

Zurich, le 09.12.2022

RAPPORT D'ACTIVITES DANS LE CADRE DU RENOUVELLEMENT DU MANDAT DE *PROFESSEUR*
TITULAIRE DE M. FARHAD HAFEZI

Période du mandat: du 01/10/2018 au 30/09/2023.

Activités d'enseignement:

- Pas d'enseignement à l'université de Genève, selon la convention entre le Prof. Hafezi, les HUG et l'Université de Genève du 4 juin 2014
- Nombre de doctorands (MD) suivis : 6
 - Max BÜRGI
 - Enes AYDEMIR
 - Emilio TORRES
 - Carmen RODRIGUES
 - Reyhaneh ABRISHAMCHI
 - Hormoz ABD SHAHZADEH)
- Formation postgraduée 2018 - 2022
 - Cours pendant la « Swiss Eye Week » de la Société Suisse d'ophtalmologie
 - Basic Science Course « Conjonctive et Cornée », 2 heures
 - Clinical Science Course « Chirurgie réfractive », 2 heures
- Formation continue
 - European Society for Cataract and Refractive Surgery (ESCRS)
 - Cours « Corneal cross-linking ». 2018 – 2022
 - 3-5 cours instructionnels au congrès annuel de l'ESCRS
 - Environ 25 à 30 interventions invitées par année dans des congrès nationaux et internationaux (voir CV). En 2020, environ 45 webinars internationaux.
 - Chef du comité scientifique du congrès international du cross-linking. Congrès international, 10 points CME FMH. 2018 – 2022.

- Responsable pour le «ELZA Refractive Course». Cours de 8 heures pour les ophtalmologues suisses (niveau interne et chef de clinique)

Activités de recherche

- Recherche clinique a l'institut ELZA et recherche laboratoire comme chef du groupe de recherche « Biologie cellulaire de l'œil » à l'université de Zurich
- Fonds obtenus
 - Nom Fondation Botnar
 - Année 2019
 - Montant CHF 238'200.-
 - Titre Smartphone-based keratography
 - Rôle Co-appliquant
 - Fonction Responsable clinique, co-chef du projet

Activités cliniques

- Activité chirurgicale et médicale en ophtalmologie, spécifiquement dans le domaine des maladies cornéennes.
- Installé en cabinet privé, Webereistrasse 2, 8953 Dietikon.

Publications pendant la période du mandat

1A ORIGINAL PUBLICATIONS. PEER-REVIEWED JOURNALS

1. Lu N., Koliwer-Brandli H., Gilardoni F., Hafezi N., Knyazer B., Achiron A., Zbinden R., Egli A., Hafezi F. The Antibacterial Efficacy of High-Fluence PACK Cross-Linking can be Accelerated. **Translational Vision Science & Technology**. (in press):
Impact Factor: 3.0
2. Kollros L., Torres Netto E. A., Rodriguez C., Hafezi N., Hillen M., Lu N., Hafezi F. Progressive keratoconus in patients older than 48 years. **Contact Lens and Anterior Eye**. (in press):
Impact Factor: 3.9
3. Torres-Netto E. A., Hafezi F., Kling S. Intracorneal Ring Segment Implantation Results in Corneal Mechanical Strengthening Visualized With Optical Coherence Elastography. **J Refract Surg**. 2022. 38(7): 459-64
Impact Factor: 3.3
4. Torres-Netto E. A., Abdshahzadeh H., Abrishamchi R., Hafezi N. L., Hillen M., Ambrosio R., Jr., Randleman J. B., Spoerl E., Gatinel D., Hafezi F. The Impact of Repetitive and Prolonged Eye Rubbing on Corneal Biomechanics. **J Refract Surg**. 2022. 38(9): 610-16
Impact Factor: 3.3
5. Mazzotta C., Balamoun A. A., Chabib A., Rechichi M., D'Oria F., Hafezi F., Bagaglia S. A., Ferrise M. Transepithelial Enhanced Fluence Pulsed Light M Accelerated Crosslinking for Early Progressive Keratoconus with Chemically Enhanced Riboflavin Solutions and Air Room Oxygen. **J Clin Med**. 2022. 11(17):
Impact Factor: 4.9
6. Lu N. J., Hafezi F., Rozema J. J., Hillen M., Hafezi N., Zhang J., Koppen C. Repeatability of Corvis ST to Measure Biomechanical Parameters Before and After Myopic Refractive Surgery. **J Cataract Refract Surg**. 2022:
Impact Factor: 3.5
7. Lu N. J., Elsheikh A., Rozema J. J., Hafezi N., Aslanides I. M., Hillen M., Eckert D., Funck C., Koppen C., Cui L. L., Hafezi F. Combining Spectral-Domain OCT and Air-Puff Tonometry Analysis to Diagnose Keratoconus. **J Refract Surg**. 2022. 38(6): 374-80
Impact Factor: 3.3
8. Kowalska M. E., Hafezi F., Pot S. A., Hartnack S. Medical Management versus PACK-CXL in Dogs with Infectious Keratitis: A Randomized Controlled Trial Protocol. **Animals (Basel)**. 2022. 12(20):
Impact Factor: 3.2
9. Hashemi H., Roberts C. J., Ambrosio R., Jr., Mehravaran S., Hafezi F., Vinciguerra R., Vinciguerra P., Panahi P., Asgari S. Comparative Contralateral Randomized Clinical Trial of Standard (3 mW/cm(2)) Versus Accelerated (9 mW/cm(2)) CXL in Patients With Down Syndrome: 3-Year Results. **J Refract Surg**. 2022. 38(6): 381-88
Impact Factor: 3.3
10. Hafezi F., Lu N. J., Assaf J. F., Hafezi N. L., Koppen C., Vinciguerra R., Vinciguerra P., Hillen M., Awwad S. T. Demarcation Line Depth in Epithelium-Off Corneal Cross-Linking Performed at the Slit Lamp. **J Clin Med**. 2022. 11(19):
Impact Factor: 4.9
11. Hafezi F., Hosny M., Shetty R., Knyazer B., Chen S., Wang Q., Hashemi H., Torres-Netto E. A., Group Pack-Cxl Working. PACK-CXL vs. antimicrobial therapy for bacterial, fungal, and mixed infectious keratitis: a prospective randomized phase 3 trial. **Eye Vis (Lond)**. 2022. 9(1): 2
Impact Factor: 4.4
12. Hafezi F., Hillen M., Kollros L., Tan J., Awwad S. T. A New Postoperative Regimen after CXL and PRK Using Topical NSAID and Steroids on the Open Ocular Surface. **J Clin Med**. 2022. 11(14):
Impact Factor: 4.9
13. Awad R., Hafezi F., Ghaith A. A., Baddour M. M., Awad K., Abdalla M., Sheta E., Sultan G. M., Elmassry A. Comparison between three different high fluence UVA levels in corneal collagen cross-linking for treatment of experimentally induced fungal keratitis in rabbits. **Eur J Ophthalmol**. 2022: 11206721221092224

Impact Factor: 1.9

14. Abdshahzadeh H., Abrishamchi R., Aydemir M. E., Hafezi N., Hillen M., Torres-Netto E. A., Lu N. J., Hafezi F. Repeated application of riboflavin during corneal cross-linking does not improve the biomechanical stiffening effect ex vivo. **Exp Eye Res.** 2022. 224: 109267
Impact Factor: 3.8
15. Vinciguerra R., Ambrosio R., Jr., Elsheikh A., Hafezi F., Yong Kang D. S., Kermani O., Koh S., Lu N., Padmanabhan P., Roberts C. J., Taneri S., Trattler W., Vinciguerra P. Detection of Post-Laser Vision Correction Ectasia with a new Combined Biomechanical Index. **J Cataract Refract Surg.** 2021:
Impact Factor: 3.5
16. Spuru B., Torres-Netto E. A., Kling S., Hafezi F., Sekundo W. Hyperopic SMILE Versus FS-LASIK: A Biomechanical Comparison in Human Fellow Corneas. **J Refract Surg.** 2021. 37(12): 810-15
Impact Factor: 3.3
17. Mazzotta C., Raiskup F., Hafezi F., Torres-Netto E. A., Armia Balamoun A., Giannaccare G., Bagaglia S. A. Long term results of accelerated 9 mW corneal crosslinking for early progressive keratoconus: the Siena Eye-Cross Study 2. **Eye Vis (Lond).** 2021. 8(1): 16
Impact Factor: 4.4
18. Kling S., Torres-Netto E. A., Abdshahzadeh H., Espana E. M., Hafezi F. Collagen V insufficiency in a mouse model for Ehlers Danlos-syndrome affects viscoelastic biomechanical properties explaining thin and brittle corneas. **Sci Rep.** 2021. 11(1): 17362
Impact Factor: 3.5
19. Hafezi F., Richoz O., Torres-Netto E. A., Hillen M., Hafezi N. L. Corneal Cross-linking at the Slit Lamp. **J Refract Surg.** 2021. 37(2): 78-82
Impact Factor: 3.3
20. Hafezi F., Kling S., Gilardoni F., Hafezi N., Hillen M., Abrishamchi R., Gomes J. A. P., Mazzotta C., Randleman J. B., Torres-Netto E. A. Individualized Corneal Cross-linking With Riboflavin and UV-A in Ultrathin Corneas: The Sub400 Protocol. **Am J Ophthalmol.** 2021. 224: 133-42
Impact Factor: 5.5
21. Ghaffari S. R., Khareshi S., Alipour F., Mashhadi Farahani S., Beheshtnejad A. H., Hafezi F. Reduced fluence corneal cross-linking in mild to moderate keratoconus: One year-follow-up. **Eur J Ophthalmol.** 2021. 31(5): 2206-12
Impact Factor: 1.9
22. Burkard T., Holmberg D., Thorell A., Hafezi F., Burden A. M. The association between bariatric surgery and cataract: a propensity score-matched cohort study. **Surg Obes Relat Dis.** 2021:
Impact Factor: 1.2
23. Awwad S. T., Chacra L. M., Helwe C., Dhaini A. R., Televizian T., Torbey J., Abdul Fattah M., Torres-Netto E. A., Hafezi F., Shetty R. Mitomycin C Application After Corneal Cross-linking for Keratoconus Increases Stromal Haze. **J Refract Surg.** 2021. 37(2): 83-90
Impact Factor: 3.3
24. Alipour F., Ansari S., Dadman N., Hafezi F. Accelerated Corneal Collagen Cross-Linking in Pediatric Keratoconus. **J Curr Ophthalmol.** 2021. 33(3): 285-90
25. Achiron A., Elhaddad O., Regev T., Krakauer Y., Tsumi E., Hafezi F., Knyazer B. PACK Cross-Linking as Adjuvant Therapy Improves Clinical Outcomes in Culture-Confirmed Bacterial Keratitis. **Cornea.** 2021:
Impact Factor: 3.2
26. Abrishamchi R., Abdshahzadeh H., Hillen M., Hafezi N., Torres-Netto E. A., Aslanides I. M., Chen S., Randleman J. B., Hafezi F. High-Fluence Accelerated Epithelium-Off Corneal Cross-Linking Protocol Provides Dresden Protocol-Like Corneal Strengthening. **Transl Vis Sci Technol.** 2021. 10(5): 10
Impact Factor: 3.0
27. Abdshahzadeh H., Abrishamchi R., Torres-Netto E. A., Kling S., Hafezi N. L., Hillen M., Hafezi F. Impact of hypothermia on the biomechanical effect of epithelium-off corneal cross-linking. **Eye Vis (Lond).** 2021. 8(1): 4
Impact Factor: 4.4

