<table>
<thead>
<tr>
<th>Company / Scientific Presentation</th>
<th>Category</th>
<th>Topic</th>
<th>Presenter</th>
<th>Booth Number or Presentation Time*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Introduction 2021 Press Conference</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Scientific Paper</strong></td>
<td>Contact Lenses</td>
<td>Antiviral Activity of Contemporary Contact Lens Solutions Against Human Seasonal Coronavirus Strains</td>
<td>Christiane Nogueira <a href="mailto:c3lourecononoguera@uwaterloo.ca">c3lourecononoguera@uwaterloo.ca</a></td>
<td></td>
</tr>
<tr>
<td><strong>Allergan, an AbbVie company</strong></td>
<td>Health Care Delivery</td>
<td>AGN-190584: Eye drop for presbyopia</td>
<td>Michael Robinson, MD <a href="mailto:michael.r.robinson@abbvie.com">michael.r.robinson@abbvie.com</a> VP, Global Therapeutic Area Head, Eye Care</td>
<td>Booth #413</td>
</tr>
<tr>
<td><strong>Scientific Lecture</strong></td>
<td>Glaucoma</td>
<td>Comparison of Internet Web Site and Tablet Melbourne Rapid Fields Procedures and their Test-Retest Reliability</td>
<td>Chris Johnson, PhD, FAAO <a href="mailto:chris-a-johnson@uiowa.edu">chris-a-johnson@uiowa.edu</a> Professor, Department of Ophthalmology and Visual Science, University of Iowa</td>
<td>Hot Topics: Glaucoma Thursday 11/4, 7:30-8:30am 205 ABC</td>
</tr>
<tr>
<td><strong>M&amp;S Technologies, Inc.</strong></td>
<td>Glaucoma</td>
<td>Smart System VR headset</td>
<td>Mike Umali <a href="mailto:mumali@mstech-eyes.com">mumali@mstech-eyes.com</a> National Sales Manager</td>
<td>Booth #434</td>
</tr>
<tr>
<td><strong>Scientific Lecture</strong></td>
<td>Glaucoma</td>
<td>The 10-2 Provides More Information for Tracking Visual Field Progression in Central Visual Field Defects Compared to 24-2</td>
<td>Jack Phu, OD, PhD, FAAO <a href="mailto:jphu@unsw.edu.au">jphu@unsw.edu.au</a> Centre for Eye Health UNSW Australia</td>
<td>Glaucoma Blended Session: Innovations in Assessment Wednesday 11/3, 1:00-3:00pm 107 ABC</td>
</tr>
<tr>
<td><strong>Falck Medical, Inc.</strong></td>
<td>Glaucoma</td>
<td>FMAT1 Serial Tonometry and Ophthalmodynamometry Technology</td>
<td>James Thimons, OD, FAAO <a href="mailto:jimthimons@gmail.com">jimthimons@gmail.com</a> Medical Director</td>
<td>Booth #200</td>
</tr>
<tr>
<td><strong>Scientific Lecture</strong></td>
<td>Glaucoma</td>
<td>Effect of Latanoprostene Bunod on Optic Nerve Head Blood Flow</td>
<td>Dan Samaha, OD, MSc, FAAO <a href="mailto:dan.samaha@umontreal.ca">dan.samaha@umontreal.ca</a> Assistant Professor Montreal Univ School of Optometry</td>
<td>Hot Topics: Glaucoma Thursday 11/4, 7:30-8:30am 205 ABC</td>
</tr>
<tr>
<td><strong>Vivid Vision</strong></td>
<td>Glaucoma/Neuro</td>
<td>Vivid Vision Perimeter (VVP)</td>
<td>Benjamin Backus, PhD <a href="mailto:ben@seevividly.com">ben@seevividly.com</a> Chief Science Officer</td>
<td>Booth #1302</td>
</tr>
<tr>
<td><strong>Scientific Lecture</strong></td>
<td>Neuro-Ophthalmic &amp; Orbit</td>
<td>Retinal Nerve Fiber Layer Degradation in Subjects with History of Multiple Traumatic Brain Injuries</td>
<td>Elizabeth Stern-Green, BA <a href="mailto:stern-green.1@buckeyemail.osu.edu">stern-green.1@buckeyemail.osu.edu</a></td>
<td>Hot Topics: TBI Thursday 11/4, 7:30-8:30am 258 ABC</td>
</tr>
<tr>
<td><strong>Scientific Presentation</strong></td>
<td>BV/Functional vision/Behavior Optometry</td>
<td>Optimizing VOMS for acute concussion in collegiate athletes: Findings from the NCAA-DoD CARE Consortium</td>
<td>Lyndsey Ferris, OD, PhD, FAAO <a href="mailto:lyndsey.m.ferris@gmail.com">lyndsey.m.ferris@gmail.com</a> Chief, Optical Radiation Bioeffects Branch, Airman Systems Directorate</td>
<td>Papers: TBI Saturday 11/6, 10:00-10:15am 104B</td>
</tr>
<tr>
<td>Scientific Abstract</td>
<td>Visual function / Perception</td>
<td>Novel microcontroller-drive illumination system to improve color contrast recognition in observers with moderate to severe color vision deficiency</td>
<td>Vladimir Mamchik <a href="mailto:mamchikvladimir@gmail.com">mamchikvladimir@gmail.com</a></td>
<td>Friday Posters Friday 11/5, 10:00am – Noon Exhibit Hall B1</td>
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<tr>
<td>Bruder Healthcare</td>
<td>External / Dry Eye</td>
<td>Bruder Pre-Surgical Patient Prep Kit</td>
<td>Paul Karpecki, OD, FAAO <a href="mailto:karpecki@karpecki.com">karpecki@karpecki.com</a></td>
<td>Booth #704</td>
</tr>
<tr>
<td>Scientific Poster</td>
<td>External / Dry Eye</td>
<td>Effect of OC-01 (varenicline) nasal spray compared to vehicle (control) on Dry Eye Disease Sign Outcomes by Baseline Subgroup Characteristics</td>
<td>Leslie O’Dell, OD, FAAO <a href="mailto:drodell@medodamerica.com">drodell@medodamerica.com</a> Clinical Director Medical Optometry America</td>
<td>Thursday Posters Thursday 11/4, 4:30 – 6:30pm Exhibit Hall B1</td>
</tr>
<tr>
<td>Scientific Paper/Lecture</td>
<td>External / Dry Eye</td>
<td>Microscopy of In Vitro Demodex following Low Level Light Therapy and Intense Pulsed Light</td>
<td>Sathi Maiti, OD <a href="mailto:sathi.maiti@gmail.com">sathi.maiti@gmail.com</a></td>
<td>Papers: Demodex Thursday 11/4, 8:30-9:15am 104 AB</td>
</tr>
<tr>
<td>CooperVision</td>
<td>Contact Lenses</td>
<td>MyDay daily disposable multifocal</td>
<td>Michele Andrews, OD <a href="mailto:mandrews@coopervision.com">mandrews@coopervision.com</a> VP, Professional and Governmental Affairs, Americas</td>
<td>Booth #613</td>
</tr>
<tr>
<td>Johnson &amp; Johnson Vision</td>
<td>Contact Lenses</td>
<td>Acuvue Oasys Multifocal</td>
<td>Kurt Moody, OD, FAAO, FBCLA <a href="mailto:Kmoody1@its.jnj.com">Kmoody1@its.jnj.com</a></td>
<td>Booth #1235</td>
</tr>
<tr>
<td>Art Optical</td>
<td>Contact Lenses</td>
<td>Ampleye Scleral Multifocal Lenses</td>
<td>Bruce Morgan, OD, FAAO <a href="mailto:bmorgan@artoptical.com">bmorgan@artoptical.com</a></td>
<td>Booth #827</td>
</tr>
<tr>
<td>Visioneering Technologies, Inc</td>
<td>Contact Lenses</td>
<td>MyPath Myopia initiative</td>
<td>Stephen Snowdy, PhD, MBA <a href="mailto:ssnowdy@vitvision.com">ssnowdy@vitvision.com</a> CEO</td>
<td>Booth #935</td>
</tr>
<tr>
<td>2021 American Academy of Optometry Ezell Fellow</td>
<td>Contact Lenses</td>
<td>Astigmatic Patient Preference for Toric Soft Multifocal and Orthokeratology Lenses</td>
<td>Erin Tomiyama, OD, MS, FAAO <a href="mailto:estomiya@central.uh.edu">estomiya@central.uh.edu</a></td>
<td>Thursday Posters Thursday 11/4, 4:30-6:30pm Exhibit Hall B1</td>
</tr>
<tr>
<td>Conclusion</td>
<td></td>
<td></td>
<td>Edward Chu, OD, FAAO</td>
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</tr>
</tbody>
</table>

