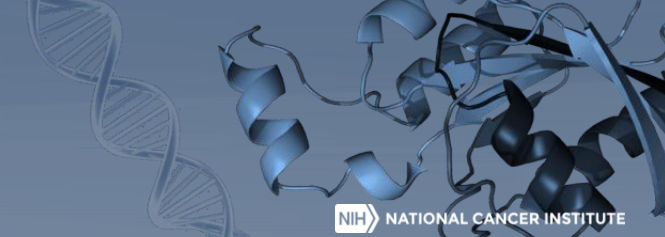
Phase II : Breast, Colon and Ovarian

Phase III completed tumor types: Uterine, Kidney and LungAdeno

Phase III (Still Accruing)

- Glioblastoma Multiforme
- Lung Squamous cell carcinoma
- Head and Neck Squamous cell carcinoma
- Pancreatic Ductal adenocarcinoma
- Cutaneous Melanoma
- Sarcomas
- Acute Myeloid Leukemia

CPTAC Biospecimen Accrual Requirements



CPTAC code	Cancer	Percent Tumor Nuclei	Percent Total Cellularity	Percent Necrosis	Maximum tumor Ischemic Time (min)	Accrual Status
CCRC	Clear Cell Renal Carcinomas	≥80%	≥50%	≤20%	30	Complete
UCEC	Uterine Corpus Endometrial Carcinoma	≥80%	≥50%	≤20%	30	Complete
LUAD	Lung Adeno Carcinoma	≥50%	≥50%	≤20%	45	Complete
PDA	Pancreatic Ductal Adenocarcinoma	No minimum; presence of tumor	No minimum	≤20%	50	Accruing
GBM	Glioblastoma Multiforme	≥60%	≥50%	≤50%	30	Accruing
LSCC	Lung Squamous Cell Carcinoma	≥50%	≥50%	≤20%	45	Accruing
HNSCC	Head and Neck Squamous Cell Carcinoma	≥80%	≥50%	≤20%	30	Accruing
CM	Cutaneous Melanoma	≥80%	≥50%	≤20%	30	Accruing
SAR	Sarcomas	≥80%	≥50%	≤20%	30	Accruing
AML	Acute Myeloid Leukemia	≥20% blasts	N/A	N/A	N/A	Accruing

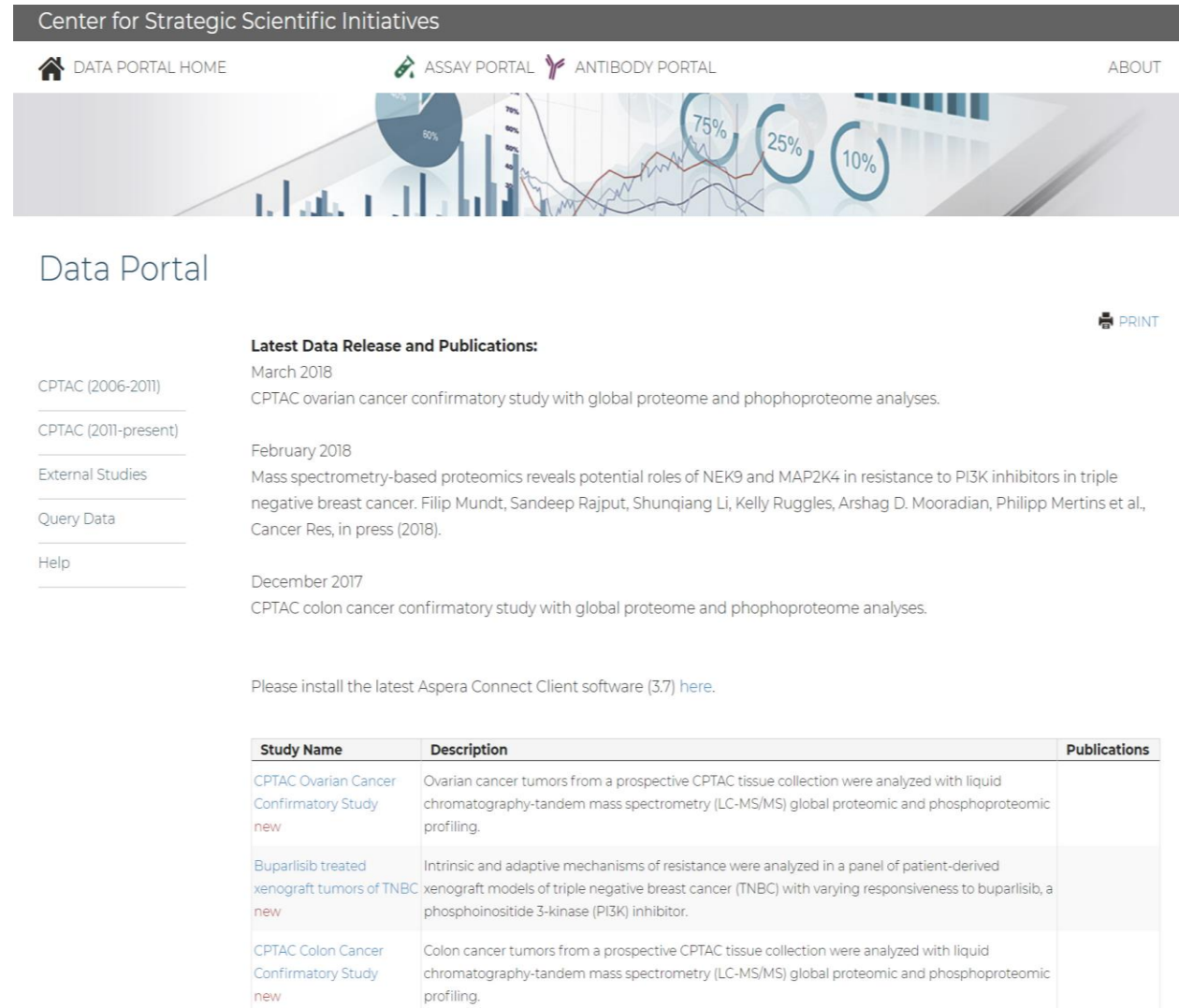
Where to get the data?