28. Torres-Netto E. A., Spuru B., Kling S., Gilardoni F., Lazaridis A., Sekundo W., Hafezi F. Similar Biomechanical Cross-linking Effect After SMILE and PRK in Human Corneas in an Ex Vivo Model for Postoperative Ectasia. **J Refract Surg.** 2020. 36(1): 49-54
Impact Factor: 3.3
29. Torres-Netto E. A., Hafezi F., Spuru B., Gilardoni F., Hafezi N., Gomes J. A. P., Randleman J. B., Sekundo W., Kling S. Contribution of Bowman's layer to corneal biomechanics. **J Cataract Refract Surg.** 2020:
Impact Factor: 3.5
30. Knyazer B., Krakauer Y., Tailakh M. A., Achiron A., Hecht I., Lifshitz T., Torres-Netto E. A., Hafezi N. L., Hafezi F. Accelerated Corneal Cross-linking as an Adjunct Therapy in the Management of Presumed Bacterial Keratitis: A Cohort Study. **J Refract Surg.** 2020. 36(4): 258-64
Impact Factor: 3.3
31. Kling S., Torres-Netto E. A., Spuru B., Sekundo W., Hafezi F. Quasi-Static Optical Coherence Elastography to Characterize Human Corneal Biomechanical Properties. **Invest Ophthalmol Vis Sci.** 2020. 61(6): 29
Impact Factor: 4.9
32. Kling S., Hufschmid F. S., Torres-Netto E. A., Randleman J. B., Willcox M., Zbinden R., Hafezi F. High Fluence Increases the Antibacterial Efficacy of PACK Cross-Linking. **Cornea.** 2020. 39(8): 1020-26
Impact Factor: 3.2
33. Hafezi F., Hafezi N. L., Pajic B., Gilardoni F., Randleman J. B., Gomes J. A. P., Kollros L., Hillen M., Torres-Netto E. A. Assessment of the mechanical forces applied during eye rubbing. **BMC Ophthalmol.** 2020. 20(1): 301
Impact factor: 2.1
34. Ghaffari S. R., Khareshi S., Alipour F., Mashhadi Farahani S., Beheshtnejad A. H., Hafezi F. Reduced fluence corneal cross-linking in mild to moderate keratoconus: One year-follow-up. **Eur J Ophthalmol.** 2020: 1120672120966560
Impact factor: 1.9
35. Belin M. W., Alizadeh R., Torres-Netto E. A., Hafezi F., Ambrosio R., Jr., Pajic B. Determining Progression in Ectatic Corneal Disease. **Asia Pac J Ophthalmol (Phila).** 2020. 9(6): 541-48
Impact factor: 4.2
36. Aslanides I. M., Hafezi F., Chen S., Mukherjee H., Selimis V., Maragkos I., Lu N., Kymionis G. 5-year efficacy of all surface laser ablation with cross-linking (ASLA-XTRA) for the treatment of myopia. **Eye Vis (Lond).** 2020. 7: 31
Impact Factor: 4.4
37. Piccinini A. L., Golan O., Torres-Netto E. A., Hafezi F., Randleman J. B. Corneal higher-order aberrations measurements: Comparison between Scheimpflug and dual Scheimpflug-Placido technology in keratoconic eyes. **J Cataract Refract Surg.** 2019. 45(7): 985-91
Impact Factor: 3.5
38. Lang P. Z., Hafezi N. L., Khandelwal S. S., Torres-Netto E. A., Hafezi F., Randleman J. B. Comparative Functional Outcomes After Corneal Crosslinking Using Standard, Accelerated, and Accelerated With Higher Total Fluence Protocols. **Cornea.** 2019:
Impact Factor: 3.2
39. Torres-Netto E. A., Kling S., Hafezi N., Vinciguerra P., Randleman J. B., Hafezi F. Oxygen Diffusion May Limit the Biomechanical Effectiveness of Iontophoresis-Assisted Transepithelial Corneal Cross-linking. **J Refract Surg.** 2018. 34(11): 768-74
Impact Factor: 3.3
40. Torres Netto E. A., Al-Otaibi W. M., Hafezi N. L., Kling S., Al-Farhan H. M., Randleman J. B., Hafezi F. Prevalence of keratoconus in paediatric patients in Riyadh, Saudi Arabia. **Br J Ophthalmol.** 2018. 102(10): 1436-41
Impact Factor: 5.9
41. Spuru B., Kling S., Hafezi F., Sekundo W. Biomechanical Properties of Human Cornea Tested by Two-Dimensional Extensimetry Ex Vivo in Fellow Eyes: Femtosecond Laser-Assisted LASIK Versus SMILE. **J Refract Surg.** 2018. 34(6): 419-23
Impact Factor: 3.3
42. Lang P. Z., Thulasi P., Khandelwal S. S., Hafezi F., Randleman J. B. Comparing Change in Anterior Curvature after Corneal Cross-Linking Using Scanning-Slit and Scheimpflug Technology. **Am J Ophthalmol.** 2018:

Impact factor: 5.5

43. Knyazer B., Krakauer Y., Baumfeld Y., Lifshitz T., Kling S., Hafezi F. Accelerated Corneal Cross-Linking With Photoactivated Chromophore for Moderate Therapy-Resistant Infectious Keratitis. **Cornea**. 2018: Impact Factor: 3.2
 44. Hafezi F., Gatzidoufas Z., Angunawela R., Ittner L. M. Absence of IL-6 prevents corneal wound healing after deep excimer laser ablation in vivo. **Eye (Lond)**. 2018. 32(1): 156-57
Impact Factor: 4.5
 45. Haberman I. D., Lang P. Z., Broncano A. F., Kim S. W., Hafezi F., Randleman J. B. Epithelial remodeling after corneal crosslinking using higher fluence and accelerated treatment time. **J Cataract Refract Surg**. 2018. 44(3): 306-12
Impact Factor: 3.5
 46. Ghaffari R., Mortazavi M., Anvari P., Salamat Rad A., Alipour F., Hafezi F., Asgari S., Hashemi H. Intraoperative optical coherence tomography to evaluate the effect of the eyelid speculum on corneal pachymetry during accelerated corneal cross-linking (9 mW/cm(2)). **Eye (Lond)**. 2018. 32(3): 579-85
Impact factor: 4.5
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1B REVIEWS. PEER-REVIEWED JOURNALS

1. Sarma P., Kaur H., Hafezi F., Bhattacharya J., Kirubakaran R., Prajapat M., Medhi B., Das K., Prakash A., Singh A., Kumar S., Singh R., Reddy D.H., Kaur G., Sharma S., Bhattacharya A. Short- and long-term safety and efficacy of corneal collagen cross-linking in progressive keratoconus: A systematic review and meta-analysis of randomized controlled trials. **Taiwan J Ophthalmol**. (in press):
 2. Hafezi F., Hillen M., Kollros L., Hafezi N., Torres Netto E. A. Corneal Cross-linking in Thin Corneas: From Origins to State of the Art. **Reviews in Ophthalmology**. 2022: 1-4
 3. Wu D., Lim D. K., Lim B. X. H., Wong N., Hafezi F., Manotosh R., Lim C. H. L. Corneal Cross-Linking: The Evolution of Treatment for Corneal Diseases. **Front Pharmacol**. 2021. 12: 686630
Impact Factor: 3.0
 4. Hashemi H., Heirani M., Ambrosio R., Jr., Hafezi F., Naroo S. A., Khorrami-Nejad M. The link between Keratoconus and posterior segment parameters: An updated, comprehensive review. **Ocul Surf**. 2021:
Impact Factor: 6.3
 5. Deshmukh R., Hafezi F., Kymionis G. D., Kling S., Shah R., Padmanabhan P., Sachdev M. S. Current concepts in crosslinking thin corneas. **Indian J Ophthalmol**. 2019. 67(1): 8-15
Impact Factor: 3.0
 6. Belin M. W., Lim L., Rajpal R. K., Hafezi F., Gomes J. A. P., Cochener B. Corneal Cross-Linking: Current USA Status: Report From the Cornea Society. **Cornea**. 2018. 37(10): 1218-25
Impact factor: 3.2
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1C EDITORIALS. PEER-REVIEWED JOURNALS

1. Hafezi F. Corneal Cross-Linking: Epi-On. **Cornea**. 2022. 41:
Impact Factor: 3.2

2. Hafezi F. Corneal Cross-linking for Keratoconus: Exploring the Issues Regarding Accelerated Protocols and Thin Corneas. **J Ophthalmic Vis Res.** 2021. 16(3): 314-16
Impact Factor: n/a

1D LETTERS AND CASE REPORTS. PEER-REVIEWED JOURNALS

1. Torres-Netto EA, Abdshahzadeh H, Abrishamchi R, Hafezi NL, Hillen M, Ambrósio R, Jr., Randleman JB, Spoerl E, Gatinel D, Hafezi F. Reply: Ex Vivo Eye Rubbing Evidence. **J Refract Surg.** 2022. 38(11): 752-53
Impact Factor: 3.3
2. Hashemi H, Heirani M, Ambrosio R, Jr., Hafezi F, Naroo SA, Khorrami-Nejad M. Reply to the letter-to-the-editor: Morphological retinal changes in keratoconus. **Ocul Surf.** 2022. 25: 71
Impact Factor: 6.3
3. Hafezi F, Munzinger A, Goldblum D, Hillen M, Tandogan T. Repeated High-Fluence Accelerated Slitlamp-Based Photoactivated Chromophore for Keratitis Corneal Cross-Linking for Treatment-Resistant Fungal Keratitis. **Cornea.** 2022. 41(8): 1058-61
Impact Factor: 3.2
4. Assaf JF, Hafezi F, Awwad ST. Delayed Laser In Situ Keratomileusis Interface Haze 6 Months After Corneal Cross-linking for Ectasia. **J Refr Surg Case Rep.** 2022. 2(2): e1-e5
5. Knyazer B, Hillen M, Hafezi F. Corneal Cross-linking for Infectious Keratitis at the Slit Lamp in Wheelchair Users. **J Refr Surg Case Rep.** 2021. 1(3): e36-e39
6. Hafezi F, Torres-Netto EA, Hillen MJP. Re: Prajna et al.: Cross-Linking-Assisted Infection Reduction: a randomized clinical trial evaluating the effect of adjuvant cross-linking on outcomes in fungal keratitis (Ophthalmology. 2020;127:159-166). **Ophthalmology.** 2021. 128(1): e6
Impact factor: 14.3
7. Hafezi F, Torres Netto EA, Randleman JB, Hafezi NL, Mazzotta C, Ambrosio R, Kollros L. Corneal Cross-linking for Keratoglobus Using Individualized Fluence. **J Refr Surg Case Rep.** 2021. 1(1): e10-e14
8. Hafezi F, Richoz O, Torres-Netto EA, Hillen M, Hafezi N. Reply: Corneal Cross-linking at the Slit Lamp: Concern About Risk of Corneal Ulcer. **J Refract Surg.** 2021. 37(8): 572-73
Impact factor: 3.3
9. Hafezi F, Kling S, Gilardoni F, Hafezi N, Hillen M, Abrishamchi R, Gomes JAP, Mazzotta C, Randleman JB, Torres-Netto EA. Reply to comment on Individualized corneal cross-linking with riboflavin and UV-A in ultra-thin corneas: the sub400 protocol. **Am J Ophthalmol.** 2021:
Impact factor: 5.5
10. Torres-Netto EA, Randleman JB, Hafezi NL, Hafezi F. Late-onset progression of keratoconus after therapy with selective tissue estrogenic activity regulator. **J Cataract Refract Surg.** 2019. 45(1): 101-04
Impact Factor: 3.5
11. Torres-Netto EA, Randleman JB, Hafezi NL, Hafezi F. Reply. **J Cataract Refract Surg.** 2019. 45(7): 1055
Impact Factor: 3.5
12. Seiler T, Randleman JB, Vinciguerra P, Hafezi F. Corneal crosslinking without epithelial removal. **J Cataract Refract Surg.** 2019. 45(6): 891-92
Impact Factor: 3.5
13. Lee R, Hafezi F, Randleman JB. Bilateral Keratoconus Induced by Secondary Hypothyroidism After Radioactive Iodine Therapy. **J Refract Surg.** 2018. 34(5): 351-53
Impact Factor: 3.3