* All room locations are at Boston Convention and Exhibit Center

Thank you to all presenters; the AAO Staff, including Kayla Ritten, Mandy Taylor, and JoEl Laborde, the AAO Communications Committee (Tammy Than, Richard Trevino, Arti Shah, Reena Patel, and Gene Wong); and most of all, to all the press in attendance.

Please write about the events at this Academy meeting and let us know how we can help you. The Academy contact person is Kayla Ritten (KaylaR@aaoptom.org) and the Press Conference Chair is Edward Chu, OD, FAAO (Edward.Chu@VA.GOV).
Antiviral Activity of Contemporary Contact Lens Solutions Against Human Seasonal Coronavirus Strains

Christiane Lourenco Nogueira, PhD
Department of Chemical Engineering, University of Waterloo
c3lourenconogueira@uwaterloo.ca

Purpose: In the advent of the coronavirus disease 2019 (COVID-19) pandemic caused by SARS-CoV-2, it has been suggested that there is an increased risk of contracting COVID-19 through contact lens (CL) wear compared to spectacle lens wear, particularly for those wearing reusable lenses. Since there is no data or evidence to support this statement, the purpose of this study was to assess the efficacy of CL care products against two human seasonal coronavirus surrogates for SARS-CoV-2 - HCoV-229E and HCoV-OC43.

Methods: The CL solutions tested in this study were two rigid lens solutions (Boston Simplus - Bausch & Lomb; cleadew GP - Ophtecs) and four soft lens solution (Biotrue - Bausch & Lomb; cleadew – Ophtecs; Clear Care – Alcon; OPTI-FREE PureMoist - Alcon). Their ability to inactivate high concentrations of human coronaviruses were evaluated by measuring end-point dilution assays using MRC-5 and HCT-8 cells for HCoV-229E and HCoV-OC43, respectively. Cytotoxicity and neutralization controls were also performed.

Results: Biotrue, Boston Simplus, and OPTI-FREE PureMoist did not exhibit a significant log10 reduction compared to control for HCoV-229E (all p>0.05). For HCoV-OC43, Biotrue did not show a significant log reduction compared to control (p=0.9468). While both Boston Simplus and OPTI-FREE PureMoist did show a significant log10 reduction compared to control (p<0.0001 and p= 0.0006), these reductions were not considered to be clinically relevant since all log10 reductions were below 0.3. Both cleadew and cleadew GP inactivated HCoV-229E to below the limit of quantification and Clear Care showed a 2.61 log10 reduction compared to control (p<0.0001). Clear Care, cleadew, and cleadew GP all led to inactivation of HCoV-OC43 to below the limit of detection. Clear Care, cleadew, and cleadew GP showed a significantly higher disinfection efficacy than Biotrue, Boston Simplus, and OPTI-FREE PureMoist against both HCoV-229E and HCoV-OC43 (all p<0.0001).

Conclusion: Oxidative CL disinfection systems (Clear Care, cleadew and cleadew GP) based on hydrogen peroxide and povidone iodine showed significant virucidal activity against both HCoV-229E and HCoV-OC43, while non-oxidative systems showed minimal to no ability to inactivate the two human seasonal coronavirus species examined.
PRESS RELEASE

Allergan, an AbbVie Company, to Present New Data on Investigational AGN-190584 for the Treatment of Presbyopia

- Detailed analyses to showcase visual outcomes and patient experience
- Data to be presented at Academy 2021, the Annual Meeting of the American Academy of Optometry

NORTH CHICAGO, Illinois, OCT. 26, 2021 – Allergan, an AbbVie (NYSE: ABBV) company, today announced that it will present new pooled analyses and post hoc results from the Phase 3 trials of AGN-190584 (pilocarpine HCl ophthalmic solution 1.25%), an investigational novel treatment for presbyopia, at Academy 2021, the annual meeting of the American Academy of Optometry, November 3-6. Presentations will include clinical results for near and intermediate vision, functional near vision, efficacy for post-LASIK patients, and the patient experience.

“We look forward to sharing data from AGN-190584’s Phase 3 study results with attendees at Academy 2021 that not only show an improvement in near vision in presbyopia patients, but also shed light on how practitioners may implement this treatment in the real world, pending approval,” said Michael R. Robinson, M.D., vice president, global therapeutic area head, eye care, AbbVie. “Optometrists well understand the daily challenges of those living with age-related blurry near vision called presbyopia, a progressive vision condition that affects nearly all of us as we age. Building upon our heritage of innovation in eye care, we look forward to the potential of bringing forth a completely new treatment option for eye care professionals to offer their patients.”

