and

Vision Science Retreat
Thursday, May 31 &
Friday, June 1, 2018

Sackler Building,
145 Harrison Avenue
Presentations in room 114, posters in room B09
Thursday, May 31, Sackler B09

4:00-5:00 pm  Presenters will put up posters

5:00-6:30 pm  Poster viewing

Refreshments will be served.

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Friday, June 1, 2018

8:00-8:40  Posters and Breakfast

8:45-8:50  Drs. Jay Duker and Noorjahan Panjwani: Welcome

8:50-9:00  Dr. Noorjahan Panjwani, School of Medicine and New England Eye Center, Tufts Medical Center: “State of vision research at Tufts University”

Session 1:  Moderator: Dr. Noorjahan Panjwani

9:00-9:30  Special Lecture: Dr. Peter Baciu, Senior Director Ocular Disease, Editas Medicine, Cambridge, “CRISPR genome editing for the treatment of rare ocular diseases: Current status and future aspirations”
9:30-9:45 Dr. Jay Duker, Chair, New England Eye Center, Tufts Medical Center, “Retina research 2018 - Trends, topics, and unmet needs”

9:45-10:00 Dr. Nadia Waheed, New England Eye Center, “Integrating imaging research into clinical trial endpoints”

10:00-10:15 Dr. Daniela Ferrara, New England Eye Center, “Image biomarkers in advanced age-related macular degeneration”

10:15-10:35 BREAK

10:40 Announcement of Poster Prize Winners
Competition judges: Drs. Pedram Hamrah, Rajendra Kumar-Singh, and Driss Zoukhri

Session 2: Moderator: Dr. Pedram Hamrah

10:45-11:15 Keynote Lecture: Dr. Michael Levin, Tufts School of Arts and Sciences, Medford, “Quantitative modeling of endogenous bioelectric circuits to address birth defects and regenerative medicine”

11:15-11:30 Dr. Chung-Jung Chiu, HNRCA, Lab of Nutrition & Vision Research, “Nut intake and the risk of age-related macular degeneration in women”

11:30-11:45 Dr. Rajendra Kumar-Singh, School of Medicine, “Gene and protein therapies for ocular disease”

11:45-12:00 Dr. Elizabeth Fini, New England Eye Center, “Discovery approach to ocular hypertension”
**Session 3:**  **Moderator:**  Dr. James Kubilus

1:00-1:15  Dr. Chiara Ghezzi, Kaplan Lab, Biomedical Engineering, Medford, “Tissue engineered cornea systems - updates and future plans”

1:15-1:30  Dr. Pedram Hamrah, New England Eye Center, “Immunobiology of corneal plasmacytoid dendritic cells”

1:30-1:45  Dr. Driss Zoukhri, School of Dental Medicine, “Role of lacrimal gland myoepithelial cells in dry eye disease”

1:45-2:00  Dr. Irmgard Behlau, Tufts Medical Center, “Antimicrobial silk ocular drug delivery implant for chronic posterior segment diseases”

2:00-2:15  Dr. James Kubilus, School of Medicine, “Embryonic development of the anterior eye in the chicken”

2:15-2:45  BREAK

**Session 4:**  **Moderator:**  Dr. Allen Taylor

2:45-3:00  Dr. Alice Rushforth, CTSI, “Navigate the translational research landscape with Tufts CTSI”

3:00-3:15  Dr. Michelle Liang, New England Eye Center, “Argus II: Experience at the New England Eye Center”
3:15-3:30  Dr. Sheldon Rowan, HNRCA, Lab of Nutrition & Vision Research, “Aged mice lacking the Nrf2 antioxidant regulator develop cataracts and features of AMD and diabetic retinopathy”

3:30-3:45  Dr. Vicki Chen, New England Eye Center, “Recombinant human collagen VII reduces corneal inflammation and fibrosis after injury in the collagen VII deficient mouse”

Research Fellows:

3:45-4:00  Dr. Anam Akhlaq, Hamrah Lab, “Epidemiology and risk factors associated with subcategories of neuropathic corneal pain”

4:00-4:15  Dr. Neslihan Dilruba Koseoglu, Hamrah Lab, “The utilization of artificial intelligence for corneal nerve analyses of in vivo confocal microscopy images for the diagnosis of neuropathic corneal pain”

4:15-4:30  Dr. Deepa Talreja, Kumar-Singh Lab, “Development of a platform protein delivery system for retinal cells in vivo following intravitreal injection”
Tufts Vision Science Retreat
Poster Presentations
Sackler B09 (basement classroom)

Poster presentation guidelines:
Kindly put up your posters between 4:00 PM and 5:00 PM in Sackler B09 on Thursday, May 31, 2018
*Even number poster presenters should be present at their posters on May 31 from 5:00 PM to 6:00 PM.
**Odd number poster presenters should be at their posters on June 1 from 8:00 AM to 8:45 AM.

