Pediatric Cancer Nanocourse
Curriculum
August 12-16, 2019
cc-TDI laboratory, 12655 SW Beaverdam RD W, Beaverton OR 97005

community-related host: Lorna Day, Sam Day Foundation
community-related co-host: Nathan Traller, KickASPS!
Registration: https://cc-tdi.kindful.com/register/pediatric-cancer-nanocourse-2019

Goals:

The goal of the Pediatric Cancer Nanocourse is to train members of the public to be informed liaisons between childhood cancer researchers and the community. Features of the course will include:

- a didactic overview of childhood cancer treatment, biology, pathology, and clinical trials
- an introduction to the scientific research process: how research works, what barriers exist, and how to overcome challenges and make progress on rare childhood cancers
- lectures on Clear Cell Sarcoma and the Ewing's family of sarcomas
- daily mentorship and hands-on opportunities to shadow our research scientists in the laboratory
- a self-selected group research project, with the opportunity to collaborate with fellow participants
- the opportunity to build a network of informed and empowered advocates who can drive the cure of rare cancers

Previous course members have had their findings published in peer-reviewed scientific literature. There is no cost to attend the course (the $150 registration fee is refunded when you arrive), but participants are required to cover their own travel, lodging, and meals. Participants are expected to attend the entire Nanocourse period. **Attendance is limited, so please register early to secure your participation.**

2019 Participants: We have 17 confirmed registrants out of 17 slots.

CCS - EWSR1 Lecturers:
Agnieszka Wozniak (KU Leuven), CCS Clinical Trials
Jeff Toretsky (Georgetown), Ewings Family Tumors Overview: clinical, biology, translation
Paul Huang (ICR London), Sarcoma Proteomics
Kevin Jones (Univ of Utah), Mouse Models of CCS
Tyuji Hoshino (Chiba Univ), Drug Design
Gwenn Hansen and Steve Basham Nurix Pharmaceuticals), Programs in Proteome Therapeutics
Xiangshu Xiao (OHSU), Development of 666-15
Michael Cohen (OHSU), EWSR1 drug development
Charles Keller for Lissett Bickford (cc-TDI), Systems Biology to develop CCS Therapeutics
Viktors Berstis (WorldCommunityGrid.org - Technical lead, architect & scientist; IBM Systems & Technology Group; IBM Master Inventor)
~~Stephen Lessnick (Nationwide Children's Hospital), EWSR1 translational therapeutics~~ *family conflict*

Other Invited Lecturers:
Ganapati Srinivasa (OmicsAutomation; Intel Collaborative Cancer Cloud, genomics
Tommy Pham (Nike), industry partnerships

WiFi : *ask on arrival*
Live Feed (selected): tbd

Nancourse Itinerary and Curriculum:

Sun Aug 11	
6:00 pm – 8:00 pm	Informal family get-together *home of Lorna and Bob Day,* *hosted by Lorna and Bob Day and the Sam Day Foundation* ***1665 NW 136th Ave. Portland*** *(about 5 miles from cc-TDI)* *We will be outside for dinner.*

Mon Aug 12	
8:30 am	Welcome & Introductions; Lab Tour
9:00 am	Overview from an Academic & Pharma perspective *charles keller* - childhood cancer treatment - clinical trials - basic science research - How to Cure Cancer from a Grassroots perspective: The Josh Sommer paradigm - Vocabulary
9:45 am	Project Introduction & Team Organization *andy woods* (Project Lead/Writer, Sub-project Leads) The goal of this NC project is a CCS/EWSR1 roadmap manuscript for journal submission Yes – you can do this!
10:00 am	EWSR1 Cancers Overview *jeff toretsky* - clinical summary - biology - therapeutics
11:00 am	CCS Clinical Trials *agnieszka wozniak* - - crizotnib and beyond
12:00 pm	Lunch (provided) … and epithelioid sarcoma presentation *charles keller*
1:00 pm	Artisan Biopharma – families developing and "taking stock" in EWSR1 drugs *charles keller* - The Pillsbury Bakeoff of EWSR1 therapies, akin to ALS-TDI (aka, "Ice Bucket Challenge")