Investigational AGN-190584 was specifically designed for the treatment of presbyopia. An optimized formulation of pilocarpine 1.25% with pHast™ technology was selected after the development of this proprietary vehicle and rigorous testing of 16 formulations. A New Drug Application was submitted to the U.S. Food and Drug Administration earlier this year and full Phase 3 GEMINI 1 study results were announced in July. Allergan, an AbbVie Company, intends to market the treatment as VUITY™ (pilocarpine HCl ophthalmic solution 1.25%) pending FDA approval.

Abstracts for Academy 2021 can be viewed on the Academy website HERE.

Posters are listed below and will be displayed all day November 4, 2021. Authors will be present from 4:30 pm to 6:30 pm ET for questions.

- AGN-190584 Improves Intermediate Vision in Pooled Phase 3 GEMINI 1 and 2;
- Comparison of Participants with and without LASIK in Near Vision Improvement with AGN-190584 Treatment;
- Near Vision Line Improvement Stratified by Baseline Severity with AGN-190584 in Pooled Phase 3 GEMINI 1 and 2;
Pooled Phase 3 GEMINI 1 and 2: AGN-190584 Improves Functional Near Vision;
Interpreting Clinically Meaningful Near Vision Improvement in Presbyopia With AGN-190584 in the Gemini 1 Phase 3 Trial;
GEMINI 1 and 2 Patient Experience with the Use of AGN-190584 (Pilocarpine 1.25%) for Presbyopia

About the Phase 3 Studies
GEMINI 1 and GEMINI 2 enrolled a total of 750 patients randomized in a one-to-one ratio of vehicle (placebo) to AGN-190584 (pilocarpine HCl ophthalmic solution 1.25%). Both studies met the primary endpoint, achieving statistical significance compared to vehicle in improvement in mesopic (low light) near vision on Day 30, Hour 3 without compromising distance vision. AGN-190584 was administered in each eye once-daily, for 30 days in both GEMINI 1 and GEMINI 2 participants with presbyopia. There were no treatment emergent serious adverse events observed in any AGN-190584 treated participants. The most common adverse reactions reported in >5% of patients were headache and conjunctival hyperemia. The majority of secondary endpoints were also met in both studies, including a significant improvement vs. vehicle in patient-reported outcomes (PROs) such as an increase in vision-related reading ability, and reductions in the impact of presbyopia on daily life and use of coping behaviors to manage presbyopia.

About AGN-190584
AGN-190584 is an investigational, novel optimized formulation of pilocarpine specifically designed for the treatment of presbyopia as a topical, once-daily drop delivered with pHast™ technology, a proprietary vehicle. This allows AGN-190584 to rapidly adjust to the physiologic pH of the tear film. The primary mechanism of action is through pupil constriction to improve near and intermediate vision while maintaining some pupillary response to different lighting conditions – an effect known as dynamic pupil modulation.

About Allergan Eye Care
As a leader in eye care, Allergan has discovered, developed, and delivered some of the most innovative products in the industry for more than 70 years. Allergan has launched over 125 eye care products and invested billions of dollars in treatments for the most prevalent eye conditions including glaucoma, ocular surface disease, and retinal diseases such as diabetic macular edema and retinal vein occlusion.

About AbbVie
AbbVie's mission is to discover and deliver innovative medicines that solve serious health issues today and address the medical challenges of tomorrow. We strive to have a remarkable impact on people's lives across several key therapeutic areas: immunology, oncology, neuroscience, eye care, virology, women's health and gastroenterology, in addition to products and services across its Allergan Aesthetics portfolio. For more information about AbbVie, please visit us at www.abbvie.com. Follow @abbvie on Twitter, Facebook, LinkedIn or Instagram.

Forward-Looking Statements
Some statements in this news release are, or may be considered, forward-looking statements for purposes of the Private Securities Litigation Reform Act of 1995. The words "believe," "expect," "anticipate," "project" and similar expressions, among others, generally identify forward-looking statements. AbbVie cautions that these forward-looking statements are subject to risks and uncertainties that may cause actual results to differ materially from those indicated in the forward-looking statements. Such risks and uncertainties include, but are not limited to,
failure to realize the expected benefits from AbbVie’s acquisition of Allergan plc ("Allergan"),
failure to promptly and effectively integrate Allergan’s businesses, competition from other
products, challenges to intellectual property, difficulties inherent in the research and
development process, adverse litigation or government action, changes to laws and regulations
applicable to our industry and the impact of public health outbreaks, epidemics or pandemics,
such as COVID-19. Additional information about the economic, competitive, governmental,
technological and other factors that may affect AbbVie’s operations is set forth in Item 1A, “Risk
Factors,” of AbbVie’s 2020 Annual Report on Form 10-K, which has been filed with the
Securities and Exchange Commission, as updated by its subsequent Quarterly Reports on
Form 10-Q. AbbVie undertakes no obligation to release publicly any revisions to forward-looking
statements as a result of subsequent events or developments, except as required by law.

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Comparison of Internet Web Site and Tablet Melbourne Rapid Fields Procedures and Their Test-Retest Reliability

Chris Johnson, PhD, FAAO
Univ of Iowa Ophthalmology
chris-a-johnson@uiowa.edu

Purpose: To determine the relationship between tablet-based and internet web site based versions of the Melbourne Rapid Fields (MRF) test visual field procedure and to assess the test-retest reliability of both of these procedures in a group of healthy participants with normal visual function. Comparisons with the 24-2 SITA Standard test on the Humphrey Field Analyzer were also performed.

Methods: Forty healthy participants with normal vision (33 female, 7 male, average age 24 years) performed two tablet-based MRF tests, two internet web site-based MRF tests and two Humphrey Field Analyzer (HFA) 24-2 SITA Standard procedures. The MRF test utilizes a 24-2 test presentation pattern and determines visual field sensitivity at each location using a ZEST threshold estimation procedure. The background luminance is 16 apostilbs (5 cd/m²), which is 3 dB lower than the HFA background of 31.5 apostilbs (10 cd.m²). One of the MRF internet web site tests was performed at the clinic with instruction and the other internet web site test was performed at their home on a tablet or computer display. Calibration procedures to adjust the test for screen size and intensity were performed at the beginning of the internet web site test. The dynamic range of the MRF is less than the HFA, so sensitivities higher than 30 dB cannot be determined with the current procedure.

