Stanford

Daniel Palanker, PhD

Professor of Ophthalmology and, by courtesy, of Electrical Engineering

NIH Biosketch available Online Curriculum Vitae available Online

CONTACT INFORMATION

- **Alternate Contact**

  Heidi Wong - Administrative Assistant

  Email heidiyyw@stanford.edu

  Tel 725-0496

Bio

BIO

Daniel Palanker is a Professor of Ophthalmology and, by courtesy, of Electrical Engineering at Stanford University. He received MSc in Physics in 1984 from the Yerevan State University in Armenia, and PhD in Applied Physics in 1994 from the Hebrew University of Jerusalem, Israel.

Dr. Palanker is working on optical and electronic technologies for diagnostic, therapeutic, surgical and prosthetic applications, primarily in ophthalmology. In the field of biomedical optics, these studies include interferometric imaging of neural signals and cellular physiology. In the field of electro-neural interfaces, Dr. Palanker is developing retinal prosthesis for restoration of sight to the blind and implants for electronic control of organs.

Several of his developments are in clinical practice world-wide: Pulsed Electron Avalanche Knife (PEAK PlasmaBlade, Medtronic Inc.), Patterned Scanning Laser Photocoagulator (PASCAL, Iridex Inc.), Femtosecond Laser System for Cataract Surgery (Catalys, J&J), Neural stimulator for enhanced tear secretion (TrueTear, Allergan Inc.). Photovoltaic Retinal Prosthesis (PRIMA, Pixium Vision) is in clinical trials.

ACADEMIC APPOINTMENTS

- Professor, Ophthalmology
- Professor (By courtesy), Electrical Engineering
- Member, Bio-X
- Member, Wu Tsai Neurosciences Institute

ADMINISTRATIVE APPOINTMENTS

- Director, Hansen Experimental Physics Laboratory, (2016-2021)
- Director of Research, Department of Ophthalmology, (2003-2018)

HONORS AND AWARDS

- Translational Research Award for Restoration of Sight in Age-Related Macular Degeneration, SPIE - International Society for Optics and Photonics. (2024)
- ARVO Silver Fellow, ARVO - Association for Research in Vision and Ophthalmology (2022)
- Bartimaeus Award, The World Congress on Artificial Vision “The Eye and The Chip“. (2019)
- Bressler Prize in Vision Science, Lighthouse Guild (2016)

- Scientific Achievement Award, Alcon Research Institute (2016)
- Translational Research Award for development of the Non-damaging Retinal Laser Therapy, SPIE - International Society for Optics and Photonics (2014)
- R&D 100 award for the OCT-Guided Femtosecond Laser for Cataract Surgery, with OptiMedica Corp., R&D 100 (2012)
- Medical Design Excellence Award for development of the Pulsed Electron Avalanche Knife (PEAK), Medical Design Excellence Awards; Canon Communications (2009)
- R&D 100 Award for the Pattern Scanning Laser Photocoagulator (PASCAL). with OptiMedica Inc., R&D Journal (2007)
- Pascal RoI award for the best paper on Ophthalmic Technologies Conference (SPIE, Photonics West), SPIE (2004)
- Winner of the Collegiate Inventors Competition, US National Inventors Hall of Fame (2001)
- First Place in Instrumentation and Devices: Plasma-based Cutting Instrument for Vitreoret. Surgery, US Vitreous Society (2000)
- Dr. Shlomiuk award for outstanding Ph.D. Research., The Hebrew University of Jerusalem, Israel (1995)
- Wolf Foundation scholarship for outstanding doctoral students., The Wolf Foundation (1992)
- Prof. Rabau award for application of the ArF excimer laser to In Vitro Fertilization., Israel Society for Fertility Research (1991)

PROFESSIONAL EDUCATION

- Postdoctoral, Stanford University , Picosecond Free Electron Laser Center (1997)
- PhD, Hebrew University of Jerusalem, Israel , Applied Physics (1995)
- MSc, Yerevan State University, USSR , Physics (1984)

LINKS

- Palanker Lab Home Page: https://web.stanford.edu/~palanker/lab/index.html

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Interactions of electric field and light with biological cells and tissues: mechanisms and applications to imaging, diagnostics, therapeutics and prosthetics.

