Stanford

David Myung, MD, PhD

Associate Professor of Ophthalmology and, by courtesy, of Chemical Engineering

NIH Biosketch available Online

CLINICAL OFFICE (PRIMARY)

- **Stanford Byers Eye Institute**

  2452 Watson Ct

  MC 5353

  Palo Alto, CA 94303

  Tel (650) 723-6995 **Fax** (650) 725-6619

ACADEMIC CONTACT INFORMATION

- **Administrative Contact**

  Lala Clemons - Administrative Assistant

  Email lalaclem@stanford.edu

Bio

BIO

Dr. Myung is an Associate Professor of Ophthalmology at the Byers Eye Institute at Stanford and, by courtesy, of Chemical Engineering. He is a board-certified ophthalmologist and attending physician specializing in cataract and corneal surgery and external diseases of the eye, and the Director of the Ophthalmic Innovation Program, a project-based fellowship in the development and regulatory science of new eye care technologies. Dr. Myung leads an NIH-funded translational research laboratory focused on two areas of clinical need: (1) ophthalmic regenerative medicine through tissue engineering and drug delivery, and (2) global health through mobile technologies and telemedicine. His research group takes an interdisciplinary approach toward fostering regeneration of ocular tissues, by using chemistry to not only build biomimetic cellular architectures but also to target and release bioactive molecules to promote healing. Current projects are directed toward the use of bio-orthogonal and supramolecular crosslinking chemistries for the localized delivery of growth factors and/or stem cells to wound sites, the synthesis of bioactive wound dressings and vehicles, the creation of biopolymeric tissue scaffolds, and 3D bioprintable inks for tissue engineering.

Dr. Myung is also Director of the Stanford Teleophthalmology Autonomous Testing and Universal Screening (STATUS) Program, which is pushing the boundaries of telemedicine and AI to improve eye care worldwide. He and his collaborators investigate the role of mobile technologies and AI in enabling diagnostics and patient care outside of traditional health care settings. Their goal is to challenge current paradigms of eye care delivery through new digital health technologies and telemedicine to increase access to care in resource-limited settings both in the US and abroad. In collaboration with his retina, primary care, and endocrinologist colleagues at Stanford, he has organized and leads a Bay Area-wide Remote Diabetic Eye Care Program. Through this program, patients with diabetes can have their eyes photographed and analyzed by an FDA-cleared autonomous artificial intelligence algorithm at clinics throughout the Bay Area and then, if needed, referred in for further evaluation by a retina specialist. More information about the STATUS program can be found at: http://med.stanford.edu/ophthalmology/patient_care/tele-eyecare.html#remote_diabetic_eyecareprogram

CLINICAL FOCUS

- Cataract Surgery
- Corneal Transplantation
- Corneal Crosslinking

- Dry Eye
- External Eye Disease
- Telemedicine
- Cornea and External Diseases Specialist

ACADEMIC APPOINTMENTS

- Associate Professor - University Medical Line, Ophthalmology
- Associate Professor - University Medical Line (By courtesy), Chemical Engineering
- Member, Bio-X
- Member, Maternal & Child Health Research Institute (MCHRI)
- Faculty Fellow, Sarafan ChEM-H
- Member, Wu Tsai Neurosciences Institute

ADMINISTRATIVE APPOINTMENTS

- Director, Remote Diabetic Eye Care, Stanford Teleophthalmology Automated Testing and Universal Screening (STATUS) Program, (2020- present)
- Co-Director, Teleophthalmology, Byers Eye Institute at Stanford, (2020- present)
- Director, Teleophthalmology, Byers Eye Institute at Stanford, (2017-2020)
- Director, Byers Family Ophthalmic Innovation Fellowship Program, Byers Eye Institute at Stanford, (2016- present)