Results: MRF average sensitivity values were within 4.02 dB (right eye) and 4.15 dB (left eye) of the HFA average sensitivities. When HFA sensitivity values above 30 dB were removed, the MRF sensitivities were within 2.2 dB (right eye) and 2.46 dB (left eye) of the HFA sensitivities. There were very few false positives, false negatives and fixation losses for the MRF and the HFA tests. The tablet MRF test-retest reliability was excellent, with an average test-retest difference of 0.04 dB (sd= 0.44 dB) for the right eye and 0.05 dB (sd= 0.53 dB) for the left eye. The internet web site test-retest variability for the MRF was slightly higher (less than 0.23 dB with a sd of less than 1.4 dB for both eyes). There were minimal differences in the visual field indices and individual location sensitivities between the tablet-based and internet web site-based MRF test results for all participants.

Conclusion: The MRF tablet-based and internet web site-based visual field test procedures have high test-retest reliability, produce highly correlated test results, and generate findings that are very similar to the HFA for young, healthy normal participants. The testing time for the MRF test is less than for SITA Standard on the HFA and is slightly longer than SITA FAST. These results suggest that tablet-based and internet web site-based MRF testing can provide quantitative perimetric findings, allowing testing to be performed with devices that are portable, easily sanitized and readily available. The possibility of home testing and visual field evaluations in many settings introduces a new paradigm shift in the manner in which this diagnostic procedure is conducted.
M&S Technologies Launches the Smart System Virtual Reality Headset Including Critical Eye Tracking Function

July 15th, 2021 NILES, IL

Press Release:

New Virtual-Reality Vision Testing Headset from M&S Technologies

Accuracy through eye tracking and a better patient experience through speed of testing.

M&S Technologies, an innovative vision testing equipment developer and manufacturer, has announced the introduction of its new virtual reality vision testing system - The Smart System VR Headset. This new dimension in vision testing will give eye-care professionals greater accuracy and efficiency while offering patients a better examination experience.

The Smart System VR headset is portable, allows for testing in a fully illuminated room, and requires no internet connection to operate. The headset, with built-in eye tracking for fixation monitoring, provides accurate 10-2, 24-2 and 30-2 visual field and contour stereo testing. The M&S VR Headset is adaptable to add many of the time-tested Smart System vision testing modules.

“For over 30 years M&S has focused on providing the highest quality software and advanced computerized testing systems to enable eye-care professionals to better care for their patients. Our new Smart System VR Headset, with visual field testing times under 3 minutes per eye, further demonstrates this commitment to perfecting vision testing technology while bringing increased efficiency and flexibility to our customer’s practice.” - Joe Marino, Global Head of M&S Technologies

For more information call 847-763-0500.

About M&S Technologies:
Founded in 1990, M&S Technologies is a software development and device manufacturer, rooted in state-of-the-art software development, local manufacturing and superior customer service. M&S is known worldwide for leading technological advancements in visual testing systems. M&S is dedicated to bringing high quality, extremely accurate testing products to eye-care professionals, optometry schools, and universities.

See the Release on PRWeb

www.mstech-eyes.com
jmarino@mstech-eyes.com

Have a thought about this article? Contact Us and let us know.
The new Smart System® VR Headset was built with the Eye Care Professional’s needs in mind. Tapping into over 30 years of experience developing and building vision testing software, M&S Technologies is committed to refining the features that would have the biggest impact for the patient and ECP.

The **Active Eye Tracking Functionality** on the VR Headset is one example of that commitment. This feature monitors and maintains patient fixation on the central target. It is designed to ensure an accurate and reliable visual field test by pausing the test with even the slightest eye movement away from the target. Thanks to our long history in the industry, our technical team has the experience and expertise necessary to ensure the eye tracking functionality meets our gold standard in vision testing software.

**Eye Tracking Functionality You Can Count On**

**Other Critical Features**

- **QuickScreen**
  - 45 sec

- **Full Threshold**
  - 3 min per eye

**Intuitive Interface**

Straightforward user friendly interface

See for yourself at Boston AAO booth #434 or schedule a demo today!
The 10-2 Provides More Information for Tracking Visual Field Progression in Central Visual Field Effects Compared to the 24-2

Jack Phu, BOptom (Hons), BSc, MPH, PhD, FAAO, Diplomate (Glaucoma)
University of New South Wales
jack.phu@unsw.edu.au

Purpose: Detection of central visual field (VF) defects has been shown to be similar between the 10-2 and 24-2. However, the implications of increased test density and dynamic range of sensitivity results for progression analysis and scotoma characterisation using the 10-2 is not yet known. We used a novel step-based approach to quantitatively examine clinically-meaningful differences between grids.

Methods: Methods: We examined the 10-2 and 24-2 VF results of 73 patients with central VF defects. We chose vertical and horizontal meridians that were approximately overlapping between the two test grids. Pattern deviation values were extracted to obtain the corrected defect depth, and using these data, we calculated the number of meaningful steps (ranging from 0 to 7 steps, in increments of 3 dB, which is the approximate test-retest variability within the central VF) to the VF measurement floor (defined as -22 dB). We compared three parameters between grids: 1) magnitude of the deepest defect; 2) difference in defect between its neighbouring point; and 3) number of steps remaining before reaching the measurement floor (Fig 1A shows an example of steps remaining at each location along the vertical meridian, with a higher y-value indicating more steps before the VF floor is reached).

Results: The magnitude of the deepest defect was similar between grids across all meridians (p=0.32-0.97). The difference in defect (dB/test location) between the neighbouring point was also similar between grids (p=0.13-0.60). Notably, this meant that the 24-2 had an effectively flatter “gradient” (dB/degree), as it has 6-degree point spacing, in comparison to the 2-degree point spacing of the 10-2 (p=0.02-<0.0001). There were proportionally fewer instances where the measurement floor was reached (p<0.0001) and a greater number of steps remaining (p=0.01) when using the 10-2 compared to the 24-2 (Fig 1B, where a higher y-value indicates more steps remaining, and a lower value indicates that the floor has been reached).

Conclusion: The greater test point density on the 10-2 provides greater dynamic range for measuring potential VF defect change over time. A “flatter” gradient of change between neighbouring points found in the 24-2 using a step-based approach highlights opportunities for monitoring glaucoma progression if using a 10-2 to identify deepening and widening of the scotoma. As glaucoma progresses, the importance of the 10-2 for monitoring change becomes more apparent.
Falck Medical, Inc, Booth 200

FMAT1 Multi-Function Device™

The FMAT1 Device is a combination Tonographer, Ophthalmodynamometer and Serial Tonometer. It is the first and only device ever cleared by the USFDA for these clinical indications of use. At the slit lamp microscope, the technology can measure the outflow of aqueous, ocular perfusion pressure and intraocular pressure variation.

