

Ophthalmology

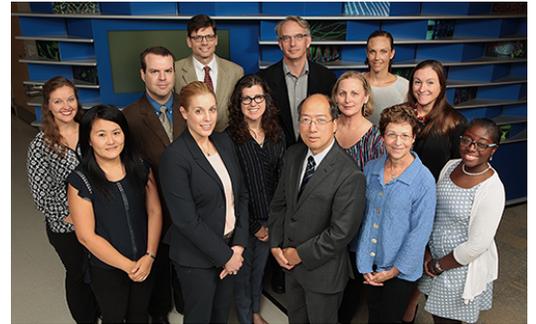
Division Details

RESEARCH AND TRAINING DETAILS

Faculty	14
Joint Appointment Faculty	1
Research Fellows and Post Docs	9
Research Graduate Students	2
Total Annual Grant Award Dollars	\$1,038,537

CLINICAL ACTIVITIES AND TRAINING

Staff Physicians	1
Clinical Fellows	1
Inpatient Encounters	2,040
Outpatient Encounters	32,294



Row 1: F Namekawa, S Lopper, M Yang, T Schwartz, E Dosunmu

Row 2: S Brook, M Gray, M Rice, B Connors, V Utz

Row 3: W Motley, R Lang, K Thomson

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Division Highlights

Terry L. Schwartz, MD

Cortical visual impairment (CVI) is the leading cause of bilateral visual impairment in children in United States, and is very common in children with cerebral palsy. Working in collaboration with the department of occupational therapy, the Maxson study's aim is to compare the efficacy of a novel, in-home telehealth-based intervention approach for children with CVI and their caregivers to standard of care. Additionally, the study will assess the feasibility and acceptability of the in-home telehealth-based intervention approach for children with CVI and their caregivers through the use of interviews and questionnaires. Study visits take place in specialized clinics in Kentucky, rural Ohio and West Virginia.

Fumika Hamada, PhD

[Dr. Hamada's laboratory](#) studies circadian rhythm of body temperature (body temperature rhythm). Body temperature rhythm is critical for the maintenance of homeostasis functions, such as metabolic energy generation and sleep. Her lab's progress has been remarkable as their work reveals the hitherto unknown molecular mechanisms underlying body temperature rhythm and has led to the first identification of a molecule that links circadian clock to body temperature rhythm. In the past year, [Dr. Hamada](#) has presented her work at Society for Neuroscience 2016, San Diego and [UCSD](#).

Melissa Rice, OD

[Dr. Melissa Rice, OD](#), completed two studies on cataract development associated with long-term glucocorticoid therapy in Duchenne muscular dystrophy (DMD) studies. This was a retrospective analysis of DMD patients evaluated in the [Comprehensive Neuromuscular Center](#) at Cincinnati Childrens' between 1/1/2010 and 12/31/2015. Completion of the studies were in collaboration with Drs. [Michael Yang, MD](#); [Brenda Wong, MD, MBBS](#); and [Paul Horn, PhD](#). Dr. Rice presented her smaller cohort at the [American Academy of Optometry](#), and

the second poster of the entire cohort will be presented by Dr. Wong at the [World Muscle Society](#) conference in Saint Malo, France in October.

Dr. Rice is the new medical director of the CLEAR Clinic providing functional vision assessments on children with cortical visual impairment and cerebral palsy. This clinic is in the [Aaron W. Perlman Center](#) at Cincinnati Children's.

Michael B. Yang, MD

[Dr. Michael Yang, MD](#), serves as site principal investigator (PI) for the Postnatal Growth and Retinopathy of Prematurity (G-ROP) multicenter [study](#) which aims to analyze various risk factors, including postnatal weight gain, for incorporation into a highly accurate risk model that can help predict which premature infants will develop severe ROP, which may allow the elimination of lower risk infants from screening altogether. With Patricia Cobb's assistance, the enrollment of over 1,500 premature infants from Cincinnati Children's Hospital Medical Center, [Good Samaritan Hospital](#), and the [University of Cincinnati Medical Center](#) in the retrospective and prospective portions of the study, makes Cincinnati Children's among the two highest enrolling centers for the study. Published initial result, and secondary analyses are forthcoming, which are likely to impact recommended screening protocols nationwide in the future.

Dr. Yang is also site PI for the Phase 1 Trial of Bevacizumab Treatment for Severe ROP. Published initial results of this study are in *JAMA Ophthalmology*, and it is this year's highlighted paper for the Division of Pediatric Ophthalmology.