HONORS AND AWARDS

- Career Advancement Award, Research to Prevent Blindness (RPB) (2023)
- Harrington Scholar-Innovator Award, Harrington Discovery Institute (2022)
- SPECTRUM Innovation Accelerator Pilot Grant, Stanford University (2021)
- Small Projects in Rehabilitation Research (SPiRE) Award, Veterans Affairs Health Care System (2019)
- Career Development Award, Research to Prevent Blindness (RPB) (2018)
- E. Mathilda Ziegler Foundation Award, E. Mathilda Ziegler Foundation for the Blind (2018)
- Coulter Foundation Translational Research Seed Award, Coulter Foundation/Stanford University (2018)
- Mentored Clinical Scientist Research Career Development Award (K08), National Eye Institute / National Institutes of Health (2017)
- SPARK Translational Research Grant, Stanford University (2017)
- SPECTRUM Translational Research Grant (Co-Investigator), Stanford University (2014)
- Stanford Society of Physician Scholars Research Grant, Stanford University School of Medicine (2014)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Member, Stanford Bio-X Scientific Leadership Council (2023 - present)
- Member, Executive Committee, Collaborative Community on Ophthalmic Imaging (CCOI) (2021 - present)
- Section Editor, Regenerative Medicine, Current Ophthalmology Reports (2016 - present)
- Member, American Academy of Ophthalmology (2012 - present)
- Member, Association for Research in Vision and Ophthalmology (2004 - present)

PROFESSIONAL EDUCATION

- Board Certification: Ophthalmology, American Board of Ophthalmology (2019)
- Fellowship: Stanford Health Care Byers Eye Institute (2019) CA

- Residency: Stanford University Ophthalmology Residency (2015) CA
- Internship: Kaiser Permanente Santa Clara Internal Medicine Residency (2012) CA
- MD, Stanford University School of Medicine , Medicine (2011)
- PhD, Stanford University , Chemical Engineering (2008)
- MS, Stanford University , Chemical Engineering (2006)
- BA, Yale University , Molecular, Cellular and Developmental Biology (2000)

COMMUNITY AND INTERNATIONAL WORK

- Teleophthalmology in Rural Nepal

LINKS

- Lab Website: http://myunglab.stanford.edu/
- Ophthalmic Innovation Program: https://med.stanford.edu/ophthalmology/education/ophthalmic_innovation_program.html
- FDA Ophthalmic Digital Health Workshop: http://www.cfom.info/meetings/OphthalmicDigitalHealth/index.html
- Stanford Remote Diabetic Eye Care: http://med.stanford.edu/ophthalmology/patient_care/tele-eyecare.html#remote_diabetic_eyecareprogram
- Collaborative Community on Ophthalmic Imaging: https://www.cc-oi.org

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Novel biomaterials to reconstruct the wounded cornea

Mesenchymal stem cell therapy for corneal and ocular surface regeneration

Engineered biomolecule therapies for promote corneal wound healing

Telemedicine in ophthalmology

Teaching

COURSES

2020-21

- Service Learning Practicum: EDUC 98 (Win)

STANFORD ADVISEES

Med Scholar Project Advisor

Nergis Khan, Jamasb Sayadi

Postdoctoral Faculty Sponsor

Uiyoung Han, Kevin Jackson, Kyeongwoo Jang, Naewon Kang, Sachin Rajpal, Euisun Song

Publications

PUBLICATIONS

- **Electrospun Nanofiber Membrane for Cultured Corneal Endothelial Cell Transplantation.** *Bioengineering (Basel, Switzerland)*
  Song, E., Chen, K. M., Margolis, M. S., Wungcharoen, T., Koh, W., Myung, D.
  2024; 11 (1)

- **Embedded 3d Bioprinting of Collagen Inks into Microgel Baths to control hydrogel Microstructure and Cell Spreading.** *Advanced healthcare materials*
  Brunel, L. G., Christakopoulos, F., Kilian, D., Cai, B., Hull, S. M., Myung, D., Heilshorn, S. C.
  2023: e2303325

- **AI-Human Hybrid Workflow Enhances Teleophthalmology for the Detection of Diabetic Retinopathy.** *Ophthalmology science*
  Dow, E. R., Khan, N. C., Chen, K. M., Mishra, K., Perera, C., Narala, R., Basina, M., Dang, J., Kim, M., Levine, M., Phadke, A., Tan, M., Weng, et al
  2023; 3 (4): 100330