The underlying cause of glaucoma is impaired aqueous outflow. In an eye with impaired outflow, the IOP will spike when aqueous production increases. These spikes typically occur outside the office. Intraocular pressure variation and decreased ocular perfusion are known risk factors for glaucoma progression.

The FMAT1 technology is designed to optimize the treatment of glaucoma and vascular disease. As a new technology with new procedures, it also provides a new revenue stream for the clinician.

falckmedical.com 860-536-9000
Effect of Latanoprostene Bunod on Optic Nerve Head Blood Flow

Dan Samaha, OD, MSc, FAAO
Montreal University School of Optometry
dan.samaha@umontreal.ca

Purpose: To evaluate the effect of topical latanoprostene bunod (LBN) on optic nerve blood volume and oxygen saturation in a population of healthy participants.

Methods: In this prospective double-blind crossover study, 23 healthy participants aged from 21 to 62 years old were recruited. Optic nerve head capillary blood volume (ONHvol) and oxygen saturation (ONHSaO2) baselines were measured over a period of 2 hours, using multichannel spectroscopic reflectometry and remeasured after a seven-day once-daily instillation regimen of either latanoprost 0.005% (Xalatan) or LBN 0.024% (Vyzulta). After a 30-day washout period, participants were crossed over to the alternate product and measurements were repeated. Participants were used as their own baselines in order to calculate variation in ONHvol and ONHSaO2 across time and pharmacological agents. Friedman’s test was used to establish significant differences in ONH parameters from baseline values and Conover’s post hoc analysis was carried for multiple between-groups comparisons.

Results: LBN 0.024% induced a significant increase of 4% in ONHSaO2 compared to Xalatan (p<0.001). Furthermore, LBN increased ONHvol levels by more than two-fold at all time points (p<0.001 at T60, p<0.001 at T90, p=0.023 at T120). The increase in ONHvol was 66.2% higher than levels achieved with latanoprost 0.005% at T60 (p<0.001), 47% higher at T90 (p=0.007) and 45% higher at T120 (p=0.02).

Conclusion: LBN 0.024% induces and significant increase in optic nerve head blood volume and oxygen saturation when compared to latanoprost 0.005% (p=0.003 and p=0.007 respectively).
Press Release

Contacts:  
Kelin Kushin, Director of Business Development, kelin@seevividly.com  
Benjamin Backus, Chief Science Officer, ben@seevividly.com  
(877) 877-0310 | www.seevividly.com

Vivid Vision advances clinical and remote vision care

San Francisco, October 1, 2021 - Vivid Vision today announced three key developments. Its flagship products, Vivid Vision Clinical and Home for patients with binocular dysfunction, is now easier for doctors to use. The company has two new products under development: Smart Assist™ will help doctors treat patients more effectively, and Vivid Vision Perimetry will introduce an accurate, low cost device for measuring visual fields, including at-home testing.

Binocular dysfunctions include difficulty converging, lack of stereoscopic depth perception, amblyopia, and strabismus. More than 400 clinics world-wide are using the Vivid Vision system to treat these conditions. Vivid Vision software is a medical device that runs on affordable virtual reality headsets, such as the HTC Vive Pro Eye and the DPVR P1 Pro, among other devices. The system is for use by a doctor in conjunction with other therapies.

James Blaha, CEO and founder of Vivid Vision, is a programmer and entrepreneur who was diagnosed with amblyopia and strabismus at a young age. “Virtual reality is the perfect platform for eye care,” says Blaha. “It gives us an incredible tool for vision testing and treatment because we can very accurately control the image being rendered to each eye.” Like many other people with “lazy eye,” Blaha thought there was no hope for treatment after the age of 9 years old. But in 2012 he saw a TED talk by neuroscientist Susan Barry describing her journey to regain stereoscopic depth perception as an adult.

That talk inspired James to design software for lazy eye using virtual reality headsets. While working on an early prototype of the system, he was able to gain depth perception and see in 3D for the first time. Now, patients who have recovered depth perception are the company’s strongest advocates. “When I first saw 3D I was having this visceral emotional reaction… Now I can sense the space all the way down the block” says one patient. “My car that I've owned for over five years, I just discovered some buttons and this other compartment that I didn't realize was there, but now they pop out” says another.

Doctors have also become advocates. According to Ted Kadet, OD, FCOVD, “Vivid Vision is the best thing to have happened to Vision Therapy.” Says Dan Fortenbacher, OD, FCOVD: “I had a lot of people asking me about Vivid Vision and I kept telling them, ‘It's our silver bullet!’” Prof. Paul Harris, OD, FCOVD, writes “Vivid Vision is providing optometry with the tools I imagined long ago, which will help us change more lives, more profoundly and more efficiently than ever before.”

Vivid Vision’s mission is to empower eye doctors with powerful vision care tools.

For more information about Vivid Vision, please look at our press kit: http://seevividly.com/press/
Retinal Nerve Fiber Layer Degradation in Subjects with a History of Multiple Traumatic Brain Injuries

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Purpose: Brain imaging techniques are not able to reliably detect neuronal degradation caused by traumatic brain injury (TBI). The retina may be an accessible site to identify alterations to neural tissue after TBI. We studied whether multiple TBIs in young subjects elicit structural changes in the macula and retinal nerve fiber layer (RNFL).

Methods: Adult case subjects with a history of at least two mild or moderate TBIs (n = 10; mean age ± SEM = 26.1 ± 0.60 yrs; 80% female) and age- and sex-matched control subjects with no TBI history (n = 10; 25.6 ± 1.10 yrs; 80% female) were prospectively recruited. Optical coherence tomography (OCT; Spectralis, Heidelberg) images of the macula and peripapillary RNFL were acquired from all subjects and were analyzed with software on the device. Minimum foveal thickness was measured on the macular scans; and global (G), temporal (T), temporal-superior (TS), nasal-superior (NS), nasal (N), nasal-inferior (NI), and temporal-interior (TI) RNFL thicknesses were measured on the RNFL scans. Scanning laser polarimetry with variable corneal compensation (SLP; GDx VCC, Zeiss) also was used to image the macula and peripapillary RNFL. Macular images were processed offline to calculate total phase retardation within three degrees of the fovea. RNFL data were obtained from the device’s standard printout and included superior average, inferior average, temporal–superior–nasal–inferior–temporal (TSNIT) average, TSNIT standard deviation, and nerve fiber indicator (NFI). All measurements from both devices were averaged between the two eyes of each subject. Comparisons between the two groups were made using two-tailed t-tests (significance threshold of p < 0.05).

