ITCR Annual PI Meeting Draft Agenda: May 27-28 2015

Agenda for Annual Meeting:

Notes taken during the meeting are available here

Day One

8:00 Registration & Breakfast

8:25 Welcome (Trey Ideker, UCSD; Juli Klemm, NCI)

8:35 <u>U24 Genomic Projects Perspective</u>: Brief presentations and Panel Discussion. Discussion topics to include engagement with users; considerations for transitioning to early prototype to broadly used software; obstacles to success; sustainability considerations

Moderator: Jerry Li, NCI

- <u>Trinity: Transcriptome assembly for genetic and functional analysis of cancer</u> Aviv Regev, Brian Haas
- Cancer Genomics:Integrative and Scalable Solutions in R / Bioconductor Martin Morgan
- NDEx the Network Data Exchange A Network Commons for Biologists Trey Ideker, Dexter Pratt
- Cloud Based Resource for Data Hosting, Visualization and Analysis Using UCSC Xena
 David Haussler

10:00 Break

10:15 <u>Keynote</u> – Stephen Friend, President, Sage Bionetworks; Medical Technology Advisor, Apple Computer

11:15 Industry Perspective and Discussion

- <u>Presentation</u> by Dr. Jadwiga Bienkowska, Director, Computational Biology Precision Medicine, Pfizer Inc.
- Discussion on open source software, industry-academic collaborations, and translating novel informatics software to industry.

12:00 Lunch (on-site)

1:00 <u>U24 Clinical Research Projects Perspective</u> – Brief presentations and panel discussion. Discussion topics to include engagement with users; considerations for transitioning to early prototype to broadly used software; obstacles to success

Moderator: Yantian Zhang, NCI

- Advanced Development of TIES-Enhancing Access to Tissue for Cancer Research Rebecca Crowley Jacobsen
- Informatics Tools for Optimized Imaging Biomarkers for Cancer Research & Discovery
 Jayashree Kalpathy-Cramer
- Cancer Deep Phenotype Extraction from Electronic Medical Records Guergana Savova
- Quantitative Image Informatics for Cancer Research (QIICR) Andrey Fedorov
- Tools to Analyze Morphology and Spatially Mapped Molecular Data Joel Saltz

2:30 Break

2:45 Flash Talks: New projects promoting posters

- 1. Computational Framework for Single-Cell Genomics of Tumors Alexander Krasnitz
- 2. Informatics Links between Histological Features and Genetics in Cancer Kun Huang
- 3. Advanced Development of an Open-source Platform for Web-based Integrative Digital Image Analysis in Cancer – David Gutman
- 4. GenePattern Notebooks for Cancer Research
- 5. <u>Informatics Quantitative Radiomics System Decoding the Tumor Phenotype</u> John Quackenbush

3:15 Poster Sessions and Demos

- Posters by new projects; U01 and U24 invited but not "required". Poster dimensions are 48" (w) x 36" (h)
- 10 Demos by U01 and U24 projects (excluding new awardees), two running simultaneously, 20 min each + 5 min transition

	Track 1 Demos	Track 2 Demos	
3:15	Trinity – Transcriptome	Advanced Development of	
	assembly for genetic and	TIES-Enhancing Access to	
	functional analysis of cancer	Tissue for Cancer Research	
3:40	Cancer Genomics:Integrative	Informatics Tools for Optimized	
	and Scalable Solutions in R /	Imaging Biomarkers for Cancer	
	Bioconductor	Research&Discovery	
4:05	NDEx – the Network Data	Cancer Deep Phenotype	
	Exchange A Network CommonsExtraction from Electronic		
	for Biologists	Medical Records	
4:30	Cloud Based Resource for Quantitative Image Informatics Data Hosting, Visualization and for Cancer Research (QIICR) Analysis Using UCSC Cancer		
	Genomics Browser		
4:55	Software Tools For Regulatory	Informatics to Enable Routine	
	Analysis of Large Cancer	Personalized Cancer Therapy	

Methylome Datasets

5:15 Break

6:00 Dinner (on-site)

Day Two

8:30 The Future of ITCR - Juli Klemm, NCI

8:45 **Panel Discussion:** <u>U01/R01 Projects</u>: Brief presentations and panel discussion. Sign up <u>here</u>. Discussion of challenge and success stories for early-stage development:

Moderator: Juli Klemm, NCI

- Interactive Informatics Resource for Research-Driven Cancer Proteomics Bobbie-Jo Webb-Robertson
- Informatics Tools for High-throughput Analysis of Cancer Mutations Michael Ryan, Rachel Karchin
- Software Tools for Regulatory Analysis of Large Cancer Methylome Datasets Ben Berman
- BMEG Biomedical Evidence Graph Josh Stuart, Kyle Ellrott
- <u>Developing Informatics Technologies to Model Cancer Gene Regulation</u> Peng Jiang
- MeV: Software for Next Generation Genomic Data Analysis Yaoyu Wang, John Quackenbush

10:15 Break

10:45 Poster Sessions and Demos

- Posters by new projects; U01 and U24 invited but not "required"
- 12 Demos by U01 and U24 projects (excluding new awardees), two running simultaneously, 20 min each + 5 min transition

	Track 1 Demos	Track 2 Demos
10:45	Interactive Informatics	EMR Adverse Drug Event
	Resource for Research-driven	Detection for
	Cancer Proteomics	Pharmacovigilance
11:10	Informatics Tools for High-	Tools to Analyze Morphology
	throughput Analysis of Cancer	and Spatially Mapped
	Mutations	Molecular Data
11:35	OmniSearch – A semantic	Advanced Development of an
	search tool for discovering	Open-source Platform for Web-
	microRNAs critical roles in	based Integrative Digital Image
	human cancer	Analysis in Cancer

12:00 MeV – Software for Next

Generation Genomic Data

Analysis

12:30 Lunch (on-site)

1:30 Poster sessions and demos (continued)

	Track 1 Demos	Track 2 Demos
1:30	ESCE - DISCOVERING	Developing Informatics
	MOLECULAR PROCESSES	Technologies to Model Cancer
		Gene Regulation
1:55	Interpreting massive genomic	caCDE-QA – A Quality
	data sets via summarization	Assurance Platform for Cancer
		Study Common Data Elements

2:30 Presentations of proposed collaborations, 5 min each

- Huang/Jiang <u>CBOE</u>: A community-based bio-ontology evaluation framework
- Karchin/Bernstam Karchin-Meric-Bernstam Collaboration
- Karchin/Ideker NDEx/CRAVAT-MuPIT Collaboration
- Jiang/Jacobsen/Savova
- Bernstam/Jacobsen/Savova
- Saltz/Fedorov/Kalpathy-Cramer <u>Digital Pathology: 3D Slicer, Ground Truth, Competitions</u>
- Jingchun Zhu, Haussler Aggregating BRCA Data: Lessons and Visions
- Quackenbush/Aerts/Huang/Gutman/Cooper
- 3:30 Activities of the Training and Outreach Working Group Rebecca Crowley Jacobsen
- 4:00 Closing remarks and adjourn