- **Artificial Intelligence Improves Patient Follow-Up in a Diabetic Retinopathy Screening Program.** *Clinical ophthalmology (Auckland, N.Z.)*
  Dow, E. R., Chen, K. M., Zhao, C. S., Knapp, A. N., Phadke, A., Weng, K., Do, D. V., Mahajan, V. B., Mruthyunjaya, P., Leng, T., Myung, D.
  2023; 17: 3323-3330

- **SCONE: Development of optic nerve head delivery technology**
  Chiang, B., Dalal, R., Heng, K., Liao, Y., Goldberg, J. L., Myung, D.
  ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2023

- **Real world outcomes from artificial intelligence to detect diabetic retinopathy in the primary care setting: 12 month experience**
  Knapp, A. N., Dow, E., Chen, K., Khan, N. C., Do, D. V., Mahajan, V., Mruthyunjaya, P., Leng, T., Myung, D.
  ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2023

- **Impact of crosslinking chemistry on corneal tissue regeneration after in situforming collagen-hyaluronate matrix therapy**
  Wungcharoen, T., Chen, F., Seo, Y., Myung, D.
  ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2023

- **Automated Detection of Dysthyroid Optic Neuropathy in Graves' Ophthalmopathy with Computed Tomography (CT) Scans by Convolutional Neural Networks**
  Hung, J., Luo, A., Deng, Y., Chung, C., Fuh, C., Perera, C., Myung, D., Kossler, A., Liao, S.
  ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2023

- **Collagen Gels Crosslinked by Photoactivation of Riboflavin for the Repair and Regeneration of Corneal Defects.** *ACS applied bio materials*
  Fernandes-Cunha, G. M., Brunel, L. G., Arboleda, A., Manche, A., Seo, Y. A., Logan, C., Chen, F., Heilshorn, S. C., Myung, D.
  2023

- **In Situ-Forming Collagen-Hyaluronate Semi-Interpenetrating Network Hydrogel Enhances Corneal Defect Repair.** *Translational vision science & technology*
  Chen, F., Mundy, D. C., Le, P., Seo, Y. A., Logan, C. M., Fernandes-Cunha, G. M., Basco, C. A., Myung, D.
  2022; 11 (10): 22

- **Effect of Recombinant Human Lubricin on Model Tear Film Stability.** *Translational vision science & technology*
  Cui, K. W., Xia, V. X., Cirera-Salinas, D., Myung, D., Fuller, G. G.
  2022; 11 (9): 9

- **Tear Film Stability as a Function of Tunable Mucin Concentration Attached to Supported Lipid Bilayers** *JOURNAL OF PHYSICAL CHEMISTRY B*
  Cui, K. W., Myung, D. J., Fuller, G. G.
  2022

- **In Situ-forming Collagen Hydrogels Crosslinked by Multifunctional Polyethylene Glycol as a Matrix Therapy for Corneal Defects: 2-Month Follow-Up In Vivo.** *Cornea*
  Logan, C. M., Fernandes-Cunha, G. M., Chen, F., Le, P., Mundy, D., Na, K. S., Myung, D.
  2022

- **Predicting Systemic Health Features from Retinal Fundus Images Using Transfer-Learning-Based Artificial Intelligence Models.** *Diagnostics (Basel, Switzerland)*
  Khan, N. C., Perera, C., Dow, E. R., Chen, K. M., Mahajan, V. B., Mruthyunjaya, P., Do, D. V., Leng, T., Myung, D.
  2022; 12 (7)

- **Smart contact lens containing hyaluronate-rose bengal conjugate for biophotonic myopia vision correction.** *Biomaterials science*
  Mun, J., Kim, T. Y., Myung, D., Hahn, S. K.
  2022

- **Hyaluronic acid hydrogels crosslinked via blue light-induced thiol-ene reaction for the treatment of rat corneal alkali burn.** *Regenerative therapy*
  Park, S. K., Ha, M., Kim, E. J., Seo, Y. A., Lee, H. J., Myung, D., Kim, H., Na, K.
  2022; 20: 51-60