Results: Case subjects reported an average (± SEM) of 3.3 ± 0.5 TBIs over a range of 1-18 years prior. There were no differences (p > 0.05) in minimal foveal thickness or macular phase retardation between the groups. There were no differences (p > 0.05) in OCT-measured G, T, TS, NS, N, and TI RNFL thicknesses between the groups; however, NI RNFL thickness was significantly lower (p = 0.04) in case subjects (97.1 ± 5.62 microns) than in control subjects (118 ± 7.62 microns). Similarly, the SLP-measured inferior average was significantly (p = 0.02) lower in case subjects (56.6 ± 1.28) versus control subjects (60.7 ± 1.27). The TNSIT average was also significantly lower (p = 0.03) in case subjects (62.9 ± 1.27) versus control subjects (68.5 ± 1.69). There were no differences (p > 0.05) between the groups for SLP parameters superior average, TSNIT standard deviation, and NFI.

Conclusion: We detected RNFL loss in young, mostly female subjects with a history of multiple TBIs, compared to controls. Our results agree with reports in the literature of RNFL thinning in male collision-sport athletes. These outcomes support the eye’s potential as a site to objectively detect structural changes to neural tissue after TBI.
Optimizing VOMS for acute concussion in collegiate athletes: Findings from the NCAA-DoD CARE Consortium

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**Purpose:** The Vestibular/Ocular-Motor Screening (VOMS) is an important component of acute sport-related concussion (SRC) assessments and is increasingly utilized alongside the Sport Concussion Assessment Tool (SCAT). VOMS has high diagnostic accuracy for acute SRC and increases diagnostic power when added to the SCAT3. However, potential overlaps among VOMS’s vestibular and oculomotor components suggest the possibility of a more efficient version for identifying acute concussion.

**Methods:** Preseason and acute (≤48 hours) post-injury scores for components of VOMS (mean near point of convergence distance, Smooth Pursuits, Horizontal Saccades, Vertical Saccades, Convergence, Horizontal Vestibulo-Ocular Reflex, Vertical Vestibulo-Ocular Reflex, Vision Motion Sensitivity) and SCAT3 (SCAT3 Symptom Evaluation, Standardized Assessment of Concussion [SAC], modified Balance Error Scoring System [mBESS]) were analyzed for 3,958 preseason (47.7% female) and 496 acute-SRC (37.5% female) collegiate athlete evaluations in the NCAA-DoD CARE study. Descriptive statistics, Kolmogorov-Smirnov significance testing, and Cohen’s d effect size were calculated on all tools. Spearman’s rho was utilized to determine correlations between VOMS component tasks while Deming regressions were utilized to determine the linear relationships between pairs of dependent VOMS and SCAT variables. Multiple logistic regression methods, principal component analysis and an all possible combination analysis were explored to perform variable selection. As VOMS includes the collection of pre-exacerbation (baseline) symptoms, a change score between VOMS Total and pre-exacerbation was calculated. Receiver Operating Characteristic (ROC) curve analyses were conducted to determine diagnostic utility of VOMS models.

**Results:** Analyses revealed very large effect sizes (d=2.39-2.45) and high correlations (rho=0.95-0.99) among all VOMS components except near point of convergence distance. Receiver operating characteristic (ROC) curve analyses showed high discriminative utility for VOMS Total (AUC=0.85), which was lowered when pre-exacerbation symptoms were incorporated (AUC=0.74). A modified VOMS (mVOMS) consisting of four components yielded identical AUCs to VOMS Total. Integer cutoff analyses suggest a score of ≥5 for VOMS Total and ≥4 for mVOMS Total optimizes concussion identification. Incorporating VOMS or mVOMS into SCAT3 (Symptom Evaluation+SAC+mBESS AUC=0.79) significantly improved the combined tool’s acute SRC identification by 4% (AUC=0.83).

**Conclusion:** All VOMS components are useful in identifying concussed athletes. Reducing VOMS to four components shortens administration time while maintaining high predictive utility for acute concussion. Future versions of the SCAT may want to consider a more parsimonious set of VOMS items for identifying acute concussion.
Eschenbach Introduces its New Smartlux® Digital!

Danbury, CT – September 24, 2021

Eschenbach Optik of America, Inc. is pleased to introduce its next generation Smartlux® Digital, a portable video magnifier for patients with vision loss due to macular degeneration and other eye diseases. The new Smartlux® Digital features a 5” reflection-free display, 14 color contrast modes, a full HD camera and is user friendly since it has just 4 tactile and color-coded buttons on the top to operate the main functions. More advanced settings are accessible via the menu button which allow for the selection of the LED brightness, viewing modes, magnification type (step or continuous) and orientation of the underline among others.

The integrated stand allows for 3 different uses: fully retracted for hand-held use, fully extended for placing on reading material and partially extended for writing under the display. The quick 50 fps refresh rate is the fastest on the market and provides a clear image when the device is in motion so there is no smearing or ghosting effect. The Smartlux® Digital can connect to an external screen using the HDMI cable to live stream images or it can connect to a computer via the USB connection to transfer photos.

A protective zippered case, charger, cleaning cloth and lanyard are included and accessories include an attachable handle which provides optimal stability and supportive grip and a Bumper which protects the product if it is dropped. In short, the Smartlux® Digital is a user friendly and customizable portable video magnifier that allows patients with vision loss to be better able to read, write and do hands-free tasks, thereby increasing their independence and quality of life!

About Eschenbach Optik of America, Inc.
Eschenbach is a world leader in the manufacture and distribution of high quality vision-enhancing products that improve the safety, productivity, independence, and quality of life of its customers. The company offers eyecare and vision rehab professionals numerous diagnostic assortment options as well as training and consultative support, all of which ensure success for their users who need magnification solutions. For more information, please contact Eschenbach Optik of America, Inc. at (800) 487-5389 / info@eschenbach.com or visit www.eschenbach.com.
Novel microcontroller-driven illumination system to improve color contrast recognition in observers with moderate to severe color vision deficiency

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Purpose: The purpose of this study was to develop a low-cost, user-friendly microcontroller-driven system to produce Differential Dynamic Illumination, and validate that the device improves color contrast discrimination in subjects with moderate to severe color vision deficiency.