2 ARTICLES, REVIEWS, OTHERS. NON PEER-REVIEWED JOURNALS

1. Hafezi F. Eye rubbing alone does not aggravate keratoconus. **De Oogarts**. 2022. (in press):
2. Hafezi F. Cross-linking advancements continue in US, Europe. **Ocular Surgery News European Edition**. 2022. Nov/Dec:
3. Hafezi F. Improving the gold standard for CXL. **Review of Oprometry**. 2022. 4: 50-52
4. Hafezi F. Fortschritte in der Cross-Linking-Therapie der Hornhautektasien. **Ophthalmologische Nachrichten**. 2022. 4: 1-2
5. Hafezi F. Keratokonus «Pearls». **Ophta**. 2022. 3: 152-53
6. Hafezi F. Management of Complex Corneas. **Cat Refr Surg Today Eur**. 2022. 4: 46-50
7. Hafezi F. Ophthalmic challenges in 2022. **Ophthalmology Times Europe**. 2021. 12: 6-10
8. Hafezi F. Cross-Linking Update 2021. **Review of Ophthalmology**. 2021. 10: 28-37
9. Hafezi F. US corneal cross-linking specialists aim to bridge “the innovation gap” with Europe. **Ocular Surgery News U.S. Edition**. 2021. 6: 1-7
10. Hafezi F. Korneales Crosslinking: Vom Operationsraum an die Spaltlampe. **Zeitschrift für praktische Augenheilkunde**. 2021. 42: 267-69
11. Hafezi F. Corneal Cross-Lining can be performed at slit lamp. **Ocular Surgery News**. 2021. 06: 1-5
12. Torres Netto EA, Hafezi F. PRK ou SMILE. Diferenças biomecânicas? **Em Foco**. 2020. 04: 28-29
13. Hafezi F, Torres Netto EA, Kling S. Individualized CXL in ultra-thin corneas: the sub400 protocol. **Ophta**. 2020. 01: 2-3
14. Hafezi F, Torres Netto EA. Cross-Linking the Cornea in 2020: State of the Art. **Ophta**. 2020. 6: 1-2
15. Hafezi F, Torres Netto EA. Durchführen tiefer Ablationen in der refraktiven Chirurgie ohne Mitomycin C. **Concept Ophthalmologie**. 2020. 7: 1-3
16. Hafezi F. Cross-linking at the Slit Lamp—Why Moving Corneal Cross-linking from the Operating Room to an Office-based Procedure Makes a Difference. **Touch Ophthalmology**. 2020. 01: 55-57
17. Hafezi F. Say anything. **Cataract and Refractive Surgery Today Europe**. 2020. 09: 63-64
18. Hafezi F. Corneal Cross-linking bei fortgeschrittenen Erkrankungen: von Keratokonus bis zur infektiösen Keratitis. **Ophthalmologische Nachrichten**. 2020. 4: 1-2
19. Hafezi F. Education Without Borders. **The Ophthalmologist**. 2020. 06: 1-3
20. Hafezi F. Corneal research - the literature. **Cataract and Refractive Surgery Today Europe**. 2020. 10: 14-16
21. Hafezi F. C-Eye, un salto evolutivo. **EyeSee**. 2020. 01: 1-2
22. Hafezi F. The top 5 challenges in 2020. **Ophthalmology Times Europe**. 2020. 03: 1-2
23. Hafezi F. Is there any truth to the idea of ‘no rub, no cone?’. **Ocular Surgery News European Edition**. 2020. March: 1-2
24. Hafezi F. Risk factors for keratoconus progression in women. **Cataract and Refractive Surgery Today Europe**. 2020. 4: 90-91

25. Hafezi NL. PACK-CXL Update. **Ophta**. 2019. 10: 1
26. Hafezi NL. Democratizing corneal cross-linking by bringing it out of the OR. **CAKE Magazine**. 2019. 09: 8-10
27. Hafezi F, Torres Netto EA. Which leaves a stronger cornea: PRK or SMILE? **Cataract and Refractive Surgery Today Europe**. 2019(09): 70-71
28. Hafezi F. Think PINCO. **The Ophthalmologist**. 2019. 09: 1-3
29. Hafezi F. Der Weg des PACK-CXL von "bench" zu "bedside". **Ophthalmologische Nachrichten**. 2019. 12: 16
30. Hafezi F. CXL beyond the OR. **Cataract and Refractive Surgery Today Europe**. 2019(03): 27-29
31. Hafezi F. CXL Unbound. **The Ophthalmologist**. 2019. 09: 1-3
32. Hafezi F. Highlights from the European Society of Cataract and Refractive Surgeons Annual Meeting - An Expert Interview with Farhad Hafezi. **Touch Ophthalmology**. 2019. 09: 15-16
33. Hafezi N, Hafezi F. Keratokonus. **Der Beobachter**. 2018. 02: 1-7
34. Hafezi F, Torres Netto EA. Democratização do crosslinking corneano. **Em Foco**. 2018. 12: 1-3
35. Hafezi F, Randleman B, Vinciguerra P, Seiler T. CXLUSA: show us your hand. **The Ophthalmologist**. 2018. 04: 16-17
36. Hafezi F, Hafezi N. Going beyond corneal strengthening. **Cataract and Refractive Surgery Today Europe**. 2018(07): 31-32
37. Hafezi F. Spending time to save time, sight and dignity. **Cataract and Refractive Surgery Today Europe**. 2018(9): 1
38. Hafezi F. Why performing research makes you a better surgeon. **Ocular Surgery News European Edition**. 2018. December: 1-3
39. Hafezi F. What's Hot and What's Heating Up in CXL. **Cataract and Refractive Surgery Today Europe**. 2018(11): 68-72
40. Hafezi F. PACK-CXL yields "good response" in antibiotic-resistant infectious keratitis. **Ocular Surgery News European Edition**. 2018. September: 24-25
41. Hafezi F. What's hot – and what's heating up – in CXL. **Cataract and Refractive Surgery Today Europe**. 2018(08): 16-17
42. Hafezi F. Antimikrobielle Keratitis-Therapie mit Riboflavin und UV-Bestrahlung: Indikationen, Möglichkeiten und Grenzen. **Ophthalmologische Nachrichten**. 2018: 17-20

3A BOOKS

None

3B BOOK CHAPTERS

1. Hafezi F, Hillen M
Corneal Cross-linking, in Keratoconus,
Das S, Editor. 2022, Springer Nature: Cham, Switzerland. 183-93.
 2. Torres Netto EA, Hosny M, Hafezi F
Corneal Cross-Linking at the Slit Lamp in Keratoconus,
Armia A, Mazzotta, C., Editor. 2021, Springer Nature: Cham, Switzerland. 149-59.
 3. Hafezi F, Torres Netto EA
Corneal Cross-Linking in Ultrathin Corneas, in Keratoconus,
Armia A, Mazzotta, C., Editor. 2021, Springer Nature: Cham, Switzerland. 159-67.
 4. Torres Netto EA, Hillen M, Hafezi F
Corneal Cross-Linking: Results and Complications, in Keratoconus,
Izquierdo L, Jr., Editor. 2020, Elsevier: Amsterdam, The Netherlands. 83-86.
 5. Torres Netto EA, Kling S, Hafezi F
The Role of Oxygen in Corneal Cross-Linking, in Controversies in the Management of Keratoconus,
Barbara A, Editor. 2019, Springer Nature Switzerland: Cham, Switzerland. 83-86.
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3C THESES

1. Max Bürgi. Influence of hormones on the cornea and their impact on corneal biomechanics. 2022 (ongoing). Department: Clinical Neurosciences. University: Geneva, Switzerland. Thesis director: Farhad Hafezi.
2. Enes Aydemir. Résistance enzymatique après Crosslinking de la cornée utilisant une combinaison de riboflavine/UV-A et la rose bengale/lumière verte. 2022 (ongoing). Department: Clinical Neurosciences. University: Geneva, Switzerland. Thesis director: Farhad Hafezi.
3. Emilio Torres-Netto. L'insuffisance de collagène V dans un modèle murin du syndrome Ehlers Danlos affecte les propriétés biomécaniques viscoélastiques expliquant les cornées fines et fragiles. 2020 (ongoing). Department: Clinical Neurosciences. University: Geneva, Switzerland. Thesis director: Farhad Hafezi.
4. Carmen Rodrigues. TBD. 2020 (ongoing). Department: Clinical Neurosciences. University: Geneva, Switzerland. Thesis director: Farhad Hafezi.
5. Reyhaneh Abrishamchi. Accelerating the biomechanical effect of the epi-off Dresden protocol ex vivo. 2020 (ongoing). Department: Clinical Neurosciences. University: Geneva, Switzerland. Thesis director: Farhad Hafezi.
6. Hormoz Abdshahzadeh. The impact of repetitive and prolonged eye rubbing on corneal biomechanics ex vivo. 2020 (ongoing). Department: Clinical Neurosciences. University: Geneva, Switzerland. Thesis director: Farhad Hafezi.
7. Shahrokh Jalali. L'AcuFocus, implant cornéen KAMRA pour corriger la presbytie à l'aide de femto-lasik. 2019. Department: Clinical Neurosciences. University: Geneva, Switzerland. Thesis director: Farhad Hafezi. DOI: 10.13097/archive-ouverte/unige:125544.
8. Nikolaos Chatzis. Progression du kératocône et effet de la réticulation du collagène cornéen chez les enfants et adolescents. 2019. Department: Clinical Neurosciences. University: Geneva, Switzerland. Thesis director: Farhad Hafezi. DOI: 10.13097/archive-ouverte/unige:117762.
9. David Tabibian. Cross-linking cornéen multiple et biomécanique cornéenne. 2018. Department: Clinical Neurosciences. University: Geneva, Switzerland. Thesis director: Farhad Hafezi. DOI: 10.13097/archive-ouverte/unige:108014.

