



## January 2020

Hello and Happy New Year! Below you'll find the latest ideas, action items, and news on the progress of the Human Immunology and Immunotherapy Initiative.

### HI3 Faculty Recruitment

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Mission: To enhance expertise and develop new strengths

- We are pleased to announce HI3 is launching a search for an Autoimmunity Director. If you know of any leaders in the field looking for a new and exciting opportunity, please contact John Cambier (John.Cambier@cuanschutz.edu) with recommendations.

### HI3 Translational Immunology Case Study Seminar Series

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Mission: To extend our understanding of translational immunology and assist in clinical problem solving

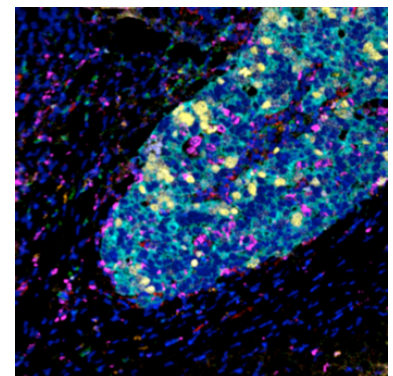
- Visit the HI3 website to view the upcoming [HI3 Translational Immunology seminars](#) designed to connect investigators across campus that perform research within immunology and/or treat patients with immune-mediated disorders to learn from one another and extend our understanding of human translational immunology
- Don't forget to attend the January 15 seminar on, 'SEMA7A and PDL-1 in postpartum breast cancer,' presented by Traci Lyons, PhD in RC1-N, 9107 at 4:00pm

### HI3 Human Immune Monitoring Shared Resource (HIMSR)

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Mission: To facilitate and support human immunology research and discovery

- We are pleased to announce that **Christian Rickert, PhD, joined the HIMSR team January 1 as the new MIBI operator on January 1.** Christian studied the structure and dynamics of proteins with electron paramagnetic resonance spectroscopy during his PhD program at the University of Osnabrück in Germany. He implemented and published software for data analysis and embedded hardware in his most recent position as a postdoctoral fellow here on the CU AMC.
- There is one position posted on CU Careers for a data scientist to help develop MIBI image analyses (Research Associate-17630, position #00769540). This position will be hired through the [Center for Innovative Design and Analysis](#).
- It's been busy at the HIMSR with new technology! **The \*MIBI instrument\* is now operational and we have successfully generated preliminary data.** We are actively looking for collaborative projects imaging human tissue samples with a 27-marker immune panel! *Need an image for a grant application?* We can now provide MIBI images that demonstrate feasibility in several tissue types. We have also successfully developed several 7-color fluorescent imaging panels for whole slide scanning and 9-color fluorescent imaging panels for region of interest scanning on the **\*new Vectra Polaris\***. We are also updating our flow cytometry panels to be compatible with the **\*new Cytex Aurora\***.
- MIBI photo is human ovarian cancer (in collaboration with Ben Bitler)



**Shown:** dsDNA (blue), pan-CK (cyan), CD31 (red), Ki67 (yellow), CD3 (green), CD68 (magenta), CD20 (orange)

**Not shown:**  $\beta$ -tubulin, HLA Class I, Na-K-ATPase, CD4, CD8, FOXP3, CD56, CD11b, CD11c, DC-SIGN, CD45, CD163, Pdpn, Vimentin, LAG3, PD1, PDL1, Granzyme B, IDO1, HLADR, CD45RO

- REMINDER that the HIMSR runs a monthly **Vectra User Group** to allow users to discuss problems, present data, ask questions and obtain feedback. If interested, please join in on the first Thursday of every month at 2:00pm in RC1-North, Room 8108. Contact Kimberly.Jordan@cuanschutz.edu if you would like to be added to the user group calendar invite.
- Questions about [HIMSR services](#) or the inclusion of HIMSR services in your next grant application? Contact Kimberly.Jordan@cuanschutz.edu

### HI3 Translational Research Networking and Preclinical Models (TRNPM)

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Mission: To provide a nexus for multiple aspects of translational immunology research