Methods: Differential Dynamic Illumination is a method based on retinal persistence to improve color contrast recognition in color vision deficient observers and has been described in a previous study. The required illumination is created through the controlled change of the spectral composition of illuminating light at a constant frequency. Previously, this has been accomplished by utilizing a set of optical bandpass filters. In this study, the illumination is created by combining light produced by a set of color LEDs. Initially, several candidate LED-based illumination sources were characterized for spectral composition and responsiveness. Then, low-cost microcontrollers were evaluated based on performance and ability to interface with peripheral devices. With the selected light source and microcontroller, a hand-held illumination system, which included an integrated user interface in a compact 3D-printed casing, has been developed. It is controlled by a program, written in Python, which allows for full control of illumination parameters, including luminosity, spectral composition, and temporal frequency. Effectiveness of the system in improving color contrast recognition for color vision deficient observers has been verified. To determine the optimal frequency of illumination change, data was collected with several different temporal settings, ranging from 13Hz to 61Hz, and compared to results of tests with ambient light. Two of the three subjects, who participated in the research, had deuteranopia, a severe color vision deficiency. The third subject had normal color vision, acting as a reference. Tests were conducted by asking subjects to identify numbers on standard Ishihara Test Plates.

Results: Data was analyzed with Fisher's Exact Test and recognition rate improvements were calculated for each subject. Results demonstrated a statistically significant increase in the recognition rate of Ishihara test plates (sample size of 21 test plates) for both color vision deficient observers when frequency of illumination change was at ~16Hz. For the first subject, color contrast recognition rate at 16.26Hz increased by 78% (p-value < 0.00001). For the second subject, color contrast recognition rate at the same frequency increased by 48% (p-value = 0.0025), and at 13Hz increased by 72% (p-value < 0.00001). The color contrast recognition rate for the subject with normal color vision remained at 100% for all illumination conditions.

Conclusion: In this study, a novel, low-cost and user-friendly device was developed that produced Differential Dynamic Illumination. The device was tested with color vision deficient observers, and it was demonstrated, using Fisher’s Exact Test, that the illumination produced by the device provides statistically significant improvements to color vision deficient participant’s ability to distinguish color.
Bruder Introduces Pre-Surgical Patient Prep Kit

New pre-op kit helps comanaging optometrists prepare their patients’ eyes for ophthalmic surgery in three easy steps.

FOR IMMEDIATE RELEASE

ALPHARETTA, GA, September 20, 2021— Bruder Healthcare, a recognized leader in eye care that provides the #1 doctor recommended moist heat eye compress announces the Bruder Sx Pre-Surgical Patient Prep Kit. Bruder released the new kit in response to demand from comanaging optometrists who seek to pre-treat the ocular surface before referring patients for cataract surgery. With the introduction of this kit, the hygiene products patients need are all available in a single, self-contained kit that optometrists can provide directly in their practices or via Bruder’s new patient-friendly online portal, specifically designed for pre-surgical patients.

“Ocular hygiene is essential pre-operatively and all evidence points to the need for pre-surgical prep,” says Paul Karpecki, OD, FAAO. “The pre-surgical prep kit removes the burden of collecting multiple hygiene products online or at a pharmacy.”

The Bruder Pre-Surgical Prep Kit includes:

- **Bruder Hygienic Eyelid Cleansing Wipes.** These textured pre-moistened wipes contain a mild surfactant designed to remove build up, oil, dirt, pollen and desquamated skin that may cause eye irritation and infection.

- **Bruder Hygienic Eyelid Solution (0.02% Pure Hypochlorous acid)** Naturally-occurring hypochlorous acid (HOCl) has shown high efficacy against a wide range of microorganisms. Applying one to two sprays of the solution daily to closed eyes helps fight infection, reduce inflammation and bacteria, and enhance natural ability to heal.

- **The Bruder Sx Pre-Surgical Compress.** This enhanced compress is designed specifically for the unique needs of the pre-surgical patient using EyeOnic™ fabric woven with antimicrobial silver threads. Like the original Bruder Moist Heat Compress, the Sx mask is filled with self-hydrating, silver-infused, patented antibacterial MediBeads® to unclog meibomian glands and stabilize the tear film to improve pre-surgical measurements. Patients microwave the mask for 20 seconds then apply for 8-10 minutes.

- **Bruder Sx Case.** All of the essential items that pre-op patients need are neatly housed in an attractive, yet practical case that’s large enough for doctors to customize by adding complimentary products, prescriptions or patient education paperwork.
The **Bruder Sx Pre-Surgical Patient Prep Kit** is now available for in-office distribution or patient purchase by referral online. Call 888-827-8337 or visit the Bruder Professional portal at order.bruder.com to learn more about this new product.

**About Bruder Healthcare Company**

Bruder Healthcare is a recognized leader in eye care and provides the #1 doctor recommended moist heat eye compress. Since 1986, Bruder Healthcare has provided safe, effective therapeutic products to medical professionals and consumers. Our products are used in medical settings and homes around the world.

Visit [www.brudersx.com](http://www.brudersx.com) for more information.

Bruder Healthcare Company

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For more information: [www.bruder.com](http://www.bruder.com) or [www.brudersx.com](http://www.brudersx.com)

###
Effect of OC-01 (varenicline) Nasal Spray Compared to Vehicle (Control) on Dry Eye Disease Sign Outcomes by Baseline Subgroup Characteristics

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**Purpose:** Dry eye disease (DED) patients present with a broad range of clinical signs & symptoms at baseline (BL), including abnormal spectrum of Schirmer’s Test Score (STS) & Eye Dryness Score (EDS) severity. OC-01 (varenicline) nasal spray is a highly selective cholinergic agonist that has been shown to pharmacologically neuro-activate the trigeminal parasympathetic pathway & increase natural tear production. To determine the effect of BL signs and symptoms on the efficacy of OC-01 (varenicline) nasal spray, integrated data from the ONSET-1 & ONSET-2 clinical trials were analyzed to determine their relevance on sign outcomes in DED subjects.

**Methods:** Integrated data from ONSET-1 & ONSET-2 trials were analyzed to determine the mean change in STS (mΔSTS) (mm) from BL to Week 4 (W4) in both 0.6 mg/mL & 1.2 mg/mL formulations of OC-01 compared to vehicle control (VC) in DED subjects by subgroups pre-specified at BL: STS <5mm/>5mm & EDS <60/>60. ANCOVA models include treatment, study number, study site, BL STS, & BL EDS as covariates.

