



October 2017

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

HI3 Faculty Recruitment

Updates on HI3 faculty searches

- **Basic Human Immunology**
 - [Tenure-eligible faculty position](#) in the Department of Immunology and Microbiology with primary duties that include the development of a strong, externally funded research program that addresses mechanisms of human immunology. Interviews to resume late fall 2017.
 - **The Patten-Davis Foundation has endowed a faculty position in basic human immunology.** The endowment of \$2,000,000 will be called the Amy Davis Chair for Basic Human Immunology. An international search for this new Associate or Full Professor position will begin soon. We would greatly appreciate nominations from the HI3 membership for this position.
- **Autoimmunity**
 - [Tenure-eligible faculty position](#) at the full professor level in the University of Colorado School of Medicine. Primary duties include the development and growth of a Human Autoimmune Disease Pathogenesis and Prevention Program alongside the development of a strong, externally funded research program with a specific focus on translational research. Interview(s) expected to resume late fall 2017.
- **Data Scientist/Bioinformatician**
 - Ron Schuyler, PhD accepted our offer and will start on November 1, 2017.

HI3 Human Immune Monitoring Shared Resource (HIMSR)

To facilitate and support human immunology research and discovery

- We are up and running with human tissue multi-parameter IHC on the Perkin Elmer Vectra platform using our new Leica Bond RX autostainer with a 120 slide per week capacity. Please see the [HIMSR section of the HI3 website](#) for a complete list of the standard antibodies we offer.
- To support our members using mouse tissue, we spearheaded the development of a mouse IHC interest group with the goal of sharing knowledge and working protocols. We also created a shareable spreadsheet for antibody information that includes specifics about tissue prep, antibody clones, staining protocols and contact information. Please contact Kimberly.Jordan@ucdenver.edu
- To further support our members using mouse tissue, we will be sponsoring a hands-on Opal staining workshop for the Vectra platform. This full-day workshop will cover multiplexing with Opal staining reagents on mouse tissue, assay development, and basics of the inform analysis software (companion to the Vectra instrument). Please contact Kimberly.Jordan@ucdenver.edu
- Would you like to include HIMSR services in your next grant application and obtain pre-written text for your grant about the HIMSR? Please contact Kimberly.Jordan@ucdenver.edu

HI3 Translational Research Networking and Preclinical Models (TRNPM)

To provide a nexus for multiple aspects of translational immunology research

- Check out the [TRNPM website](#) to meet the team and learn more about the mission, services, rates and fee structure, iLab and request forms.
- Would you like to learn more about humanized mouse models and the services offered through the TRNPM? Contact Julie.Lang@ucdenver.edu or Roberta.Pelanda@ucdenver.edu

HI3 Translational Research Networking and Preclinical Models (TRNPM) SCIENCE UPDATES

- Chimerism of cord-blood derived humanized mice in our BRGS strain remains at >90% success with an average of ~60% human chimerism.
- Successfully completed two "official" immune-oncology experiments in cord-blood derived humanized mice in August 2017.
- Continue ongoing collaboration evaluating the (human) immune response in humanized mice to anti-PD1 therapies to various tumors.
- Continue ongoing collaboration investigating the use of humanized mice as a model for EBV Type I and Type II infection.
- Successfully identified, with Clinimmune, several frozen cord blood samples that HLA-match (5/6 or better) select tumor cell lines. Currently optimizing the thawing procedure for cord blood samples and subsequent purification of CD34+ stem cells to create humanized mice for HLA-matched immune systems to the select tumor cell lines.
- Submission of IACUC protocol that will include generation of "BLT" humanized mice, humanized mice co-transplanted with human thymus and matched CD34+ cells from the liver of same donor.

HI3 GMP Immunotherapeutic Support

Facilitate the production of clinical grade biological reagents and cell-based immunotherapeutic products

- The HI3 has provided \$250,000 to Drs. Enkhee Purev and Craig Jordan to facilitate CAR-T cell process development on the AMC in a collaboration between Clinimmune and the Gates Center. To date, a successful scale-up production of ~2 billion CD19 CAR T cells (>60% CAR expression) took place in the Gates Manufacturing Facility process development suite in preparation for a GMP run. Additionally, the HI3 HIMSR was able to analyze the cells to validate CAR-T protocols.

Facilitate the use of campus CLIA labs for monitoring patient responses and clinical decision-making

- Check out the [HI3 website for a list of CLIA labs](#) on campus.

HI3 Training Program

Develop and establish training programs across the training continuum at the pre-doctoral, post-doctoral, and junior faculty level

- This subcommittee is expected to convene late fall 2017 or early winter 2018.

HI3 Clinical Research Program

Provide expertise and coordination with established campus clinical research services to HI3 research teams to effectively operationalize clinical research

- This HI3 endeavor may be shifting toward the development of an HI3 Clinical Immunology Core (CIC) under the direction of Kevin Deane, MD, PhD. The HI3 CIC would provide access to clinical data and biospecimens from subjects with autoimmune and related diseases, high-risk and healthy controls. A campus-wide HI3 meeting will be scheduled later fall 2017 or early winter 2018 to learn more about this potential program.

UPCOMING MEETINGS and ACTION ITEMS

- Be on the lookout for a calendar invitation to a campus-wide HI3 Members Meeting late fall 2017.
- Please visit the [HI3 website](#) to check out (and share) the [SUPPORT button](#) with friends, family, neighbors, grateful patients or anyone interested in supporting our initiative!