- Interested in using human tissue of immune relevance for your research? **The TRNPM has an approved COMIRB protocol that can provide regulatory approval to HI3 investigators for their human tissue studies.** This protocol allows investigators to obtain fresh (adult or pediatric) human tissue of immunological relevance upon donor consent or as medical waste (depending on the origin of the tissue).
- At present, the tissue approved on the protocol includes blood, tonsils, bone marrow, bone and associated marrow, lymph nodes, spleen, thymus, tumor, and stool. Additional tissue can be added to the protocol upon request. **Regarding blood samples, it is now possible for interested HI3 investigators to obtain fresh blood samples from a group of selected healthy donors.** If interested in using this COMIRB protocol for your human studies and/or getting healthy blood samples, please contact: [Roberta.Pelanda@cuanschutz.edu](mailto:Roberta.Pelanda@cuanschutz.edu)
- To learn more about human immune system (HIS) mouse models and the services offered through the TRNPM contact: [Julie.Lang@cuanschutz.edu](mailto:Julie.Lang@cuanschutz.edu) or [Roberta.Pelanda@cuanschutz.edu](mailto:Roberta.Pelanda@cuanschutz.edu)

### HI3 Support for development of Immunotherapeutics

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Mission: To facilitate the production of clinical grade biological reagents and cell-based immunotherapeutics

- Under the direction of Terry Fry, MD, the CD19 lymphoma trial was granted permission to proceed by the FDA with plans to enroll the first patient at UCH in March 2020. In addition, the CD19 ALL IND for Children’s Hospital Colorado will be submitted in February and process development work for the CD19xCD22 CAR T cell trial will begin at Gates Biomanufacturing Facility this month.

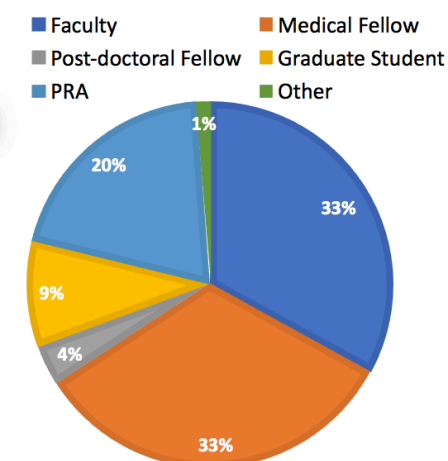
### HI3 Training Program

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Mission: To develop and establish training programs across the training continuum at the pre-doctoral, post-doctoral, and junior faculty level

- HI3 has offered a free 2.5-day 'FUN-SIZE' human immunology and immunotherapy workshop 4x over the past 1.5 years to 85 HI3 trainees. Each session has been filled beyond capacity and served a variety of participants in various stages of their career (see chart) from a diverse array of specialties, including infectious disease, cardiology, pulmonology, surgery, rheumatology, hem/onc, pediatrics, critical care, allergy/immunology and many others.
- HI3 will offer the 'FUN-SIZE' workshop again in the fall of 2020 - dates TBD. If interested in learning more about this opportunity or to register online, please visit the [Training page of the HI3 website](#).
- Questions? Contact Aimee.Bernard@cuanschutz.edu

HI3 FUN-SIZE PARTICIPANTS (85) 2018 & 2019



### JANUARY

- **January 15:** HI3 Translational Human Immunology Seminar, 'SEMA7A and PDL-1 in postpartum breast cancer,' by Traci Lyons, PhD in RC1-North, Room 9107 from 4:00-5:00pm

### FEBRUARY

- **February 6:** HIMSR Vectra User Group meeting at 2:00pm in RC1-North, Room 8108.
- **February 19:** HI3 Translational Human Immunology Seminar, 'The effect of malaria on the immune system of children,' by Rosemary Rochford, PhD, in RC1-North, Room 9107 from 4:00-5:00pm

### MARCH

- **March 5:** HIMSR Vectra User Group meeting at 2:00pm in RC1-North, Room 8108.
- **March 18:** HI3 Translational Human Immunology Seminar, 'Title TBD,' by Peter Gottlieb, MD, in RC1-North, Room 9107 from 4:00-5:00pm