CPTAC data portal

<https://cptac-data-portal.georgetown.edu/cptacPublic/>

<https://proteomics.cancer.gov> and select “Data Portal”

NCI’s GDC (Genomic Data)
<https://gdc.cancer.gov/>



Center for Strategic Scientific Initiatives

DATA PORTAL HOME ASSAY PORTAL ANTIBODY PORTAL ABOUT

Data Portal

PRINT

Latest Data Release and Publications:

March 2018
CPTAC ovarian cancer confirmatory study with global proteome and phosphoproteome analyses.

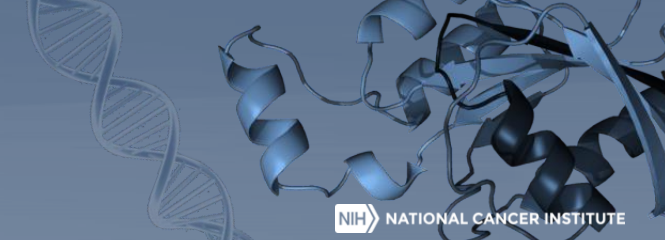
February 2018
Mass spectrometry-based proteomics reveals potential roles of NEK9 and MAP2K4 in resistance to PI3K inhibitors in triple negative breast cancer. Filip Mundt, Sandeep Rajput, Shunqiang Li, Kelly Ruggles, Arshag D. Mooradian, Philipp Mertins et al., Cancer Res, in press (2018).

December 2017
CPTAC colon cancer confirmatory study with global proteome and phosphoproteome analyses.

Please install the latest Aspera Connect Client software (3.7) [here](#).

Study Name	Description	Publications
CPTAC Ovarian Cancer Confirmatory Study new	Ovarian cancer tumors from a prospective CPTAC tissue collection were analyzed with liquid chromatography-tandem mass spectrometry (LC-MS/MS) global proteomic and phosphoproteomic profiling.	
Buparlisib treated xenograft tumors of TNBC new	Intrinsic and adaptive mechanisms of resistance were analyzed in a panel of patient-derived xenograft models of triple negative breast cancer (TNBC) with varying responsiveness to buparlisib, a phosphoinositide 3-kinase (PI3K) inhibitor.	
CPTAC Colon Cancer Confirmatory Study new	Colon cancer tumors from a prospective CPTAC tissue collection were analyzed with liquid chromatography-tandem mass spectrometry (LC-MS/MS) global proteomic and phosphoproteomic profiling.	

Contact



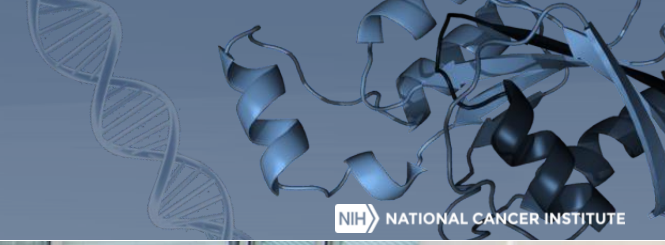
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To participate in CPTAC as a TSS (Tissue source site), please contact

Mathangi Thiagarajan
CPTAC Project Manager
mathangi.thiagarajan@nih.gov

Chris Kinsinger
CPTAC Program Director
kinsingc@mail.nih.gov

Thank You



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