2:00 pm	Sarcoma Proteomics *paul huang* - EWSR1 family cancers and CCS
3:00 pm	robotic drug screen: stage 1 of 2 *with ken crawford*
4:00 pm	Reception with Lorna, Nathan and Renee!
6:00 pm	Group dinners with speakers (locations TBA)

* at various times, each person will rotate into the laboratory to shadow our scientists

Tue Aug 13	
8:00 am	CCS Mouse Models *kevin jones*
9:00 am	Drug Design (super-powered by the IBM World Community Grid) *tyuji hoshino*
10:00 am	Proteosome-enabled Therapeutics: The New Frontier *Gwenn Hansen (SVP Research, Nurix) and Steve Basham (Director of Discovery, Nurix)*
11:00 pm	666-15 for CCS *xiangshu xiao*
12:00 pm	LUNCH with SCIENCE: research at cc-TDI *cc-TDI scientists & engineers presenting*
1:00 pm	CCS Project Work Time * and EPS working group discussions *charles keller*
2:00 pm	
3:00 pm	
4:00 pm	Personalized Therapy – scientific considerations *charles keller*
5:00 pm	

Wed Aug 14	
8:00 am	Project Work Time *
9:00 am	Allosteric modulation of PARP1-DNA binding with small molecule inhibitors: a potential therapeutic strategy for treating Ewing Sarcoma *michael cohen*
10:00 am	Genomic Decisions – All in a Day *ganapati srinivasa*

11:00 pm	PLENARY LECTURE: The IBM World Community Grid *Smash Childhood Cancer Program* *Viktors Berstis* WorldCommunityGrid.org - Technical lead, architect & scientist; IBM Systems & Technology Group; IBM Master Inventor
12:00 pm	Catered Lunch in honor of Viktors Berstis
1:00 pm - 1:15 pm	Introduction to the cc-TDI junior board! *Calleigh Germer, cc-TDI Junior Board Chairperson*
1:15 pm - 1:45 pm	Wall of Hope *and* Wouldn't it be cool if … ! *Lorna Day, Nanocourse co-host*
2:00 pm	tba *tba*
3:00 pm	Project Work Time *
5:00 pm	Dinner on your own

Thu Aug 15	
8:00 am	Partnering with industry Tommy Pham
9:00 am	how I became a full time scientist for my daughter's cancer *andy woods*
10:00 am	Egg-static about preclinical research *samuel rasmussen*
11:00 pm	Lunch and Learn: proteins from ancient tumor samples – back to the future! *Dylan Marchione*
12:00 pm	robotic drug screen: stage 2 of 2 *ken crawford*
1:00 pm	Nike Tour and off-site project work time host *tommy pham*
5:00 pm	

Fri Aug 16	
8:00 am	Project Work Time *
9:00 am	Project Finalization *
12:00 pm	Group Lunch (provided)
1:30 pm	Presentation of Completed Projects (manuscript submission?)
3:30 pm	Feedback Session
5:00 pm	Nanocourse Conclusion

Selected Pre-Reading & Media (required):

Epithelioid Sarcoma Roadmap: https://www.frontiersin.org/articles/10.3389/fonc.2015.00186/full, *or*
Hepatoblastoma Roadmap: https://www.frontiersin.org/articles/10.3389/fped.2016.00022/full

Selected Pre-Reading & Media (not required):

I have mainly one video to suggest (Josh Sommer on his personal cancer journey and creating the Chordoma Foundation), an article, and a few short books. All of these are optional, but **the video of Josh Sommer is the highest potential value**. One of the books comes as a Hollywood movie.

The video of Josh Sommer: https://youtu.be/YN88evi1aXs

The article: *Understanding Academic Medical Centers: Simone's Maxims. Joseph V. Simone. Clinical Cancer Research. Vol. 5, 2281–2285, September 1999* (available at http://clincancerres.aacrjournals.org/content/5/9/2281.long).