Specific fields of interest include:

Electro-neural interfaces;

Electronic control organs;

Optical detection of neural signaling.

Current research projects include:

1) Photovoltaic Retinal Prosthesis:

Photovoltaic restoration of sight to patients blinded by retinal degeneration.

2) Electronic Control of Organs:

Secretion of tears and reversible vasoconstriction by pulsed electrical stimulation: mechanisms and applications.

3) Label-free optical imaging of retinal physiology: Interferometric detection of neural signals in the retina, interferometric imaging of physiological signals.

Teaching

COURSES

2025-26

- Introduction to Electro-neural Interfaces: NEPR 230, OPHT 207 (Spr)

2023-24

- Introduction to Electro-neural Interfaces: NEPR 230, OPHT 207 (Spr)

2022-23

- Introduction to Electro-neural Interfaces: OPHT 207 (Aut)

STANFORD ADVISEES

Med Scholar Project Advisor

Sarthak Shah

Postdoctoral Faculty Sponsor

Keith Ly

Doctoral Dissertation Advisor (AC)

Nathan Jensen, Anna Kochnev Goldstein

Publications

PUBLICATIONS

- **Residual photoreceptors affect the response of a degenerate retina to electrical stimulation.** *Proceedings of the National Academy of Sciences of the United States of America*
  Ly, K., Bhuckory, M. B., Pham-Howard, D., Kochnev Goldstein, A., Jensen, N., Palanker, D.
  2026; 123 (22): e2537064123
- **Maximizing the fidelity of a photovoltaic subretinal prosthesis for human patients.** *Journal of neural engineering*
  Jensen, N., Ly, K., Kochnev Goldstein, A., Devaud, Q., Palanker, D.
  2026
- **Simulation of prosthetic vision with the PRIMA system and enhancement of face representation.** *Journal of neuroengineering and rehabilitation*
  Kochnev Goldstein, A., Park, J., Zhou, Y., Jensen, N., Palanker, D.
  2026
- **Reversible isomerization of rhodopsin imaged in-vivo with phase-sensitive OCT**
  Zaman, M., Zhuo, Y., Li, H., Bhuckory, M., Pham-Howard, D., Ling, T., Palanker, D.
  edited by Hammer, D. X., Nankivil, D., Tao, Y. K.
  SPIE-INT SOC OPTICAL ENGINEERING.2026
- **Interferometric imaging of the reversible rhodopsin dynamics in the living rat eye.** *Nature communications*
  Zhuo, Y., Li, H., Bhuckory, M., Pham-Howard, D., Palanker, D.
  2025; 16 (1): 10730
- **On the physiological processes underlying optoretinography [Invited].** *Biomedical optics express*
  Li, H., Zhuo, Y., Pandiyan, V. P., Zaman, M. A., Ling, T., Sabesan, R., Palanker, D.
  2025; 16 (11): 4333-4352
- **On the physiological processes underlying optoretinography [Invited]** *BIOMEDICAL OPTICS EXPRESS*
  Li, H., Zhuo, Y., Pandiyan, V., Zaman, M., Ling, T., Sabesan, R., Palanker, D.