Division Publications

1. Tang X; Roessingh S; Hayley SE; Chu ML; Tanaka NK; Wolfgang W; Song S; Stanewsky R; Hamada FN. [The role of PDF neurons in setting the preferred temperature before dawn in Drosophila](#). *eLife*. 2017; 6.
2. VanderVeen DK; Melia M; Yang MB; Hutchinson AK; Wilson LB; Lambert SR. [Anti-Vascular Endothelial Growth Factor Therapy for Primary Treatment of Type 1 Retinopathy of Prematurity](#). *Ophthalmology: Journal of The American Academy of Ophthalmology*. 2017; 124:619-633.
3. Pediatric Eye Disease Investigator Group; Chen AM; Holmes JM; Chandler DL; Patel RA; Gray ME; Erzurum SA; Wallace DK; Kraker RT; Jensen AA. [A Randomized Trial Evaluating Short-term Effectiveness of Overminus Lenses in Children 3 to 6 Years of Age with Intermittent Exotropia](#). *Ophthalmology: Journal of The American Academy of Ophthalmology*. 2016; 123:2127-2136.
4. Goda T; Tang X; Umezaki Y; Chu ML; Kunst M; Nitabach MN; Hamada FN. [Drosophila DH31 Neuropeptide and PDF Receptor Regulate Night-Onset Temperature Preference](#). *The Journal of neuroscience : the official journal of the Society for Neuroscience*. 2016; 36:11739-11754.
5. Palevski D; Levin-Kotler LP; Kain D; Naftali-Shani N; Landa N; Ben-Mordechai T; Konfino T; Holbova R; Molotski N; Rosin-Arbesfeld R. [Loss of Macrophage Wnt Secretion Improves Remodeling and Function After Myocardial Infarction in Mice](#). *Journal of the American Heart Association : Cardiovascular and Cerebrovascular Disease*. 2017; 6:e004387.
6. Wallace DK; Kraker RT; Freedman SF; Crouch ER; Hutchinson AK; Bhatt AR; Rogers DL; Yang MB; Haider KM; VanderVeen DK. [Assessment of Lower Doses of Intravitreal Bevacizumab for Retinopathy of Prematurity A Phase 1 Dosing Study](#). *JAMA Ophthalmology*. 2017; 135:654-656.
7. Zhou L; Yang K; Carpenter A; Lang RA; Andl T; Zhang Y. [CD133-positive dermal papilla-derived Wnt ligands regulate postnatal hair growth](#). *The Biochemical journal*. 2016; 473:3291-3305.
8. Wasserman H; Hufnagel RB; Utz VM; Zhang K; Valencia CA; Leslie ND; Crimmins NA. [Bilateral cataracts in a 6-yr-old with new onset diabetes: a novel presentation of a known INS gene mutation](#). *Pediatric Diabetes*. 2016; 17:535-539.

9. Merhar SL; Gozdas E; Tkach JA; Harpster KL; Schwartz TL; Yuan W; Kline-Fath BM; Leach JL; Altaye M; Holland SK. **Functional and structural connectivity of the visual system in infants with perinatal brain injury.** *Pediatric Research*. 2016; 80:43-48.
10. Utz VM. **Nature versus nurture: A systematic approach to elucidate gene-environment interactions in the development of myopic refractive errors.** *Ophthalmic Genetics (Informa)*. 2017; 38:117-121.
11. Gray ME; Palileo CM; Sheridan RM. **Cellular neurothekeoma of the eyelid in a 6-year-old boy.** *Journal of American Association for Pediatric Ophthalmology and Strabismus*. 2016; 20:374-376.

Grants, Contracts, and Industry Agreements

Annual Grant Award Dollars

Investigator	Title	Sponsor	ID	Dates	Amount
Eniolami Dosunmu, MD	Save Our Sight Ohio Amblyope Registry	Ohio Department of Health (The Research Instit at Nationwide Hosp)	02530011AR0109	07/01/2008 - 06/30/2018	\$5,000
Richard Lang, PhD	Regulation of Vascular Development in the Eye by an Opsin 5-dependent Clock	National Institutes of Health	R01 EY027077	09/01/2016 - 08/31/2021	\$494,153
Richard Lang, PhD	Regulation of Eye Development by an Opsin 5- dopamine Pathway	National Institutes of Health (Emory University)	RO1 EY027711	04/01/2017 - 03/31/2021	\$248,684
Fumika Namekawa	Molecular and Neural Mechanisms of Temperature Preference Rhythm in Drosophila	National Institutes of Health	R01 GM107582	09/01/2016 - 08/31/2018	\$290,700
Total Annual Grant Award Dollars					\$1,038,537