3E INVITED TALKS ON CONGRESSES

1. Hafezi F. Sub400 Corneal Cross-Linking Treatment. Gazi eye clinic XX. Ophthalmology Meeting May 28-29, 2022 "Webinar". 29 May, 2022. Ankara, Turkey (virtual).
2. Hafezi F. Prevalence of Keratoconus: Update 2022. XII International conference on ophthalmology EAST- WEST. 02-03 Jun, 2022. Moscow, Russia (virtual).
3. Hafezi F. Limites actuelles de l'ablation de surface. Diplôme Universitaire de Chirurgie Réfractive FMPC (Faculté de Médecine et de Pharmacie de Casablanca). 10-11 Jun, 2022. Casablanca, Morocco.
4. Hafezi F. PACE: PTK-assisted customized epi-on CXL. SICSSO Congress (The International Society of Cornea, Stem Cells and Ocular Surface). 01 Jul, 2022. Florence, Italy.
5. Hafezi F. The question for epi-on: my epi-on protocol. 4th International CXL Experts' Summer Meeting. 22 Jul, 2022. Beijing, China (virtual).
6. Hafezi F. C-Eye: Simple, Affordable and Portable Treatment for KC and Infectious Keratitis. CAKE & PIE Expo 2.0. 20 Aug, 2022. Da Nang, Vietnam (virtual).
7. Hafezi F. Is corneal crosslinking a valid alternative for treatment of IK. 49th ECLSO (European Contact Lens Society of Ophthalmologists) Congress. 01-02 Sep, 2022. Paris, France.
8. Hafezi F. PACE: A Novel Way to Perform Customized CXL. The 28th Annual Meeting of the Lebanese Ophthalmological Society. 02-06 Sep, 2022. Beirut, Lebanon.
9. Hafezi F. CXL Update. International Society of Refractive Surgery (ISRS) Session. 10 Sep, 2022. Damascus, Syria (virtual).
10. Hafezi F. Office-based epi-on CXL at the Slitlamp; Democratizing Access to Treatment. 38th World Ophthalmology Congress (WOC2022®). 12 Sep, 2022. Geneva, Switzerland (virtual).
11. Hafezi F. SMART: Simple, Mobile, Affordable & Reliable Technology for LMICs. 40th Congress of the ESCRS (European Society of Cataract and Refractive Surgeons). 15-19 Sep, 2022. Milan, Italy.
12. Hafezi F. Crosslinking in eye-care practice. International Ophthalmology Congress IOC UZBEKISTAN 2022. 29 Sep, 2022. Tashkent, Uzbekistan.
13. Hafezi F. Hornhautektasien. SICHT.KONTAKTE 2022. 07 Okt, 2022. Osnabrück, Germany.
14. Hafezi F. Epi-on CXL at the slitlamp PACE: 2nd generation customized CXL High-fluence PACK-CXL for infectious keratitis. 19th International Congress SASCERS (Southern African Society of Cataract and Refractive Surgery). 03 Nov, 2022. Cape Town, South Africa (virtual).
15. Hafezi F. Frontiers in Cross-Linking in Keratoconus. Turkish Ophthalmological Society (TOD) National Congress. 05 Nov, 2022. Antalya, Turkey.
16. Hafezi F. Diagnostic Tools in Pediatric. Muscat International Ophthalmology Conference. 10-12 Nov, 2022. Muscat, Oman.
17. Hafezi F. PACK-CXL in Microbial Keratitis. 6th International Red Sea Ophthalmology Conference. 12-13 Nov, 2022. Jeddah, Saudi Arabia.
18. Hafezi F. Understand OCT elastography for corneal biomechanics. 16ème Congrès d'Ophtalmologie Pratique. 16-19 Nov, 2022. Algiers, Algeria.
19. Hafezi F. ELZA Innovations Corneal Cross-linking of 2022. Keratoconus Theatre Version 4.0. 18 Nov, 2022. Udupi, India (virtual).
20. Hafezi F. Crosslinking Up Date de A à Z. 12e congrès de la Vision 02-03 Dec, 2022. Rabat, Morocco.
21. Hafezi F. Prise en charge du kératocône. 39ème congrès de la STO (Société tunisienne d'ophtalmologie). Feb 9-12, 2022. Casablanca, Morocco.
22. Hafezi F. Prise en charge du kératocône. 35ème congrès national d'ophtalmologie. Feb 9-12, 2022. Casablanca, Morocco.
23. Hafezi F. CXL Updates. MIOC (Muscat International Ophthalmology Conference). Jan 15, 2022. Muscat, Oman (Virtual).
24. Hafezi F. Keratoconus Screening 2022: providing access to affordable portable and simple-to-use technology. AOPA (Association des Ophtalmologues Algériens). Jan 13-15, 2022. Algiers, Algeria.
25. Hafezi F. Visual Rehabilitation post – CXL. AOPA (Association des Ophtalmologues Algériens). Jan 13-15, 2022. Algiers, Algeria.
26. Hafezi F. Corneal Collagen Cross - Linking: Today and Tomorrow. International Cornea Masterclass Series (Centre for Sight). Jan 06, 2021. New Delhi, India (virtual).
27. Hafezi F. Case Presentation. 6th QOIC (al Qassimi Ophthalmology International Conference). Feb 13, 2021. Dubai, UAE (virtual).
28. Hafezi F. PKR dans les cornées irrégulières. 34ème Congrès National d'Ophtalmologie. Feb 19, 2021. Rabat, Morocco (virtual).
29. Hafezi F. Results of a prospective study using individualized fluence corneal-cross-linking in ultra-thin corneas – the sub400 protocol. 25th ESCRS (The European Society of Cataract and Refractive Surgeons) winter meeting. Feb 19, 2021. London, UK (virtual).
30. Hafezi F. Corneal Cross-Linking for Keratoglobus using Individualized Fluence. 25th ESCRS (The European Society of Cataract and Refractive Surgeons) winter meeting. Feb 19, 2021. London, UK (virtual).
31. Hafezi F. 2020 advances in cross linking. HSOIRS (Hellenic Society of Intraocular Implant and Refractive Surgery) Winter Symposium. Feb 26, 2021. Athens, Greece (virtual).

32. Hafezi F. Crosslinking technologies (SUB400 Protocol). 4th webinar of the AOPA (Association of Algerian Private Ophthalmologists). Mar 26, 2021. Algiers, Algeria (virtual).
33. Hafezi F. PACK-CXL: Keratitisbehandlung ohne Antibiotika? 3. Wissenschaftliche Sitzung der WOG (Wiener Ophthalmologische Gesellschaft). 10 May, 2021. Vienna, Austria (virtual).
34. Hafezi F. PACK-CXL for Bacterial Keratitis: providing access to treatment while combatting antibiotic resistance. International Conference on Ophthalmology East-West-2021. 03 Jun, 2021. Moscow, Russia (virtual).
35. Hafezi F. Keratoconus in difficult situations. World Webinar on Cataract & Refractive Surgery. 05 Jun, 2021. Brasilia, Brazil (virtual).
36. Hafezi F. Crosslinking versus stop rubbing. 49th ECLSO (European congress on myopia control). 18 Sep, 2021. Paris, France (virtual).
37. Hafezi F. Optical coherence elastography. 39th Congress of the ESCRS (European Society of Cataract and Refractive Surgeons). 10 Sep, 2021. Amsterdam, Netherlands.
38. Hafezi F. PRK for very high myopia without MMC. 35th of the HISIOIRS (Hellenic Society of Intraocular Implant and Refractive Surgery). 21 Oct, 2021. Thessaloniki, Greece.
39. Hafezi F. Current Concepts in Cross Linking. 35th of the HISIOIRS (Hellenic Society of Intraocular Implant and Refractive Surgery). 22 Oct, 2021. Thessaloniki, Greece.
40. Hafezi F. PACK-CXL for sterile and infectious keratitis - clinical evidence, recent findings, and future applications. 35th of the HISIOIRS (Hellenic Society of Intraocular Implant and Refractive Surgery). 23 Oct, 2021. Thessaloniki, Greece.
41. Hafezi F. OCT élastographie : Nouveauté dans le diagnostic du kératocône. 16ème Congrès de la SAMIR (Société Marocaine de chirurgie Réfractive et d'Implantologie). 12 Nov, 2021. Rabat, Morocco.
42. Hafezi F. CXL, where we are now? Third SGH (Saudi German Hospital) International Ophthalmology Conference. 25 Oct, 2021. Riyadh, KSA.
43. Hafezi F. TPRK can be a rule for refractive surgery. Third SGH (Saudi German Hospital) International Ophthalmology Conference. 25 Oct, 2021. Riyadh, KSA.
44. Hafezi F. Advances in CXL therapy of corneal ectasia. 29. Kölner Adventssymposium. 04 Dez, 2021. Cologne, Germany (virtual).
45. Hafezi F. Ocular Elastography : le futur du diagnostic du kératocône. 11e congrès de la Vision RESO (Réseau de l'Enseignement et la Solidarité en Ophthalmologie). 16 Dec, 2021. Rabat, Morocco (virtual).
46. Hafezi F. CXL at the Slit Lamp: Why & How. 11e congrès de la Vision RESO (Réseau de l'Enseignement et la Solidarité en Ophthalmologie). 17 Dec, 2021. Rabat, Morocco (virtual).
47. Hafezi F. Understanding Oxygen. CXL Experts' Meeting 2021. 17-18 Dec, 2021. Zurich, Switzerland (virtual).
48. Farhad F. Kératocône up date. 34ème Congrès National d'Ophthalmologie. Feb 15, 2021. Rabat, Morocco (virtual).
49. Hafezi F. Corneal Crosslinking - the future is now. KKesh Medical Education. Dec 15, 2020. Riyadh, KSA (virtual).
50. Hafezi F. CXL for complications correction post-LASIK/PRK. Omani Ophthalmological Society. Nov 27, 2020. Muscat, Oman (virtual).
51. Hafezi F. Kératocônes Update 2020. Société Marocaine d'Ophthalmologie (SMO). Nov 26, 2020. Casablanca, Morocco (virtual).
52. Hafezi F. Failed Crosslinking: What Next? American Academy of Ophthalmology (AAO). Nov 13-15, 2020. Chicago, USA (virtual).
53. Hafezi F. CXL for corneal infections: "PACK-CXL". 51st Meeting of the Polish Ophthalmological Society. Nov 07-09, 2020. Krakow, Poland (virtual).
54. Hafezi F. CXL treatment protocols for KC and corneal ectasia: epi-on vs. epi-off. 51st Meeting of the Polish Ophthalmological Society. Nov 07-09, 2020. Krakow, Poland (virtual).
55. Hafezi F. CXL Protocols in special cases: thin corneas & customized treatments Alicante Refractive International. Mar 26-29, 2020. Alicante, Spain (virtual).
56. Hafezi F. Epi-on CXL, is there any evidence? Alicante Refractive International. Mar 26-29, 2020. Alicante, Spain (virtual).
57. Hafezi F. CXL épi-on in 2020. Société Marocaine d'Optalmologie. Sep 21-24, 2020. Delhi, India (virtual).
58. Hafezi F. The Soothsayer - Crosslinx - Failed CXL. Refractive Surgery 360. LV Prasad Eye Institute. Sep 11, 2020. Delhi, India (virtual).
59. Hafezi F. The Fourth protocol - Collagen Crosslinking. Refractive Surgery 360. LV Prasad Eye Institute. Sep 11, 2020. Delhi, India (virtual).
60. Hafezi F. Cross-linking (CXL) for the treatment of infectious keratitis. 15th Symposium of the Croatian Organisation for Cataract and Refractive Surgery. Sep 11-13, 2020. Zagreb, Croatia (virtual).
61. Hafezi F. Le rôle de l'oxygène dans les protocoles cliniques du cross-linking. Société Française d'Ophthalmologie. Sep 05-08, 2020. Paris, France (virtual).
62. Hafezi F. Results of a Prospective Study Using Individualized Fluence Corneal Cross- Linking in Ultra-Thin Corneas – the sub400 Protocol. Annual Meeting of the Swiss Ophthalmological Society. Aug 27-28, 2020. Lausanne, Switzerland (virtual).
63. Hafezi F. Best Practice Model for Treating Pediatric Patients. Saudi Ophthalmology. Aug 6-8, 2020. Jeddah, KSA (virtual).
64. Hafezi F. What are the At-Risk Groups for Keratoconus. Saudi Ophthalmology. Aug 6-8, 2020. Jeddah, KSA (virtual).
65. Hafezi F. Is Keratoconus Really Rare? Saudi Ophthalmology. Aug 6-8, 2020. Jeddah, KSA (virtual).