2025; 16 (11): 4333-4352

- **Subretinal Photovoltaic Implant to Restore Vision in Geographic Atrophy Due to AMD.** *The New England journal of medicine*
  Holz, F. G., Le Mer, Y., Muqit, M. M., Hattenbach, L. O., Cusumano, A., Grisanti, S., Kodjikian, L., Pileri, M. A., Matonti, F., Souied, E., Stanzel, B. V., Szurman, P., Weber, et al
  2025
- **Amorphous silicon resistors enable smaller pixels in photovoltaic retinal prosthesis.** *Journal of neural engineering*
  Shin, A., Jensen, N., Butt, E., An, J., Pham-Howard, D., Galambos, L., Mathieson, K., Kamins, T., Palanker, D.
  2025
- **Accelerated Simulation of Multi-Electrode Arrays Using Sparse and Low-Rank Matrix Techniques** *IEEE TRANSACTIONS ON BIOMEDICAL ENGINEERING*
  Jensen, N., Chen, Z., Goldstein, A., Palanker, D.
  2025; 72 (8): 2321-2330
- **Restoration of Sight with Electronic Retinal Prostheses.** *Annual review of vision science*
  Palanker, D., Weiland, J. D., Rosin, B., Sahel, J. A.
  2025
- **Restoration of Central Vision with the PRIMA System in Patients with Geographic Atrophy: Preliminary Results from the PRIMAVERA trial**
  Muqit, M., Holz, F. G., Le Mer, Y., Olmos, L. C., Palanker, D., Hornig, R., Sahel, J.
  ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2025
- **Response of the degenerate retina to electrical stimulation is affected by residual photoreceptors**
  Ly, K., Pham-Howard, D., Bhuckory, M., Goldstein, A., Jensen, N., Palanker, D.
  ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2025
- **Scaffold on photovoltaic prosthesis replicates the human subretinal debris layer for preclinical studies in rats**
  Bhuckory, M., Shin, A., Ly, K., Mamchik, V., Jensen, N., Devaud, Q., Pham-Howard, D., Goldstein, A., Palanker, D.
  ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2025
- **Reversible isomerization of rhodopsin imaged in a living eye with phase-sensitive OCT**
  Zhuo, Y., Li, H., Bhuckory, M., Palanker, D.
  ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2025
- **Amorphous silicon resistors enable smaller pixels in photovoltaic retinal prosthesis.** *bioRxiv : the preprint server for biology*
  Shin, A., Jensen, N., Butt, E., An, J., Pham-Howard, D., Galambos, L., Mathieson, K., Kamins, T., Palanker, D.
  2025
- **Retinal thermal deformations measured with phase-sensitive optical coherence tomography in vivo.** *Light, science & applications*
  Zhuo, Y., Bhuckory, M., Li, H., Hattori, J., Pham-Howard, D., Veysset, D., Ling, T., Palanker, D.
  2025; 14 (1): 151
- **Enhancing prosthetic vision by upgrade of a subretinal photovoltaic implant in situ.** *Nature communications*
  Bhuckory, M. B., Monkongpitukkul, N., Shin, A., Kochnev Goldstein, A., Jensen, N., Shah, S. V., Pham-Howard, D., Butt, E., Dalal, R., Galambos, L., Mathieson, K., Kamins, T., Palanker, et al
  2025; 16 (1): 2820
- **Accelerated Simulation of Multi-Electrode Arrays Using Sparse and Low-Rank Matrix Techniques.** *bioRxiv : the preprint server for biology*
  Jensen, N., Charles Chen, Z., Kochnev Goldstein, A., Palanker, D.
  2024
- **Light-evoked deformations in rod photoreceptors, pigment epithelium and subretinal space revealed by prolonged and multilayered optoretinography.** *Nature communications*
  Tan, B., Li, H., Zhuo, Y., Han, L., Mupparapu, R., Nanni, D., Barathi, V. A., Palanker, D., Schmetterer, L., Ling, T.
  2024; 15 (1): 5156
- **3D electronic implants in subretinal space: Long-term follow-up in rodents.** *Biomaterials*
  Bhuckory, M. B., Wang, B. Y., Chen, Z. C., Shin, A., Pham-Howard, D., Shah, S., Monkongpitukkul, N., Galambos, L., Kamins, T., Mathieson, K., Palanker, D.