The poster number precedes each entry.

1  Abdo Abdou-Slaybi, PI Hamrah, “Adult and pup trigeminal ganglion neuronal cells exhibit differential expression of neuropeptide receptor kisspeptin receptor 1”

2  Anam Aklaq, PI Hamrah, “Change in discomfort- and vision-related symptoms of the ocular surface disease index in patients with neuropathic corneal pain”


4  Malvika Arya, PI Waheed, “Parafoveal vessel density assessment by optical coherence tomography angiography (OCTA) in diabetic eyes”

5  Irmgard Behlau, “The search for antifungal prophylaxis after artificial cornea surgery”

7 William Binotti, PI Hamrah, “Comparative assessment of semi-automated conjunctival methodologies for spectral domain anterior segment optical coherence tomography angiography”

8 Zhiyi Cao, PI Panjwani, “Treatment with a highly selective galectin-3 inhibitor, GAL-200-10, reduces both pathological corneal neovascularization and fibrosis”

9 Bhanu Dasari, PI Kumar-Singh, “Aptamer mediated protein delivery to retinal cells”

10 Gabriela Dieckmann, PI Hamrah, “Neuropathic corneal pain in post-cataract surgery patients”

11 Gabriela Dieckmann, PI Hamrah, “Efficacy of intranasal neurostimulation for peripheral pain among neuropathic corneal pain patients”

12 Elizabeth Fini, “Endocytosis inhibitors protect the ocular surface against damaging stress”

13 Elizabeth Fini, “Homeostatic role for GPR158 in modulating intraocular pressure (IOP)”

14 Deshea Harris, PI Hamrah, “Plasmacytoid dendritic cells and their role in vascular endothelial cell proliferation and differentiation in vitro”

15 Arsia Jamali, PI Hamrah, “A murine model of Alzheimer's disease shows gender-specific ocular surface findings”
16 Arsia Jamali, *PI Hamrah*, “Local adoptive transfer of plasmacytoid dendritic cells as a novel therapeutic approach for corneal neovascularization”


18 Binit Kumar, *PI Kumar-Singh*, “Complement membrane attack complex activates the NLRP3 inflammasome in experimental autoimmune uveitis and inhibition by AAV mediated delivery of sCD59”

19 Maria Lopez, *PI Hamrah*, “Corneal pain has a negative impact on the quality of life of patients with neuropathic corneal pain”

20 Opeoluwa Olukorede, *PI A. Taylor HNRCA*, “Autophagy in the degradation of advanced glycation end products”

21 Chris Or, *PI Waheed*, “Incidence of vascularized drusen in non-exudative age-related macular degeneration using spectral domain optical coherence tomography (OCT) angiography”

22 Gustavo Ortiz, *PI Hamrah*, “Mechanisms of action of the leukocyte function-associated antigen-1 (LFA-1) antagonist lifitegrast in dry eye disease”

23 Nicholas Pondelis (*colleague will present*), *PI Hamrah*, “Detection and assessment of treatment efficacy of demodex blepharitis by in vivo confocal microscopy”

24 Sheldon Rowan, *PI A. Taylor HNRCA*, “Glycemically stressed Nrf2-null mice develop features of age-related macular degeneration and diabetic retinopathy”
25  Alice Rushforth group, CTSI, with Drs Geneve Allison and Dan Weiner “Programs, resources & services to foster collaborative, interdisciplinary research”

26  Yashar Seyed-Razavi, PI Hamrah, “Role of resident dendritic cells on corneal cold thermoreceptor function”

27  Deepa Talreja, PI Kumar-Singh, “Platform for the rapid delivery of protein therapeutics into retinal and corneal cells in vivo following intravitreal injection”

28  Vanessa Yanez, PI Kumar-Singh, “CRISPR/Cas9-based editing delivered in vitro using an aptamer for the treatment of retinitis pigmentosa P23H”