- **Effect of hepatocyte growth factor-loaded collagen-PEG gels on corneal wound healing**
  Naranjo, A., Cunha, G., Myung, D.
  ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2022

- **Inorganic polyphosphate-collagen complexes improve corneal epithelial cell function under glucose starvation and enhance corneal wound healing**
  Rogers, G., Myung, D.
  ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2022

- **Epidermal growth factor-loaded collagen gels to enhance corneal wound healing: Effect of matrix crosslinking chemistry**
  Seo, Y., Rogers, G., Myung, D.
  ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2022

- **A Pilot Study on Novel Ptotic Eye Dataset: Automated Prediction of Horizontal Corneal Diameter on Digital Photos of Taiwanese Ptotic Patients by Convolutional Neural Networks (CNNs)**
  Hung, J., Chen, K., Chandrashan, P., Myung, D., Kossler, A., Fuh, C., Liao, S., Hsu, C.
  ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2022

- **Predicting systemic health features from retinal fundus images using transfer-learning based AI models**
  Khan, N. C., Perera, C., Dow, E. R., Leng, T., Mahajan, V. B., Mruthyunjaya, P., Do, D. V., Myung, D.
  ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2022

- **Integration of Artificial Intelligence into a Telemedicine-Based Diabetic Retinopathy Screening Program**
  Chen, K., Dow, E. R., Khan, N. C., Levine, M., Perera, C., Phadke, A., Dang, J., Weng, K., Do, D. V., Mahajan, V. B., Mruthyunjaya, P., Mishra, K., Leng, et al
  ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2022

- **Collagen hydrogels covalently crosslinked by bioorthogonal click chemistry resist cell-induced contraction while preserving encapsulated corneal stromal cell phenotype**
  Brunel, L. G., Hull, S. M., Johansson, P. K., Myung, D., Heilshorn, S. C.
  ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2022

- **Biocompatibility of photoactivated collagen-riboflavin hydrogels for corneal regeneration**
  Arboleda, A., Cunha, G., Manche, A., Seo, Y., Logan, C., Heilshorn, S. C., Myung, D.
  ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2022

- **A Mucin-Deficient Ocular Surface Mimetic Platform for Interrogating Drug Effects on Biolubrication, Antiadhesion Properties, and Barrier Functionality.** *ACS applied materials & interfaces*
  Madl, A. C., Liu, C., Cirera-Salinas, D., Fuller, G. G., Myung, D.
  2022

- **Bimetallic Nanocatalysts Immobilized in Nanoporous Hydrogels for Long-Term Robust Continuous Glucose Monitoring of Smart Contact Lens.** *Advanced materials (Deerfield Beach, Fla.)*
  Kim, S., Lee, G., Jeon, C., Han, H. H., Kim, S., Mok, J. W., Joo, C., Shin, S., Sim, J., Myung, D., Bao, Z., Hahn, S. K.
  2022: e2110536

- **An Outperforming Artificial Intelligence Model to Identify Referable Blepharoptosis for General Practitioners.** *Journal of personalized medicine*
  Hung, J., Chen, K., Perera, C., Chiu, H., Hsu, C., Myung, D., Luo, A., Fuh, C., Liao, S., Kossler, A. L.
  2022; 12 (2)

- **Artificial Intelligence for Retinopathy of Prematurity: Validation of a Vascular Severity Scale against International Expert Diagnosis.** *Ophthalmology*
  Campbell, J. P., Chiang, M. F., Chen, J. S., Moshfeghi, D. M., Nudleman, E., Ruambivoonsuk, P., Cherwek, H., Cheung, C. Y., Singh, P., Kalpathy-Cramer, J., Ostmo, S., Eydelman, M., Chan, et al
  2022

- **The Collaborative Community on Ophthalmic Imaging: Accelerating Global Innovation and Clinical Utility** *OPHTHALMOLOGY*
  Blumenkranz, M. S., Tarver, M. E., Myung, D., Eydelman, M. B., Collaborative Community Ophthalmic
  2022; 129 (2): E9-E13