2024; 311: 122674

- **On selectivity of neural stimulation with subretinal photovoltaic implants**
  Goldstein, A., Jensen, N., Wang, B., Bhuckory, M., Palanker, D. V.
  ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2024
- **Non-Damaging Laser Retinal Therapy (NRT) for Type 2 Macular Telangiectasia: Three years follow-up**
  Lavinsky, D., Chaves, A., Schneider, W., Oliveira, M., Luz, P., Lavinsky, F., Palanker, D. V.
  ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2024
- **Transcriptional and Translational Profiling of Reactive Muller Glia Following Cell-type specific Retinal Injury**
  Ashouri, M., Bhuckory, M., Xia, X., Nahmou, M., Tsien, C., Huie, E., Li, B., Cameron, E., Wang, S., Palanker, D. V., Goldberg, J.
  ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2024
- **Letter Acuity and Reading with a Subretinal Photovoltaic Implant in Geographic Atrophy**
  Muqit, M., Le Mer, Y., de Koo, L., Holz, F. G., Sahel, J., Palanker, D. V.
  ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2024
- **Mapping the retinal resistivity with electrical impedance tomography for modeling of retinal stimulation**
  Shah, S., Goldstein, A., Chen, Z., Vasireddy, P., Bhuckory, M., Palanker, D. V.
  ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2024
- **Replacement of a subretinal prosthesis with a higher-resolution array improves grating acuity in the same animal**
  Bhuckory, M., Monkongpitukkul, N., Shin, A., Goldstein, A., Shah, S., Pham-Howard, D., Dalal, R., Galambos, L., Kamins, T., Palanker, D. V.
  ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2024
- **Enhancing Prosthetic Vision by Upgrade of a Subretinal Photovoltaic Implant in situ.** *bioRxiv : the preprint server for biology*
  Bhuckory, M. B., Monkongpitukkul, N., Shin, A., Goldstein, A. K., Jensen, N., Shah, S. V., Pham-Howard, D., Butt, E., Dalal, R., Galambos, L., Mathieson, K., Kamins, T., Palanker, et al
  2024
- **Prosthetic Visual Acuity with the PRIMA Subretinal Microchip in Patients with Atrophic Age-Related Macular Degeneration at 4 Years Follow-up.** *Ophthalmology science*
  Muqit, M. M., Le Mer, Y., Olmos de Koo, L., Holz, F. G., Sahel, J. A., Palanker, D.
  2024; 4 (5): 100510
- **Three-dimensional electro-neural interfaces electroplated on subretinal prostheses.** *Journal of neural engineering*
  Butt, E., Wang, B. Y., Shin, A., Chen, Z. C., Bhuckory, M., Shah, S., Galambos, L., Kamins, T., Palanker, D., Mathieson, K.
  2024
- **Three-dimensional electro-neural interfaces electroplated on subretinal prostheses.** *bioRxiv : the preprint server for biology*
  Butt, E., Wang, B., Shin, A., Chen, Z. C., Bhuckory, M., Shah, S., Galambos, L., Kamins, T., Palanker, D., Mathieson, K.
  2023
- **Prosthetic Visual Acuity with the PRIMA System in Patients with Atrophic Age-related Macular Degeneration at 4 years follow-up.** *medRxiv : the preprint server for health sciences*
  Muqit, M., Le Mer, Y., Olmos de Koo, L., Holz, F. G., Sahel, J. A., Palanker, D.
  2023
- **Cellular migration into a subretinal honeycomb-shaped prosthesis for high-resolution prosthetic vision.** *Proceedings of the National Academy of Sciences of the United States of America*
  Bhuckory, M. B., Wang, B. Y., Chen, Z. C., Shin, A., Huang, T., Galambos, L., Vounotrypidis, E., Mathieson, K., Kamins, T., Palanker, D.
  2023; 120 (42): e2307380120
- **3D electronic implants in subretinal space: long-term follow-up in rodents.** *bioRxiv : the preprint server for biology*
  Bhuckory, M., Wang, B. Y., Chen, Z. C., Shin, A., Pham-Howard, D., Shah, S., Monkongpitukkul, N., Galambos, L., Kamins, T., Mathieson, K., Palanker, D.
  2023
- **The role of stimulation selectivity in visual acuity with subretinal prostheses**
  Wang, B., Bhuckory, M., Chen, Z., Shin, A., Jensen, N., Galambos, L., Mathieson, K., Kamins, T., Werginz, P., Palanker, D.

ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2023

- **Explantation of subretinal prostheses with planar and 3-D configurations**
  Bhuckory, M., Shin, A., Wang, B., Galambos, L., Kamins, T., Palanker, D.
  ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2023
- **Optimal Photovoltaic Pixels for High-Resolution Subretinal Prosthesis**
  Chen, Z., Wang, B., Goldstein, A., Palanker, D.
  ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2023
- **Electronic Retinal Prostheses.** *Cold Spring Harbor perspectives in medicine*
  Palanker, D.
  2023
- **Interferometric thermometry of ocular tissues for retinal laser therapy.** *Biomedical optics express*
  Veysset, D., Zhuo, Y., Hattori, J., Buckhory, M., Palanker, D.
  2023; 14 (1): 37-53
- **Electronic photoreceptors enable prosthetic visual acuity matching the natural resolution in rats.** *Nature communications*
  Wang, B., Chen, Z. C., Bhuckory, M., Huang, T., Shin, A., Zuckerman, V., Ho, E., Rosenfeld, E., Galambos, L., Kamins, T., Mathieson, K., Palanker, D.
  2022; 13 (1): 6627
- **Photovoltaic implant simulator reveals resolution limits in subretinal prosthesis.** *Journal of neural engineering*
  Chen, Z. C., Wang, B., Kochnev Goldstein, A., Butt, E., Mathieson, K., Palanker, D.
  2022
- **Pixel size limit of the PRIMA implants: from humans to rodents and back.** *Journal of neural engineering*
  Wang, B. Y., Chen, Z. C., Bhuckory, M., Kochnev Goldstein, A., Palanker, D.
  2022
- **Interferometric imaging of thermal expansion for temperature control in retinal laser therapy** *BIOMEDICAL OPTICS EXPRESS*
  Veysset, D., Ling, T., Zhuo, Y., Pandiyan, V., Sabesan, R., Palanker, D.
  2022; 13 (2): 728-743
- **A Smartphone-Based Near-Vision Testing System: Design, Accuracy, and Reproducibility Compared With Standard Clinical Measures** *OPHTHALMIC SURGERY LASERS & IMAGING RETINA*
  Kim, D., Webel, A. D., Blumenkranz, M. S., Kim, Y., Yang, J., Yu, S., Kwak, H., Palanker, D., Toy, B., Myung, D.
  2022; 53 (2): 79-84
- **Interferometric imaging of thermal expansion for temperature control in retinal laser therapy.** *Biomedical optics express*
  Veysset, D., Ling, T., Zhuo, Y., Pandiyan, V. P., Sabesan, R., Palanker, D.
  2022; 13 (2): 728-743
- **Simultaneous perception of prosthetic and natural vision in AMD patients** *NATURE COMMUNICATIONS*
  Palanker, D., Le Mer, Y., Mohand-Said, S., Sahel, J. A.
  2022; 13 (1): 513
- **Questions about the role of P3HT nanoparticles in retinal stimulation.** *Nature nanotechnology*
  Palanker, D., Glowacki, E. D., Ghezzi, D.
  2021
- **Simultaneous Perception of Prosthetic and Natural Vision in Patients with Geographic Atrophy**
  Palanker, D. V., Le Mer, Y., Hornig, R., Buc, G., Mohand-Said, S., Sahel, J.
  ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2021
- **Subretinal monopolar photovoltaic arrays provide pixel size-independent stimulation threshold and 40 mu m resolution under spatiotemporal modulation**
  Wang, B., Bhuckory, M., Chen, Z., Huang, T., Galambos, L., Mathieson, K., Kamins, T., Palanker, D. V.
  ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2021