This article is written by one of the first oncologists to try giving more than one chemotherapy drug at the same time, in this instance for childhood leukemia. He is the 'grandfather' of pediatric oncology and very much active to this day.

A book that became a movie: *The Cure: How a Father Raised $100 Million--and Bucked the Medical Establishment--in a Quest to Save His Children.* ISBN-10: 006073440X

A painful but heartening book on just how far a parent can go to create a cure for their child. Its movie version, *Extraordinary Mesures*, with Brendan Frasier and Harrison Ford:
http://www.imdb.com/title/tt1244659/ (we could play this in the background during a project work session)

Other books:

One Tough Mother
A story of how a mom in an impossible situation built a billion dollar company. To some extent, curing cancer could take this kind of small business approach from the community.
ISBN-13: 978-1558689084

Great by Choice: Uncertainty, Chaos, and Luck--Why Some Thrive Despite Them All
ISBN-13: 978-0062120991
If you do reading about business strategies, you'll love this. if not, then most of what you need is in the first 2 chapters. The message is that in a downturned economy, stick to your mission and made careful decisions that are mindful of the most recent technology (or research).

A Life Decoded
ISBN-10: 0670063584
Sequencing the genome would take 15 years and 3 billion dollars… or does it take $300 million and only 9 months? This is a real world story of going outside of the box.

Leading for Growth: How Umpqua Bank Got Cool and Created a Culture of Greatness
ISBN-13: 978-0787986070
What business are you *really* in? How can you empower people around you to achieve incredible things? Ray Davis speaks to this in the context of a bank, but it is anything but an ordinary story.

Attendee Suggestions:

Global Genes overview of patient advocacy in drug discovery: https://globalgenes.org/toolkits/from-molecules-to-medicines-how-patients-can-share-their-voices-throughout-the-drug-development-process/introduction/

A Note to Participants:

Dear Participants, Thank you for registering for the 2018 Pediatric Cancer Nanocourse!

Location of the Nanocourse

cc-TDI laboratory
12655 SW Beaverdam RD W
Beaverton OR 97005

Hotel Accommodations (selected)

The closest (utilitarian):
Comfort Inn & Suites Beaverton - Portland West
13455 SW Tualatin Valley Hwy, Beaverton, OR 97005 Tel (503) 643-9100.

New, nearby (best bet):
Marriott TownePlace Suites
3900 SW 114th Street Beaverton, Oregon 97005

A good value, and very peaceful:
River's Edge Hotel & Spa, 455 SW Hamilton Ct,
Portland, OR 97239, Tel: (503) 802-5800

The grooviest, downtown; check on hotels.com:

Hotel Zags (previously Hotel Modera)
515 SW Clay St, Portland, OR 97201, Tel: (503) 484-1084

Park Lane Suites and Inn
-Downtown
-30 minutes to the lab by MAX Blue Line
-15 minutes to the lab by car

Embassy Suites by Hilton Portland Washington Square
-10 minutes to the lab by car
-20 minutes to the lab by bus
-40 minutes to downtown Portland

Air and Ground Travel PDX is served by most major airlines.

The MAX light rail starts within a few feet of the PDX airport, goes to downtown and even the cc-TDI lab. See https://tHorimet.org/max/.

In detail, our lab is a short walk from the light rail blue line (Beaverton Central stop) … from the airport Max stop, you take the red line eastbound (it only goes eastbound) and change at the Beaverton transit center to the blue line westbound. The very first stop is Beaverton Central. Our address for GPS walking directions is 12655 Sw Beaverdam Rd W, Beaverton, OR 97005 … or just cross the street to the south, and you're here (our door is on the south side of our building).

About Portland Situated between the Columbia River Gorge and the Oregon Coast beaches, the greater Portland area is home to great restaurants and diverse cultural attractions and events. Our lab is 10 minutes east of Portland in the sister city, Beaverton, where Nike headquarters are.

Sincerely, Charles

Charles Keller MD | Scientific Director
Children's Cancer Therapy Development Institute
direct: (801) 232-8038 | charles@cc-TDI.org | http://cc-TDI.org