- **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
- **In vivo biocompatibility evaluation of in situ-forming polyethylene glycol-collagen hydrogels in corneal defects.** *Scientific reports*
  Chun, Y. H., Park, S., Kim, E. J., Lee, H. J., Kim, H., Koh, W., Cunha, G. F., Myung, D., Na, K.
  1800; 11 (1): 23913
- **Fusogenic liposome-enhanced cytosolic delivery of magnetic nanoparticles.** *RSC advances*
  Chen, F., Bian, M., Nahmou, M., Myung, D., Goldberg, J. L.
  2021; 11 (57): 35796-35805
- **Fusogenic liposome-enhanced cytosolic delivery of magnetic nanoparticles** *RSC ADVANCES*
  Chen, F., Bian, M., Nahmou, M., Myung, D., Goldberg, J. L.
  2021; 11 (57): 35796-35805
- **A Simple Inner-Stopper Guarded Trephine for Creation of Uniform Keratectomy Wounds in Rodents.** *Journal of ophthalmic & vision research*
  Le, P. B., Chen, F., Myung, D.
  2021; 16 (4): 544-551
- **Supramolecular Host-Guest Hydrogels for Corneal Regeneration.** *Gels (Basel, Switzerland)*
  Madl, A. C., Myung, D.
  2021; 7 (4)
- **A Simple Inner-Stopper Guarded Trephine for Creation of Uniform Keratectomy Wounds in Rodents** *JOURNAL OF OPHTHALMIC & VISION RESEARCH*
  Le, P. B., Chen, F., Myung, D.
  2021; 16 (4): 544-551
- **Supramolecular host-guest hyaluronic acid hydrogels enhance corneal wound healing through dynamic spatiotemporal effects.** *The ocular surface*
  Fernandes-Cunha, G. M., Jeong, S. H., Logan, C. M., Le, P., Mundy, D., Chen, F., Chen, K. M., Kim, M., Lee, G., Na, K., Hahn, S. K., Myung, D.
  2021
- **Detection of Optic Disc Abnormalities in Color Fundus Photographs Using Deep Learning.** *Journal of neuro-ophthalmology : the official journal of the North American Neuro-Ophthalmology Society*
  Liu, T. Y., Wei, J., Zhu, H., Subramanian, P. S., Myung, D., Yi, P. H., Hui, F. K., Unberath, M., Ting, D. S., Miller, N. R.
  2021; 41 (3): 368-374
- **Foundational Considerations for Artificial Intelligence Utilizing Ophthalmic Images.** *Ophthalmology*
  Abramoff, M. D., Cunningham, B., Patel, B., Eydelman, M. B., Leng, T., Sakamoto, T., Blodi, B., Grenon, S. M., Wolf, R. M., Manrai, A. K., Ko, J. M., Chiang, M. F., Char, et al
  2021
- **Mucin-Like Glycoproteins Modulate Interfacial Properties of a Mimetic Ocular Epithelial Surface.** *Advanced science (Weinheim, Baden-Wurttemberg, Germany)*
  Liu, C., Madl, A. C., Cirera-Salinas, D., Kress, W., Straube, F., Myung, D., Fuller, G. G.
  2021: e2100841
- **Magnetic nanoparticles for subcellular organelle manipulation**
  Bian, M., Chen, F., Nahmou, M., Myung, D., Goldberg, J. L.
  ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2021
- **In vitro characterization of a novel in situ-forming semi-interpenetrating polymer network of crosslinked collagen and glycosaminoglycans for corneal defect repair**
  Mundy, D., Chen, F., Le, P., Myung, D.
  ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2021
- **Collagen gels crosslinked by photoactivation of riboflavin for corneal defect repair**
  Seo, Y., Fernandes-Cunha, G., Chen, F., Le, P., Logan, C., Mundy, D., Myung, D.

ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2021

- **In situ-forming semi-interpenetrating network hydrogels for corneal regeneration: in vivo biological response**
  Chen, F., Le, P., Fernandes-Cunha, G., Mundy, D., Myung, D.
  ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2021
- **In situ forming collagen-PEG hydrogel as a matrix therapy for corneal defects: 2 month in vivo response**
  Rogers, G., Chen, F., Le, P., Mundy, D., Logan, C., Myung, D.
  ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2021
- **A corneal tissue opacity model for the evaluation of corneal wound healing technologies**
  Le, P., Myung, D.
  ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2021
- **Supramolecular host-guest hyaluronic acid hydrogels for corneal endothelial cell delivery and epithelial wound healing**
  Logan, C. M., Fernandes-Cunha, G., Jung, S., Le, P., Mundy, D. C., Kim, M., Lee, G., Hahn, S., Myung, D.
  ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2021
- **A novel device for descemetorhexis creation: 3D Printed Prototype Design and Ex Vivo Evaluation**
  Buickians, D., Mbagwu, M., Lin, C. C., Myung, D.
  ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2021
- **Bio-orthogonally Crosslinked Matrix Therapies for Corneal Defect Repair**
  Myung, D., Chen, F., Fernandes-Cunha, G., Le, P., Hull, S., Heilshorn, S.
  ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2021
- **Smart Contact Lenses with a Transparent Silver Nanowire Strain Sensor for Continuous Intraocular Pressure Monitoring.** *ACS applied bio materials*
  Kim, T. Y., Shin, S., Choi, H., Jeong, S. H., Myung, D., Hahn, S. K.
  2021; 4 (5): 4532-4541
- **Smart Contact Lenses with a Transparent Silver Nanowire Strain Sensor for Continuous Intraocular Pressure Monitoring** *ACS APPLIED BIO MATERIALS*
  Kim, T., Shin, S., Choi, H., Jeong, S., Myung, D., Hahn, S.
  2021; 4 (5): 4532-4541
- **Comparison of Telemedicine Screening of Diabetic Retinopathy by Mydriatic Smartphone-Based vs Nonmydriatic Tabletop Camera-Based Fundus Imaging.** *Journal of vitreoretinal diseases*
  Han, Y. S., Pathipati, M., Pan, C., Leung, L., Blumenkranz, M. S., Myung, D., Toy, B. C.
  2021; 5 (3): 199-207
- **Effect of mesenchymal stromal cells encapsulated within polyethylene glycol-collagen hydrogels formed in situ on alkali-burned corneas in an ex vivo organ culture model.** *Cytotherapy*
  Na, K., Fernandes-Cunha, G. M., Varela, I. B., Lee, H. J., Seo, Y. A., Myung, D.
  2021
- **3D Bioprinting using UNIversal Orthogonal Network (UNION) Bioinks.** *Advanced functional materials*
  Hull, S. M., Lindsay, C. D., Brunel, L. G., Shiwarski, D. J., Tashman, J. W., Roth, J. G., Myung, D., Feinberg, A. W., Heilshorn, S. C.
  2021; 31 (7)
- **3D Printable, Modified Trephine Designs for Consistent Anterior Lamellar Keratectomy Wounds in Rabbits.** *Current eye research*
  Chen, F., Buickians, D., Le, P., Xia, X., Montague-Alamin, S. Q., Blanco Varela, I. B., Mundy, D. C., Logan, C. M., Myung, D.
  2021: 1–10
- **A deep learning approach to identify blepharoptosis by convolutional neural networks.** *International journal of medical informatics*
  Hung, J. Y., Perera, C. n., Chen, K. W., Myung, D. n., Chiu, H. K., Fuh, C. S., Hsu, C. R., Liao, S. L., Kossler, A. L.
  2021; 148: 104402
- **Automatic Identification of Referral-Warranted Diabetic Retinopathy Using Deep Learning on Mobile Phone Images.** *Translational vision science & technology*
  Ludwig, C. A., Perera, C., Myung, D., Greven, M. A., Smith, S. J., Chang, R. T., Leng, T.
  2020; 9 (2): 60

- **Modeling and Restoring the Tear Film** *CURRENT OPHTHALMOLOGY REPORTS*
  Madl, A. C., Fuller, G. F., Myung, D.
  2020; 8 (4): 281-300