- **Retinal integration with a subretinal honeycomb-shaped prosthesis**
  Bhuckory, M., Chen, Z., Wang, B., Huang, T., Galambos, L., Shin, A., Kamins, T., Palanker, D. V.
  ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2021
- **Subretinal monopolar photovoltaic arrays provide pixel size-independent stimulation threshold and 40 mu m resolution under spatiotemporal modulation**
  Wang, B., Bhuckory, M., Chen, Z., Huang, T., Galambos, L., Mathieson, K., Kamins, T., Palanker, D. V.
  ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2021
- **Retinal integration with a subretinal honeycomb-shaped prosthesis**
  Bhuckory, M., Chen, Z., Wang, B., Huang, T., Galambos, L., Shin, A., Kamins, T., Palanker, D. V.
  ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2021
- **Vertical-junction photodiodes for smaller pixels in retinal prostheses.** *Journal of neural engineering*
  Huang, T. W., Kamins, T. n., Chen, Z. C., Wang, B. Y., Bhuckory, M. n., Galambos, L. n., Ho, E. n., Ling, T. n., Afshar, S. n., Shin, A. n., Zuckerman, V. n., Harris, J. S., Mathieson, et al
  2021
- **Real-Time Optimization of the Current Steering for Visual Prosthesis**
  Chen, Z., Wang, B., Palanker, D., IEEE
  IEEE.2021: 592-596
- **Reply to Farrell: Experimental evidence is the ultimate judge for model assumptions.** *Proceedings of the National Academy of Sciences of the United States of America*
  Ling, T., Boyle, K. C., Palanker, D.
  2020
- **On optimal coupling of the "electronic photoreceptors" into the degenerate retina.** *Journal of neural engineering*
  Werginz, P., Wang, B., Chen, Z. C., Palanker, D.
  2020
- **Photovoltaic Restoration of Central Vision in Atrophic Age-Related Macular Degeneration.** *Ophthalmology*
  Palanker, D., Le Mer, Y., Mohand-Said, S., Muqit, M., Sahel, J. A.
  2020
- **Current Distribution on Capacitive Electrode-Electrolyte Interfaces** *PHYSICAL REVIEW APPLIED*
  Chen, Z., Ryzhik, L., Palanker, D.
  2020; 13 (1)
- **Local photoreceptor degeneration causes local pathophysiological remodeling of retinal neurons.** *JCI insight*
  Denlinger, B. n., Helft, Z. n., Telias, M. n., Lorach, H. n., Palanker, D. n., Kramer, R. H.
  2020; 5 (2)
- **Sensory Particles with Optical Telemetry**
  Ganesan, K., Flores, T. A., Le, B. Q., Muratore, D. G., Patel, N., Mitra, S., Murmann, B., Palanker, D., IEEE
  IEEE.2020
- **The optoretinogram reveals the primary steps of phototransduction in the living human eye.** *Science advances*
  Pandiyan, V. P., Maloney-Bertelli, A. n., Kuchenbecker, J. A., Boyle, K. C., Ling, T. n., Chen, Z. C., Park, B. H., Roorda, A. n., Palanker, D. n., Sabesan, R. n.
  2020; 6 (37)
- **High-speed interferometric imaging reveals dynamics of neuronal deformation during the action potential.** *Proceedings of the National Academy of Sciences of the United States of America*
  Ling, T. n., Boyle, K. C., Zuckerman, V. n., Flores, T. n., Ramakrishnan, C. n., Deisseroth, K. n., Palanker, D. n.
  2020
- **Decoding network-mediated retinal response to electrical stimulation: implications for fidelity of prosthetic vision.** *Journal of neural engineering*
  Ho, E. n., Shmakov, A. n., Palanker, D. n.