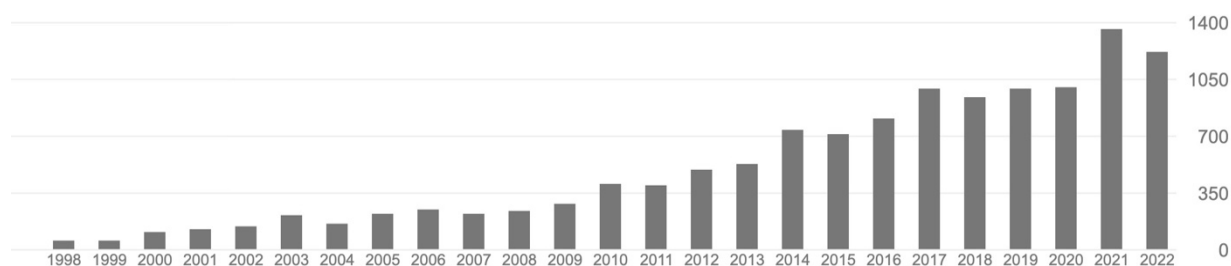
66. Hafezi F. CXL treatment & management of young patients. Middle East Ophthalmology Meeting. Jun 26, 2020. Dubai, UAE (virtual).
67. Hafezi F. Cross-Linking for Keratoconus. World Webinar on Cataract and Refractive Surgery. May 30, 2020. Chennai, India (virtual).
68. Hafezi F. Mise à jour CXL 2020: le cross-linking dans les cornées ultrafines. 53ème cours de formation postgraduée. May 3, 2020. Rabat, Morocco (virtual).
69. Hafezi F. Le CXL pédiatrique pour les enfants avec kératocône. 53ème cours de formation postgraduée. May 3, 2020. Rabat, Morocco (virtual).
70. Hafezi F. Corneal Cross-Linking in 2020 and beyond. UNIFESP Sao Paulo. External Eye Disease and Cornea Lectures April 29, 2020. Sao Paulo, Brazil (virtual).
71. Hafezi F. CXL at the slit Lamp: Access for all. King Khaled Eye Specialist Hospital. KKESH Global Education Forum. April 2, 2020. Riyadh, KSA (virtual).
72. Hafezi F. CXL Treatment for ultrathin corneas: the sub400 protocol. King Khaled Eye Specialist Hospital. KKESH Global Education Forum. April 2, 2020. Riyadh, KSA (virtual).
73. Hafezi F. Diagnose of Irregular Corneas II. King Khaled Eye Specialist Hospital. Anterior Segment Lecture. Mar 3, 2020. Riyadh, KSA (virtual).
74. Hafezi F. Neue Wege zur Behandlung infektiöser Keratitiden durch Kollagenquervernetzung. Marburger Ophthalmologischer Disput. Feb 29-Mar1, 2020. Marburg, Germany.
75. Hafezi F. PACK-CXL: Using riboflavin for infectious keratitis. Bascom Palmer Eye Institute. Interactive Consultations in Cornea, Cataract and Refractive Surgery 2020. Feb 21-22, 2020. Miami, USA.
76. Hafezi F. Therapeutic Excimer Laser Surface Ablation in KC. Bascom Palmer Eye Institute. Interactive Consultations in Cornea, Cataract and Refractive Surgery 2020. Feb 21-22, 2020. Miami, USA.
77. Hafezi F. CXL Beyond the Dresden Protocol. Bascom Palmer Eye Institute. Interactive Consultations in Cornea, Cataract and Refractive Surgery 2020. Feb 21-22, 2020. Miami, USA.
78. Hafezi F. Detecting Irregular Corneas Al-Qassani Ophthalmology Congress. Feb 12-15, 2020. Dubai, UAE.
79. Hafezi F. PRK in high myopia without MMC. 14th International Conference of RIO (Research Institute of Ophthalmology). Jan 22-26, 2020. Cairo, Egypt.
80. Hafezi F. SmartSurf & Inflammation – experimental experience. 14th International Conference of RIO (Research Institute of Ophthalmology). Jan 22-26, 2020. Cairo, Egypt.
81. Hafezi F. Sub400: CXL Treatments for thin corneas. 14th International Conference of RIO (Research Institute of Ophthalmology). Jan 22-26, 2020. Cairo, Egypt.
82. Hafezi F. Why TransPRK is better than LASIK & SMILE. 14th International Conference of RIO (Research Institute of Ophthalmology). Jan 22-26, 2020. Cairo, Egypt.
83. Hafezi F. Results of the multicenter RCT on PACK-CXL. 15th Annual CXL Experts Meeting. Dec 4 to 8, 2019. Zurich, Switzerland.
84. Hafezi F. CXL in ultrathin corneas. The sub-400 protocol. 15th Annual CXL Experts Meeting. Dec 4 to 8, 2019. Zurich, Switzerland.
85. Hafezi F. Is KC really rare? Identifying at risk patient groups 15th Annual CXL Experts Meeting. Dec 4 to 8, 2019. Zurich, Switzerland.
86. Hafezi F. CXL at the Slit Lamp. AOPA (Association des Ophtalmologues Algériens). Oct 31 - Nov 02, 2019. Algiers, Algeria.
87. Hafezi F. Using CXL to treat infectious keratitis. AOPA (Association des Ophtalmologues Algériens). Oct 31 - Nov 02, 2019. Algiers, Algeria.
88. Hafezi F. Sub400: CXL Treatment for thin corneas. AOPA (Association des Ophtalmologues Algériens). Oct 31 - Nov 02, 2019. Algiers, Algeria.
89. Hafezi F. Laser excimer applications for irregular corneas. AOPA (Association des Ophtalmologues Algériens). Oct 31 - Nov 02, 2019. Algiers, Algeria.
90. Hafezi F. How to perform PRK in high myopia without mitomycin C. 9ème congrès de la vision. Oct 26-26, 2019. Rabat, Morocco.
91. Hafezi F. Excimer Laser for irregular corneas. 9ème congrès de la vision. Oct 26-26, 2019. Rabat, Morocco.
92. Hafezi F. What are the at-risk groups for KC"? . 9ème congrès de la vision. Oct 26-26, 2019. Rabat, Morocco.
93. Hafezi F. Is KC really rare? 9ème congrès de la vision. Oct 26-26, 2019. Rabat, Morocco.
94. Hafezi F. Best practice model for treating pediatric patients. 9ème congrès de la vision. Oct 26-26, 2019. Rabat, Morocco.
95. Hafezi F. Expanding CXL From Keratoconus to Infectious Keratitis. American Academy of Ophthalmology. Oct 10-18, 2019. San Francisco, USA.
96. Hafezi F. Hormonal influences of KC and ectasia. Egyptian Keratoconus Society. Oct 2-5, 2019. Cairo, Egypt.
97. Hafezi F. Decision making in KC. Egyptian Keratoconus Society. Oct 2-5, 2019. Cairo, Egypt.
98. Hafezi F. Using light to save sight: PACK-CXL. Egyptian Keratoconus Society. Oct 2-5, 2019. Cairo, Egypt.
99. Hafezi F. CXL for thin corneas. Egyptian Keratoconus Society. Oct 2-5, 2019. Cairo, Egypt.
100. Hafezi F. Corneal refractive surgery following CXL. Egyptian Keratoconus Society. Oct 2-5, 2019. Cairo, Egypt.
101. Hafezi F. CXL: basics & principles. CXL Updates 2019. Egyptian Keratoconus Society. Oct 2-5, 2019. Cairo, Egypt.
102. Hafezi F. Prevalence, detection, & treatment of pediatric KC. Egyptian Keratoconus Society. Oct 2-5, 2019. Cairo, Egypt.

103. Hafezi F. Update on corneal cross-linking for keratoconus and infectious keratitis. 117th Annual Congress of the German Ophthalmological Society (DOG). Sep 26-29, 2019. Berlin, Germany.
104. Hafezi F. Crosslinking – Pro and Contra. 117th Annual Congress of the German Ophthalmological Society (DOG). Sep 26-29, 2019. Berlin, Germany.
105. Hafezi F. Modulating the stromal response to infection: PACK-CXL. 31st Biennial Harvard Cornea Conference. Sep 19-21, 2019. Boston, Massachusetts.
106. Hafezi F. Modern management of irregular corneas. European Society for Cataract and Refractive Surgery (ESCRS). Sep 14-18, 2019. Paris, France.
107. Hafezi F. Assessment of the mechanical forces applied during eye rubbing. European Society for Cataract and Refractive Surgery (ESCRS). Sep 14-18, 2019. Paris, France.
108. Hafezi F. Cross linking at the slit lamp. Middle East Africa Council Of Ophthalmology Symposium. Sep 5-8, 2019. Ammann, Jordan.
109. Hafezi F. Epi-off CXL. Middle East Africa Council Of Ophthalmology Symposium. Sep 5-8, 2019. Ammann, Jordan.
110. Hafezi F. Who are the at-risk groups for Keratoconus? Middle East Africa Council Of Ophthalmology Symposium. Sep 5-8, 2019. Ammann, Jordan.
111. Hafezi F. Is keratoconus really rare? Middle East Africa Council Of Ophthalmology Symposium. Sep 5-8, 2019. Ammann, Jordan.
112. Hafezi F. Using CXL to treat infectious keratitis (PACK-CXL). Middle East Africa Council Of Ophthalmology Symposium. Sep 5-8, 2019. Ammann, Jordan.
113. Hafezi F. CXL and Thin Corneas. Middle East Africa Council Of Ophthalmology Symposium. Sep 5-8, 2019. Ammann, Jordan.
114. Hafezi F. PACK-CXL for infectious keratitis. 112th Annual Congress of the Swiss Ophthalmological Society. August 28-29, 2019. Locarno, Switzerland.
115. Hafezi F. CXL Basics: KC and Infection. Vision China. Jul 24-27, 2019. Qingdao, China.
116. Hafezi F. Corneal cross-linking (CXL) treatment applications: from keratoconus to infection. Vision China. Jul 24-27, 2019. Qingdao, China.
117. Hafezi F. CXL technology & applications. X International Conference on Ophthalmology. Jun 5-8, 2019. Ufa, Russia.
118. Hafezi F. The role of oxygen in CXL. 17° International Congress of The Italian Society of Ophthalmology (SOI). May 24-25, 2019. Rome, Italy.
119. Hafezi F. CXL Applications beyond KC. Keratoconus Theatre 2019. May 18-20, 2019. Bangalore, India.
120. Hafezi F. What is right for your patient with keratoconus. Keratoconus Theatre 2019. May 18-20, 2019. Bangalore, India.
121. Hafezi F. Using Light to Save Sight: KC in pediatric and low-compliant patients. Finish Society for Cataract and Refractive Surgery. May 15-17, 2019. Turku, Finland.
122. Hafezi F. Expanding CXL Applications from KC to infectious keratitis. Finish Society for Cataract and Refractive Surgery. May 15-17, 2019. Turku, Finland.
123. Hafezi F. Les bonnes indications du CXL. XIVe Congrès national de chirurgie réfractive et d'implantologie (SAMIR). Apr 11-13, 2019. Rabat, Morocco.
124. Hafezi F. Therapeutisches Crosslinking bei Infektionen. Visus & Visionen. Apr 5-6, 2019. Salzburg, Austria.
125. Hafezi F. Using CXL to treat infectious keratitis (PACK-CXL). Croatia Contact Lens Symposium. Mar 30, 2019. Zagreb, Croatia.
126. Hafezi F. CXL Applications Beyond Keratoconus. Croatia Contact Lens Symposium. Mar 30, 2019. Zagreb, Croatia.
127. Hafezi F. Identifying “at risk” patient groups Croatia Contact Lens Symposium. Mar 30, 2019. Zagreb, Croatia.
128. Hafezi F. Navigating through the Sea of Protocols: what is right for your patient? Croatia Contact Lens Symposium. Mar 30, 2019. Zagreb, Croatia.
129. Hafezi F. Corneal crosslinking (CXL) Basics. Croatia Contact Lens Symposium. Mar 30, 2019. Zagreb, Croatia.
130. Hafezi F. Unterfunktion der Schilddrüse und Keratokonus. SBAO. Mar 24-25, 2019. Bern, Switzerland.
131. Hafezi F. Addressing the needs of children and low-compliant patients during eye surgery. European Symposium on Ambulatory Anesthesia and Analgesia. Mar 8-9, 2019. Zurich, Switzerland.
132. Hafezi F. Inflammation and its management in refractive surgery. 42nd SIMASP. Feb 14-16, 2019. Sao Paulo, Brazil.
133. Hafezi F. Diagnosing, treating and managing low compliant pediatric patients. 42nd SIMASP. Feb 14-16, 2019. Sao Paulo, Brazil.
134. Hafezi F. Lessons from the last 10 years. How will we be crosslinking in 5 years? 42nd SIMASP. Feb 14-16, 2019. Sao Paulo, Brazil.
135. Torres E., Hafezi F. PACK-CXL multicenter trial: preliminary results. EUCornea. Vienna, Austria.
136. Torres E., Hafezi F. Does Bowman's layer influence corneal biomechanics? American Academy of Ophthalmology (AAO). Chicago, USA.
137. Kling S., Torres E., Hafezi F. Quantitative antimicrobial efficacy of PACK-CXL for different bacterial strains as a function of UV fluence and irradiated volume. EUCornea. Vienna, Austria.
138. Kling S., Torres E., Hafezi F. Individualized Corneal Cross-linking in Ultra-Thin Corneas: Treatment Outcome after 1 Year. European Society for Cataract and Refractive Surgery (ESCRS). Vienna, Austria.