- **Management of acute corneal hydrops with intracameral gas injection.** *American journal of ophthalmology case reports*
  Sayadi, J. J., Lam, H., Lin, C. C., Myung, D.
  2020; 20: 100994

- **3D Bioprinting using UNIversal Orthogonal Network (UNION) Bioinks** *ADVANCED FUNCTIONAL MATERIALS*
  Hull, S. M., Lindsay, C. D., Brunel, L. G., Shiwarski, D. J., Tashman, J. W., Roth, J. G., Myung, D., Feinberg, A. W., Heilshorn, S. C.
  2020

- **Development, Validation, and Innovation in Ophthalmic Laser-Based Imaging: Report From a US Food and Drug Administration-Cosponsored Forum.** *JAMA ophthalmology*
  Brodie, F., Repka, M., Burns, S. A., Prakalapakorn, S. G., Morse, C., Schuman, J. S., Duenas, M. R., Afshari, N., Pollack, J. S., Thorne, J. E., Vitale, A., Sen, H. N., Myung, et al
  2020

- **Gold nanoparticles to enhance ophthalmic imaging.** *Biomaterials science*
  Chen, F., Si, P., de la Zerda, A., Jokerst, J. V., Myung, D.
  2020

- **Simultaneous Interpenetrating Polymer Network of Collagen and Hyaluronic Acid as an In Situ-Forming Corneal Defect Filler.** *Chemistry of materials : a publication of the American Chemical Society*
  Chen, F., Le, P., Lai, K., Fernandes-Cunha, G. M., Myung, D.
  2020; 32 (12): 5208-5216

- **Simultaneous Interpenetrating Polymer Network of Collagen and Hyaluronic Acid as an In Situ-Forming Corneal Defect Filler** *CHEMISTRY OF MATERIALS*
  Chen, F., Le, P., Lai, K., Fernandes-Cunha, G. M., Myung, D.
  2020; 32 (12): 5208–16

- **Bioengineered, In Situ-Crosslinked Collagen Gels for Suture-Free Stromal Defect Reconstruction of the Cornea**
  Myung, D., Djalilian, A. R., Heilshorn, S., Chen, F., Le, P., Hull, S., Fernandes-Cunha, G., Na, K.
  ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2020

- **Optimization of an in situ-forming interpenetrating polymer network of collagen and hyaluronic acid hydrogel independently and simultaneously crosslinked by click chemistries**
  Le, P., Chen, F., Cunha, G., Lai, K., Myung, D.
  ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2020

- **Design and development of a novel electroretinogram-microperimetry system with superimposed multifocal arrays**
  Suzuki, N., Myung, D.
  ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2020

- **In situ-forming bio-orthogonally crosslinked collagen-hyaluronate co-polymeric hydrogel to treat deep corneal stromal defects: in vivo biological response**
  Chen, F., Le, P., Cunha, G., Myung, D.
  ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2020

- **Supramolecular guest-host hyaluronic acid hydrogels for epithelial cell delivery to the cornea**
  Chen, K., Cunha, G., Jung, S., Hahn, S., Lee, G., Myung, D.
  ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2020

- **Encapsulation of Corneal Stromal Stem Cells within Supramolecular Host-Guest Hyaluronic Acid Gels**
  Seo, Y., Chen, K., Fernandes-Cunha, G., Jung, S., Lee, G., Hahn, S., Djalilian, A. R., Jabbehdari, S., Myung, D.
  ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2020

- **Assessment of Eye Disease and Visual Impairment in the Nursing Home Population Using Mobile Health Technology** *OPHTHALMIC SURGERY LASERS & IMAGING RETINA*
  Lai, K. Y., Pathipati, M. P., Blumenkranz, M. S., Leung, L., Moshfeghi, D. M., Toy, B. C., Myung, D.

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PRESENTATIONS

- Synergistic corneal wound healing effects of human mesenchymal stem cell secreted factors and hyaluronic acid-based viscoelastic gel - Association for Research in Vision and Ophthalmology (ARVO) National Meeting 2018
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