2020

- **Harmonic-balance circuit analysis for electro-neural interfaces.** *Journal of neural engineering*
  Chen, Z. C., Wang, B. Y., Palanker, D. n.
  2020
- **FUNCTIONAL AND STRUCTURAL EFFECTS OF NONDAMAGING RETINAL LASER THERAPY FOR MACULAR TELANGIECTASIA TYPE 2: A Randomized Sham-Controlled Clinical Trial.** *Retina (Philadelphia, Pa.)*
  Lavinsky, D. n., Silva, M. O., Chaves, A. E., Schneider, W. F., Lavinsky, F. n., Palanker, D. n.
  2020
- **Cortical Interactions between Prosthetic and Natural Vision.** *Current biology : CB*
  Arens-Arad, T., Farah, N., Lender, R., Moshkovitz, A., Flores, T., Palanker, D., Mandel, Y.
  2019
- **Performance of complex visual tasks using simulated prosthetic vision via augmented-reality glasses.** *Journal of vision*
  Ho, E., Boffa, J., Palanker, D.
  2019; 19 (13): 22
- **Chronic Electrical Stimulation for Tear Secretion: Lacrimal vs. anterior ethmoid nerve.** *The ocular surface*
  Kossler, A. L., Brinton, M., Patel, Z. M., Dalal, R., Ta, C. N., Palanker, D.
  2019
- **Characteristics of prosthetic vision in rats with subretinal flat and pillar electrode arrays.** *Journal of neural engineering*
  Ho, E., Lei, X., Flores, T. A., Lorach, H., Huang, T. W., Galambos, L., Kamins, T., Harris, J. S., Mathieson, K., Palanker, D.
  2019
- **Retinal Laser Therapy Preserves Photoreceptors in a Rodent Model of MERTK-Related Retinitis Pigmentosa.** *Translational vision science & technology*
  Kang, S., Lorach, H., Bhuckory, M. B., Quan, Y., Dalal, R., Palanker, D.
  2019; 8 (4): 19
- **Restoration of Sight in Geographic Atrophy using a Photovoltaic Subretinal Prosthesis**
  Palanker, D. V., Le Mer, Y., Hornig, R., Buc, G., Deterre, M., Bismuth, V., Sahel, J.
  ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2019
- **Effect of Proliferative Diabetic Retinopathy on Development of Neovascular AMD: a Big Data Analysis**
  Brodie, F., Stell, L., Bhuckory, M., Zuckerman, V., Vounotrypidis, E., Sanislo, S., Palanker, D. V.
  ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2019
- **Optoretinogram: stimulus-induced optical changes in photoreceptors observed with phase-resolved line-scan OCT**
  Pandiyan, V., Bertelli, A., Kuchenbecker, J. A., Park, B., Palanker, D. V., Roorda, A., Sabesan, R.
  ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2019
- **Photovoltaic restoration of sight in age-related macular degeneration**
  Palanker, D. V.
  ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2019
- **Pillar electrodes reduce in-vivo stimulation thresholds for subretinal prosthesis**
  Ho, E., Huang, T., Lei, X., Flores, T., Lorach, H., Kamins, T., Galambos, L., Mathieson, K., Palanker, D. V.
  ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2019
- **Honeycomb-shaped subretinal prosthesis enables cellular-scale pixels**
  Flores, T., Huang, T., Bhuckory, M., Lorach, H., Chen, Z., Dalal, R., Lei, X., Galambos, L., Kamins, T., Mathieson, K., Palanker, D. V.
  ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2019
- **Cortical response to combined prosthetic and visible stimuli exhibits similarities to natural visual processing**
  Mandel, Y., Arens-Arad, T., Farah, N., Moshkovitz, A., Lender, R., Flores, T., Palanker, D. V.
  ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2019
- **Titration for selective RPE therapy using a continuous line scanning laser**

Bhuckory, M., Flores, T., Shao, X., Dalal, R., Palanker, D. V.
ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2019

- **Non-Damaging Laser Therapy (NRT) for Macular Telangiectasia Type 2: Randomized Clinical Trial**
  Lavinsky, D., Chaves, A., Schneider, W., Oliveira, M., Lavinsky, F., Palanker, D. V.
  ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2019
- **STEM CELL THERAPIES, GENE-BASED THERAPIES, OPTOGENETICS, AND RETINAL PROSTHETICS: CURRENT STATE AND IMPLICATIONS FOR THE FUTURE** *RETINA-THE JOURNAL OF RETINAL AND VITREOUS DISEASES*
  Wood, E. H., Tang, P. H., De la Huerta, I., Korot, E., Muscat, S., Palanker, D. A., Williams, G. A.
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