139. Hafezi F. CXL in ultrathin corneas / PACK-CXL for infectious keratitis. Kölner Advents-Symposium. Dec 7-9, 2018. Cologne, Germany.
140. Hafezi F. Epi-off accelerated CXL. 14th International CXL Experts Meeting. Nov 29-Dec1, 2018. Zurich, Switzerland.
141. Hafezi F. CXL: Photo Activated Chromophore to treat Keratitis. 12ème ATMO (Association Tunisienne de Microchirurgie Oculaire). 01.-04.11.2018. Sousse, Tunisia.
142. Hafezi F. Treating Irregular Corneas. 19th Russian National Meeting. 18.-20.10.2018. Moscow, Russia.
143. Hafezi F. CXL: Update 2018. 12ème ATMO (Association Tunisienne de Microchirurgie Oculaire). 01.-04.11.2018. Sousse, Tunisia.
144. Hafezi F. Excimer Laser Applications for Irregular Corneas. European Society for Cataract and Refractive Surgery (ESCRS). Vienna, Austria.
145. Hafezi F. Current State of CXL - looking beyond keratoconus. 19th Russian National Meeting. 18.-20.10.2018. Moscow, Russia.
146. Hafezi F. Hypothermia improves oxygen availability and enhances the biomechanical corneal cross-linking effect. American Academy of Ophthalmology (AAO). Chicago, USA.
147. Hafezi F. CXL in ultrathin corneas / PACK-CXL for infectious keratitis. Kölner Adventssymposium. Cologne, Germany.
148. Hafezi F. CXL: Photo Activated Chromophore to treat Keratitis. Association Tunisienne des Ophthalmologues. Sousse, Tunisia.
149. Hafezi F. CXL: Update 2018. Association Tunisienne des Ophthalmologues. Sousse, Tunisia.
150. Hafezi F. Conférence sur le CXL. Dernières avancées en 2018. Association Tunisienne des Ophthalmologues. Sousse, Tunisia.
151. Hafezi F. Treating Irregular Corneas. National Meeting of the Russian Ophthalmological Society. Moscow, Russia.
152. Hafezi F. Current State of CXL from KC to beyond. National Meeting of the Russian Ophthalmological Society. Moscow, Russia.
153. Hafezi F. Crosslinking (CXL) beyond keratoconus. National Meeting of the Serbian Ophthalmological Society. Belgrade, Serbia.
154. Hafezi F. Antimikrobielle Keratitis – Therapie mit Riboflavin und UV-Bestrahlung: Indikationen, Möglichkeiten und Grenzen. Kongress der deutschen Ophthalmochirurgen (DOC). Leipzig, Germany.
155. Hafezi F. CXL – Hype or Reality. Keratoconus Theatre Bangalore. Nov 5-6, 2016. Bangalore, India.
156. Hafezi F. What's New in CXL 2018? Keratoconus Theatre Bangalore. Nov 5-6, 2016. Bangalore, India.
157. Hafezi F. Traitement des faibles et moyennes amétropies par PKR 13ème SAMIR (Société Marocaine de Chirurgie Réfractive et d'Implantologie). April 6-8, 2017. Tangier, Morocco.
158. Hafezi F. Le kératocône chez la femme enceinte. 13ème SAMIR (Société Marocaine de Chirurgie Réfractive et d'Implantologie). April 6-8, 2017. Tangier, Morocco.
159. Hafezi F. Le PACK-CXL en 2018. 31. Congrès Annuel de la Société Marocaine d'Ophthalmologie (SMO). February 3-5, 2017. Rabat, Morocco.

Publication indicators (Google Scholar: <https://bit.ly/3H59S7H>)

h-index:	56
Total number of peer-reviewed publications	231
Total number of peer-reviewed publications, only 1 st or last author	122
Total number of citations	13'006



Activités diverses

Pas d'autres activités.

Activités accessoires ou extérieures

- Responsable du groupe " Ocular Cell Biology " dans le CABMM (Center for Applied Biotechnology and Molecular Medicine) de l'université de Zurich
- Activité médicale en cabinet privé, Webereistrasse 2, 8953 Dietikon
- Membre du HMEC (Human Medicine Experts Committee) de Swissmedic, Bern
- Membre du conseil de la fondation « Light for Sight », Dietikon, Suisse

HAFEZI / Farhad

09 décembre 2022



UNIVERSITÉ
DE GENÈVE

DIVISION DES
RESSOURCES HUMAINES

CAHIER DES CHARGES (corps enseignant)

FONCTION Professeur titulaire

Nom et prénom du/de la titulaire HAFEZI, Farhad
Taux d'activité ou heures de cours (selon la fonction) 10%
Faculté, école, institut Faculté de médecine
Section ou département Département des neurosciences cliniques
Nom et prénom du responsable hiérarchique SCHALLER, Karl

Taux : le total des points 1, 2 et 3 doit atteindre 100%

1. ENSEIGNEMENT ET ENCADREMENT DES ETUDIANTS

Taux consacré 10%

- Suivi des 6 doctorants actuels (Max BÜRGI, Enes AYDEMIR, Emilio TORRES, Carmen RODRIGUES, Reyhaneh ABRISHAMCHI, Hormoz ABD SHAHZADEH)
- Suivi des futurs doctorants dans le domaine de l'ophtalmologie
- Donner des cours/interventions au niveau post-gradué
 - 1) des sujets définis de l'ophtalmologie/ l'ophtalmochirurgie et/ou
 - 2) en biologie cellulaire et biomécanique de la cornée.
- Donner des cours au niveau pré-gradué sur des sujets de la biologie cellulaire et physiologie de l'oeil.

2. RECHERCHE

Taux consacré 90%

- Continuer à poursuivre ma recherche dans le domaine de l'ophtalmologie clinique et fondamentale.
- Continuer à publier mes articles dans les journaux internationaux à politique éditoriale (62 publications entre 2018 et 2022, voir liste des publications).

3. AUTRES TACHES

3.1. GESTION, ORGANISATION, ADMINISTRATION, DIRECTION

Taux consacré

Le/la titulaire participera aux tâches de gestion et d'organisation qui sont liées au domaine spécifique qui lui est confié.

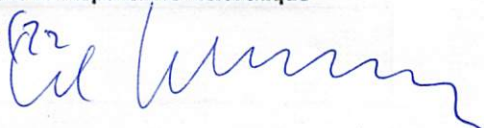
3.2. SERVICES A LA CITE

Dans le cadre de son activité, le/la titulaire doit être prêt-e, le cas échéant, à exercer vis-à-vis de la collectivité, une fonction de service rentrant dans la mission de l'Université, ce type d'activité faisant *ipso facto* partie du cahier des charges.

4. AUTRES DISPOSITIONS

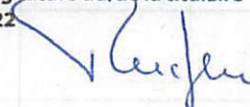
Par sa signature, le/la candidat/e atteste qu'il/elle a pris connaissance de la proposition de cahier des charges afférent au poste mis au concours qui sera soumise à l'autorité de nomination/d'engagement. La proposition de cahier des charges signée ne saurait en aucun cas être considérée comme un acte d'engagement. Seule la décision de nomination et/ou la signature d'un contrat de travail par l'autorité compétente selon le règlement sur le personnel de l'Université valent acte d'engagement.

Date et signature du responsable hiérarchique

24/11/22 

Date et signature du/de la titulaire

22.11.2022



Imprimer le formulaire

■ Personal data

Name, first name	HAFEZI, Farhad
DOB	November 1, 1967
Place of birth	Remscheid (Germany)
Private address	Aberenterrasse 17, 6340 Baar
ORCID	https://orcid.org/0000-0001-8935-4558
Email	farhad@hafezi.ch
Work address	ELZA Institute, Webereistrasse 2, 8953 Dietikon

■ Education

2018	FARVO (Fellow of ARVO), Association for Research in Vision and Ophthalmology, Bethesda, MD, USA
2008	PhD, Erasmus University Rotterdam, Rotterdam, The Netherlands
2001	FMH Ophthalmology and Ophthalmic Surgery, SIWF/IFSM, Bern, Switzerland
1993	Medical doctorate, University of Bern, Switzerland
1992	Medical diploma, University of Bern, Switzerland
1986	Swiss maturity, Fribourg, Switzerland

Additional relevant training

2002-2003	Fellowship in Oculoplastic Surgery, Oogziekenhuis Rotterdam, The Netherlands
1997-2000	Residency in Ophthalmology, University Eye Clinic Zurich, Switzerland
1994-1997	Postdoctoral fellowship, University Eye Clinic Zurich, Switzerland
1993-1994	Postgraduate course in experimental medicine, Swiss Federal Institute of Technology (ETH) Zurich, Switzerland

■ Past and present positions

2017 – now	Visiting Professor, Wenzhou University, China
2015 – now	Chief Medical Officer – 70%, ELZA Institute AG, Dietikon, Switzerland
2015 – now	Research Group Leader – 10%, Ocular Cell Biology Laboratory, CABMM, University of Zurich, Switzerland
2014 – now	Clinical Professor of Ophthalmology – 5%, Roski Eye Institute, University of Southern California, Los Angeles, USA
2010 – 2014	Chairman of Ophthalmology – 100%, HUG and University of Geneva, Switzerland
2002 – 2010	Partner – 100%, Institute for Refractive and Ophthalmic Surgery (IROC), Zurich, Switzerland
2000 – 2002	Chef de Clinique – 100%, University Eye Clinic Zurich, Switzerland

1997 – 2000	Clinical Resident – 100%, University Eye Clinic Zurich, Switzerland
1994 – 1997	Postdoctoral Fellow – 100%, University Eye Clinic Zurich, Switzerland
1992 – 1993	Postgraduate Course in Experimental Medicine – 100%, Swiss Federal Institute of Technology (ETH), Zurich, Switzerland

■ Academic age

25 years

■ Honors and awards

2019	Whitney Sampson lecture “Expanding CXL From Keratoconus to Infectious Keratitis”. American Academy of Ophthalmology. San Francisco
2018	Association of Research in Vision and Ophthalmology (ARVO): Silver Fellow
2014	AAO/ International Society of Refractive Surgery (ISRS): Casebeer award
2014	ARVO Foundation: Carl Camras Translational Research Award
2014/2016/2018/2020	PowerList, the 100 most influential people in International Ophthalmology (<i>The Ophthalmologist</i>)

■ Language skills

German	Mother tongue
English	C2
French	C2
Polish	B2
Farsi	B1

■ Self-evaluation

As a clinician-researcher, my first major contribution was identifying the role of c-fos plays in preventing light-induced photoreceptor apoptosis (PMID:[9055866](#)), published in *Nature Medicine*, *Nature Genetics* (PMID: [10802658](#), *Genes & Development* (PMID: [11069886](#)) and others.

Under the tutelage of Prof. Theo Seiler (co-inventor of modern excimer laser refractive surgery) in Zurich, first at the University Hospital Zurich, and later at IROC, I mastered refractive surgery (PMIDs:[16473213](#), [16765785](#), [18053900](#), [35887874](#)), and played a key role in the development and clinical application of a new form of surgery, first used to treat corneal ectasias, and later corneal infections: corneal cross-linking (CXL).

This bench-to-bedside approach, spanning cell biology to clinical trials resulted in several seminal advances in our understanding of CXL, and has changed clinical practice. Identifying oxygen diffusion into the cornea as an essential and rate-limiting component of CXL photochemistry (PMID:[24349884](#)) explained several phenomena (like why accelerating CXL or leaving the epithelium intact results in reduced efficacy [PMID:[24677109](#)]) and enabled us to algorithmically model the reaction [PMID:[28192592](#)]. This unlocked the ability to safely cross-link thin corneas by adjusting irradiation time to each patient's measured corneal thickness (sub400 method; PMID:[33340508](#)), in contrast to prior methods that involved artificially thickening the cornea (PMID:[19304080](#)). The algorithm enabled the optimization of the efficacy of accelerated CXL and "epithelium-on" CXL – a CXL "holy grail", leaving the epithelium intact reduces postoperative pain, infection and corneal haze risk (PMID:[36078972](#)).

Finally, as antimicrobial resistance grows, PACK-CXL infectious keratitis treatment – which is as effective as antimicrobials – will become increasingly valuable as other treatment options start to fail (PMIDs:[24983827](#), [34996516](#)).

■ Research outputs

Five most significant publications

- 1) Hafezi F, Steinbach JP, Marti A, Munz K, Wang ZQ, Wagner EF, Aguzzi A, Reme CE. The absence of c-fos prevents light-induced apoptotic cell death of photoreceptors in retinal degeneration in vivo. *Nature Med.* 1997. 3(3): 346-9. Impact factor: 87.2. (PMID:[9055866](#))
First time that induced retinal degeneration could completely be prevented by interfering with the apoptotic pathway. Title story in Nature Medicine April 1997.
- 2) Hafezi F, Kanellopoulos J, Wiltfang R, Seiler T. Corneal collagen crosslinking with riboflavin and ultraviolet A to treat induced keratectasia after laser in situ keratomileusis. **J Cataract Refract Surg.** 2007. 33(12): 2035-40. Impact Factor: **3.5**. [PMID: [18053900](#)]
Ectasia after eye laser surgery for myopia is the most dreaded complication in refractive laser surgery. This paper represents the first successful therapeutic approach to treat postoperative ectasia using CXL. This treatment has become the global standard to treat postoperative ectasia.

- 3) Richoz O, Hammer A, Tabibian D, Gatzoufas Z, Hafezi F. The biomechanical effect of corneal collagen cross-linking (CXL) with riboflavin and UV-A is oxygen dependent. *Transl Vis Sci Technol.* 2013. 2(7):6. Impact factor: **3.0**. [[Open archive link](#)]
Corneal Cross-Linking (CXL) has become the global standard of care in progressive keratoconus. Here, we were the first to demonstrate that CXL is an oxygen-dependent process, which had large implications in our understanding of CXL and in developing modern, accelerated CXL protocols.
- 4) Hafezi F, Kling S, Gilardoni F, Hafezi N, Hillen M, Abrishamchi R, Gomes JAP, Mazzotta C, Randleman JB, Torres-Netto EA. Individualized Corneal Cross-linking with Riboflavin and UV-A in Ultrathin Corneas: The Sub400 Protocol. *Am J Ophthalmol.* 2021. 224: 133-42. Impact Factor: **5.5**. [[PMID: 33340508](#)]
The result of 10 years of work, starting with the identification of oxygen as an essential component of the UV-riboflavin photochemical reaction, continued with the algorithmic modelling of UV, riboflavin and oxygen. This protocol now allows to treat far advanced keratoconus disease stages.
- 5) Hafezi F, Hosny M, Shetty R, Knyazer B, Chen S, Wang Q, Hashemi H, Torres-Netto EA; PACK-CXL Working Group. PACK-CXL vs. antimicrobial therapy for bacterial, fungal, and mixed infectious keratitis: a prospective randomized phase 3 trial. *Eye Vis (Lond).* 2022. 9(1):2. Impact factor: **3.0**. [[PMID: 34996516](#)]
First prospective RCT of its kind to treat severe corneal infection, independently of antibiotic resistance. PACK-CXL can be used as a single treatment, avoiding multiple doctor visits – something that is cost saving and of particular value in rural regions of low-to-middle income countries.

Most significant methods, tools, infrastructures, data, etc. developed as part of research

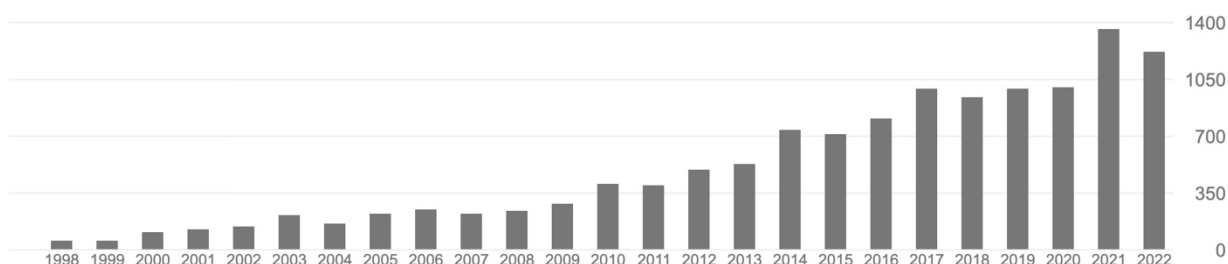
- 1) New treatment method: PACK-CXL: ([Open Archive Topic Review](#); [PMID: 34996516](#)) As described above, a non-antimicrobial, often single-visit treatment of infectious keratitis. Dramatic reductions in doctor-time costs, of particular value in developing countries.
- 2) New treatment method: CXL for Terrien Marginal Disorder ([PMID: 24892378](#)) Before this paper, effective treatment of PMD challenging, as keratoplasty had only moderate success. CXL arrested the melting-thinning pathology and improved visual acuity.
- 3) New treatment method: CXL at the slit lamp ([PMID: 33577692](#)) This approach eliminates the need for an operating theater (CXL sterilizes the cornea) and portable, slit-lamp mountable cross-linking devices have made this process easy: wherever there is a slit lamp, such as a doctor's office, cross-linking can be performed. Again, this reduces costs, opens access, and is of particular value in low-to-middle income countries
- 4) New tool: built an eye-rubbing device to investigate on the effect of chronic eye rubbing on corneal biomechanics, published the study ([PMID: 36098386](#))

Most significant patents/inventions

- 1) Patent "Method of applying a composition and pharmaceutical composition with a regimen of administering it" By Richoz, O. and Hafezi, F. PCT/CH 2014/000075 Filing date: June 16, 2013.
- 2) Patent "Apparatus for the treatment and/or prevention of corneal diseases" by Richoz, O. and Hafezi, F. PCT/CH 2012/000090. Filing date: April 23, 2011.

Publication indicators (Google Scholar: <https://bit.ly/3H59S7H>)

h-index:	56
Total number of peer-reviewed publications:	231
Total number of peer-reviewed publications, only 1 st or last author:	122
Total number of citations:	13'006



■ Scientific planning

I plan to improve current CXL technology for keratoconus with two approaches: optimize "epi-on" CXL using our model so that CXL can be performed as an "epi-on" procedure (sparing patients from pain and elevated postoperative infection risk) in a shorter time, and to leverage our experience in CXL, therapeutic excimer ablation surgery, and Femto-CAIRS with the intention of significantly rehabilitate the vision of keratoconus patients.

PACK-CXL effectively kills bacteria and fungi, but not *acanthamoeba keratitis* (AK). We are working on optimizing UV-riboflavin PACK-CXL, but also in combination with other chromophore and light combinations which may be more effective in killing AK, such as Rose Bengal and green light. AK is a major reason hard contact lenses need daily cleaning; effective treatment for this serious blinding infection is a seriously currently unmet need, that we believe we can meet.

■ Research collaborations

Prof. Shady Awwad, American University of Beirut, Lebanon

- To improve several aspects of CXL, including reducing post-surgical adverse events like haze formation, investigating the efficacy of new CXL methods like CXL at the slit lamp.
- My role: First author of several publications. Our group provided the framework and Prof. Awwad supported us with the algorithms he developed.
- Outputs: [Pubmed link](#), [Pubmed link](#), [Pubmed link](#)

Prof. Walter Sekundo, Philipps-Universität Marburg, Germany

- To explore the impact of excimer (LASIK, PRK) and femtosecond laser (SMILE, FLEEx) refractive surgery on the biomechanical strength of the cornea.
- My role: My group performed the stress-strain measurements of corneas treated in Prof. Either co-author or PI on several projects.
- Outputs: [Pubmed link](#), [Pubmed link](#), [Pubmed link](#), [Pubmed link](#), [Pubmed link](#)

Dr. Sabine Kling, ETH Zurich, Switzerland

- Our collaboration involves various topics in corneal biomechanics (OCT elastography, transgenic mouse models for collagen disorders, etc.
- My role: Sabine Kling formerly was a postdoc in my lab, and we maintain a close collaboration on corneal biomechanics, with either her or me as PI.
- Outputs: [Pubmed link](#), [Pubmed link](#), [Pubmed link](#)

Prof. Boris Knyazer, Ben Gurion University of the Negev, Beer-Sheva, Israel

- Our collaboration involves the development of new PACK-CXL protocols for infectious keratitis and testing in clinical trials
- My role: My group develops the PACK-CXL protocols in laboratory-based studies. These protocols are then applied clinically in Prof. Knyazer's group.
- Outputs: [Pubmed link](#), [Pubmed link](#), [Pubmed link](#), [Pubmed link](#)

Prof. Reinhard Zbinden, Institute of Medical Microbiology, University of Zurich, Switzerland

- Our collaboration involves the development of new PACK-CXL in in vitro and ex vivo models.
- My role: My group develops the PACK-CXL protocols in the facilities of the Institute of Medical Microbiology, supported by the know-how of Prof. Zbinden's team.
- Outputs: [Pubmed link](#)

■ Research funding and grants

Funding entity	Botnar Foundation, Basel
Amount	CHF 238'200.-
Year	2019
Title	Smartphone-based keratography (SBK)
Role	Co-applicant
Function	Clinical lead

■ Research supervision and mentoring

Size and composition of research group over the last 5 years

Between 2017 and 2022, I have been research group leader of the Ocular Cell Biology group at the University of Zurich, typically with 1 to 2 postdocs / PhD students.

Mentoring and coaching to promote scientific offspring

All the researchers mentioned have been involved in exceptional research and have achieved authorship in high-impact research publications. Their education has been invested in, with international congress participation in Europe and North America being an essential part of their development, where all have had the opportunity to present their work at annual meetings like the American Academy of Ophthalmology, and the European Society of Cataract and Refractive Surgeons (ESCRS).

Dr. Nan-Ji Lu

(Since 2021, Postdoctorand)

Best Refractive Poster Award, ESCRS 2022

Dr. Emilio Torres-Netto (2017-2021; Scientific Collaborator)

Best Refractive Poster Award, ESCRS 2019. Best Refractive Poster Award, ESCRS 2020. Best Refractive Poster Award, Winter ESCRS 202. ICO International Fellowship award. Barraquer medal for excellence in refractive surgery research, BRASCRS 2022.

Reyhaneh Abrishamchi (2019-2021; Scientific Assistant)

Hormoz Abdshadezeh (2019-2021; Scientific Assistant)

Dr. Francesca Gilardoni (2017-2021; MD; Scientific Assistant)

Dr. Sabine Kling (2011-2018)

Troutman Award of American Academy (ARVO 2016). Ambizione grant of the SNF

Current Doctorands at Medical Faculty University of Geneva

Max Bürgi, Enes Aydemir, Emilio Torres, Carmen Rodriguez, Reyhaneh Abrishamchi, Hormoz Abdshahzadeh

Mentoring activities for the promotion of feminine careers

Of the three female researchers, all have had access to mentorship from a female Chief Executive Officer in the field of ophthalmology.

Dr. Sabine Kling was able to receive an Ambizione grant from the SNF, based on the work she published under my supervision. (<https://www.cabmm.uzh.ch/en/news-1/AmbizioneGrant.html>)

■ Other scientific activities

2022 -	EBM Journal of Clinical Medicine
2021 -	EBM BMC Ophthalmology
2021 -	EBM European Journal of Ophthalmology
2017 -	EBM Translational Vision Science and Technology (TVST)
2016 -	EBM Eye and Vision
2014 -	Associate Editor of the Journal of Refractive Surgery
2014 -	EBM Iranian Journal of Ophthalmology
2013 -	EBM International Journal of Keratoconus and Ectatic Corneal Disease
2018 -	Member of Swissmedic's HMEC (Human Medicine's Expert Committee)
2018	Became a Fellow of ARVO (Association of Research in Vision and Ophthalmology). Largest research organization in ophthalmology. Typically requires 20-25 years of active participation within the association.
2005 -	Congress organizer and chairman of the Scientific Committee of the international CXL Experts' Meeting (largest international annual meeting on CXL technology)
Yearly	Invited speaker at approximately 25 international congresses per year

■ Contributions to Open Science

In the last 5 years, I have been an author of 32 free, open-access peer-reviewed PubMed-listed articles ([link](#)). Where appropriate, data has been placed in open-access repositories.

■ Scientific outreach

Public Events: CXL and Keratoconus Experts' Meetings

I co-organize these meetings that act as a forum for the leading experts in the field of keratoconus and corneal cross-linking to come together and share their latest research with the field. As well as being at the leading edge of the field, they have a strong educational outreach element, with previous meetings' presentations being made free to view after the event, further broadcasting the educational aspect of the meeting to all those interested.

Social Media

I view social media as a key method of disseminating my research and educational activities. I actively update Twitter ([@farhad_hafezi](#)), Instagram ([prof.farhad.hafezi](#)), Facebook ([farhad.hafezi.67](#)) and LinkedIn ([farhad-hafezi-mdphd-farvo](#)).

Lay and trade press

I am a strong advocate of contributing articles to broader trade publications, which are free-to-read and have a significantly wider audience than most specialized peer-reviewed and interacting with the lay press. Our group has contributed to over xxx such articles between 2017 and 2022, and these have been in Swiss, European, North American, South American, and Asia-Pacific publications.

■ Teaching experience

Pregraduate and postgraduate

Chairman of ophthalmology University of Geneva

During my time as the Chairman of Ophthalmology at the University of Geneva, I was responsible for the pre- and postgraduate teaching of all topics related to ophthalmology

Postgraduate

Chief Medical Officer ELZA Institute

In my current role as CMO of a SIWF/IFSM accredited C2 Clinic, I structure, supervise, and also give weekly postgraduate education to residents.

Swiss Eye Week

The Swiss Eye Week is held every year for all clinical residents in ophthalmology in Switzerland. I teach therapeutic refractive surgery as well as physiology of the cornea and conjunctiva.

Refractive Surgery Course for residents and senior physicians

Since 2022, I run a 1–2-day refractive surgery course for Swiss residents and senior physicians ([link](#)).

Continuing education

International CXL Experts' Meeting

Since 2013, I am the Chairman of the Scientific Committee of the largest international meeting on CXL technology ([link](#)).

Educational Courses at European meeting (ESCRS)

Every year, I am responsible for a number of educational courses given at the European Society for Cataract and Refractive Surgery, the largest meeting in Europe in our field (10'000+ participants) ([link](#))

Presentations and wetlabs at international congresses

Every year, I give invited lectures and wetlabs at 20 to 30 international congresses.

■ Development of teaching tools and activities

CXL Experts Meeting

The International CXL Experts Meeting is the largest international congresses dedicated to corneal cross-linking technology, uniting researchers from more than 40 countries in Zurich. Every year, we film our educational activities and offer free streaming after the congress for those who cannot afford to join the meeting in person.

Book Chapters

In the past 5 years, I have authored and co-authored 6 book chapters for postgraduate and continuing education:

1. Hafezi, F, Hillen, M. Corneal Cross-linking. In: S. Das, Editor Keratoconus. Springer Nature, Cham, Switzerland; 183-193.
2. Torres Netto, EA, Hosny, M, Hafezi, F. Corneal Cross-Linking at the Slit Lamp In: A. Armia, Mazzotta, C., Editor Keratoconus. Springer Nature, Cham, Switzerland; 149-159.
3. Hafezi, F, Torres Netto, EA. Corneal Cross-Linking in Ultrathin Corneas. In: A. Armia, Mazzotta, C., Editor Keratoconus. Springer Nature, Cham, Switzerland; 159-167.
4. Torres Netto, EA, Hillen, M, Hafezi, F. Corneal Cross-Linking: Results and Complications. In: L. Izquierdo, Jr., Editor Keratoconus. Elsevier, Amsterdam, The Netherlands; 83-86.
5. Torres Netto, EA, Kling, S, Hafezi, F. The Role of Oxygen in Corneal Cross-Linking. In: A. Barbara, Editor Controversies in the Management of Keratoconus. Springer Nature Switzerland, Cham, Switzerland; 83-86.
6. Kling, S, Hafezi, F. Pediatric Corneal Cross-Linking. In: J.L. Alio, Editor Keratoconus, Essentials in Ophthalmology. Springer International Publishing, Basel; 249-252.

■ Teaching perspective

The ELZA Institute and ORASIS, combined, are a SIWF/IFSM C2 clinic, meaning that we can provide postgraduate education to ophthalmology residents for a period of two years as part of their FMH specialty training. Additionally, the clinic can train residents in the entire surgical subspecialty. As part of this education, residents at the clinic receive 4 hours of instruction per week, and I, personally, provide 3-4 hours of instruction per month.

Furthermore, we have run the ELZA refractive surgery course, comprised of two afternoon seminars, educating local Swiss and international doctors on the topic, and I continually evolve and refine my presentations given at local, national, and international congresses. This has involved video production, animations, and a constant refinement of messaging to convey the educational topics in the clearest way possible, bearing in mind that many viewers may not be native language speakers.

■ **Management skills**

Research Group Leader University of Zurich

As the Research Group Leader of the Ocular Cell Biology Group of the Center for Applied Biotechnology and Molecular Medicine (CABMM) of the University of Zurich, I am responsible for all administrative and managerial aspects of running an active research group, including helping in the career planning of my group members.

Chief Medical Officer ELZA Institute

Being a SIWF/IFSM-accredited C2 educational clinic (ophthalmology and ophthalmic surgery), I supervise and manage a technical and medical team daily.

■ **Institutional involvement**

N/A

■ Clinical expertise

Improving current corneal cross-linking technology for progressive keratoconus

Corneal cross-linking (CXL) with riboflavin (vitamin B2) and ultraviolet (UV)-A light is, other than corneal transplantation, the only available treatment for keratoconus. Keratoconus is a disease where the corneas of (mostly children and adolescents) weakens and causes a bulging corneal “cone” that dramatically reduces vision to form. CXL mechanically stiffens the cornea: photons of UV light interact with riboflavin to generate reactive oxygen species (ROS). These then covalently cross-link together (predominantly) corneal collagen molecules, thereby strengthening the cornea. Our research group continues to comprehensively model the UV-riboflavin-cornea reaction to characterize and optimize treatment parameters to make CXL more efficient and effective.

Photoactivated chromophore for the treatment of infectious keratitis (PACK-CXL)

One major cause of global blindness is corneal infection. UV-riboflavin interactions produce ROS, which kill pathogens by oxidizing cell membranes and nucleic acids. We are developing CXL irradiation systems that can kill >99% of bacterial and fungal pathogens on the ocular surface in just a few minutes, without requiring antibiotics or antifungal medication.

Improvement of current excimer and femtosecond laser technology

Lasers in ophthalmology can correct vision through refractive surgery, enable safer cataract surgery, and provide more precise corneal transplantations. We have helped to improve excimer laser refractive surgery technology and are helping to establish the field “additive” corneal procedures like CAIRS (corneal allogenic ring segments) with the potential to recover lost vision in keratoconus, and help correct vision in hyperopia, using natural, non-allogenic cross-linked collagen.