**Results:** Using last available data for missing assessments, the 0.6 mg/mL formulation data showed statistically significant increases in mΔSTS from BL to W4 compared to VC, (p<0.01 for all subgroups). At W4, outcomes in mΔSTS from BL STS <5: 11.6mm compared to VC: 6.1mm; BL STS >5: 11.7 mm compared to VC: 6.4mm; BL EDS <60: 12.3mm compared to VC: 6.2mm; & BL EDS >60: 11.2 mm compared to VC 6.2mm. The 1.2 mg/mL formulation data also showed statistically significant increases in mΔSTS from BL to W4 compared to VC, (p<0.01 for all subgroups). At W4, outcomes in mΔSTS from BL STS <5: 12.1 mm compared to VC: 6.1mm; BL STS >5: 11.6 mm compared to VC 6.4mm; BL EDS <60: 13.5mm compared to VC: 6.2mm; & BL EDS >60: 10.5 mm compared to VC: 6.2mm. OC-01 (varenicline) nasal spray was associated with sneezing. Most subjects in the 0.6 mg/mL formulation group (82%) & in the 1.2mg/mL group (84%) reported a sneeze; the majority (98%) in both groups rated it as mild. 22.4% of subjects in the VC group reported a sneeze. Treatment-Emergent Adverse Events (TEAEs) in >5% of subjects were cough, throat & instillation site irritation.

**Conclusion:** In the integrated ONSET-1 & ONSET-2 clinical trials data, treatment with both formulations of OC-01, 0.6mg/mL & 1.2mg/mL, showed statistically significant increases in mΔSTS from BL to W4 in DED subjects compared to VC regardless of pre-specified BL subgroup. The most common TEAEs reported with both formulations of OC-01 were sneezing, cough, throat & instillation site irritation. No drug-related Serious Adverse Events were reported. With its novel pharmacologic neuro-activator mechanism of action and route of administration, OC-01 (varenicline) nasal spray may potentially be an effective therapeutic option for increasing natural tear production in heterogenous DED patient populations.
Microscopy of In Vitro Demodex following Low Level Light Therapy and Intense Pulsed Light

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**Purpose:** Demodex folliculorum infestation has been implicated in the pathogenesis of blepharitis, ocular rosacea, and meibomian gland dysfunction (MGD). Low level light therapy (LLLT), specifically blue light wavelengths (400-525 nm) has been touted as a treatment for Demodex, yet a thorough literature search resulted in no studies supporting this claim. In this experiment we directly observe the effects of blue light LLLT, alternating blue and red light LLLT, and Intense Pulsed Light (IPL) on two Demodex mites in vitro.

**Methods:** A single eyelash was extracted from a 36 yo WM patient with a history of ocular rosacea and MGD. It was prepared on a standard microscope slide with Systane Complete, a cover slip and viewed with an Omax binocular compound microscope prior to and following six 15 minute blue light (400-450 nm) treatments with an Equinox-LLLT (Marco), 2 pairs of alternating 15 minute blue and immediately following 15 minute red light (633 nm) treatments with an Equinox-LLLT, 7 IPL pulses with a M22 IPL (Lumenis) using 560 nm filter, rosacea of erythema and Fitzpatrick 2 settings, and 1 M22 IPL pulse using acne filter. For LLLT treatments the slide was elevated on an overturned mug to give a 2 cm distance to the mask. IPL pulses were administered at a 3 mm distance with the slide on a flat, white background. Demodex movement and anatomical morphology were evaluated, and video following each treatment was recorded through a microscope ocular with a Samsung Galaxy S8+ smartphone camera.

**Results:** Prior to any treatment the 8 legs attached to the prosoma (thorax) of the 2 Demodex mites moved in a spontaneous, circular motion and the details of the anatomical contents of the opisthosoma (abdomen) were quite visible and easy to differentiate. Immediately following each of 6 blue light LLLT treatments the leg and prosoma movements of both Demodex appeared to increase in activity and no change in anatomical appearance was noted. After 1 red light LLLT treatment 1 Demodex moved its position significantly along the length of the lash, no change in anatomy or movement of either mite was observed. Following a second pairing of 1 blue and 1 red light LLLT, active leg movements of both Demodex were observed, the details of both opisthosomas became less well defined. Following 2 IPL pulses one Demodex was completely immobilized and no movement was observed, and the body appeared less corrugated and smoother in appearance; the second Demodex made active leg movements, while the entire body had a smoother less defined appearance. After a total of 8 IPL pulses 1 Demodex stayed completely immobilized, the other mite’s legs appeared retracted with fewer, more lethargic movements. The next observation time point, 17 hours later, revealed no movement of either mite.

**Conclusion:** Blue light LLLT therapy alone is not an effective treatment for eradication of Demodex in vitro. There is significant need for more in vitro and in vivo studies regarding LLLT and combination LLLT/IPL as a treatment for Demodex.
CooperVision Presents Presbyopia Research, Introduces MyDay® Daily Disposable Multifocal at Academy 2021

BOSTON, November 2, 2021—As part of the American Academy of Optometry 2021 virtual press conference, CooperVision presented results of research into the daily complexity of dealing with presbyopia and how this may affect clinical choices. The work was conducted in support of the launch of CooperVision’s new MyDay® daily disposable multifocal, which the company is unveiling in Boston this week.

Ethnography Research to Understand the Vision and Switching Experiences of Living with Presbyopia® defines three usage personas based on lifestyle choices and self-perception. It also ranked activities and locations in which near vision needs are paramount—not all of which were anticipated.

Based on 98 hours of video footage and more than 1,200 data entries of current monovision contact lens, multifocal contact lens, and reading spectacles wearers, the analysis suggests that lifestyle and emotional connections to vision have a significant impact on the success of a presbyopia management plan. The authors recommend eye care professionals consider obtaining more patient input on those dimensions, with an empathetic approach offering the best opportunities to match individuals with correction types.

CooperVision MyDay® daily disposable multifocal contact lenses are an expansion of the popular premium silicone hydrogel 1 day family. Leveraging the company’s deep expertise in optical design and prescribing practices, the new lenses are the first to feature the Binocular Progressive System™, an innovative add approach that caters to all levels of presbyopia with simplified fitting², optimal visual acuity at all distances and comfortable wear for exceptional performance.

“Spherical contact lens wearers live active, on-the-go lifestyles, but as they look to continue contact lens wear with their presbyopia³, they’re typically unable to experience the same clear vision. As a result, they often turn to reading glasses over their contact lenses or drop out of the category entirely. With so many factors to consider, presbyopes need a contact lens that checks all the boxes: excellent vision, comfort, and ocular health⁴,” said Michele Andrews, OD, Vice President of Professional and Government Affairs, CooperVision.

“MyDay® multifocals are ideal for all contact lens wearers with presbyopia⁵. It’s an inventive product that will help eye care professionals in most every practice setting, and we are enthusiastic about its potential to help grow the multifocal category.”

1 A Zucaro, A Deal, R O’Leary, P Lazon, G Orsborn, A Sulley. Ethnography research to understand the vision and switching experiences of living with presbyopia. Paper Presentation, BCLA 2021.
2 CVI data on file 2020. Prospective, double-masked, bilateral, one-week dispensing study UK with MyDay® daily disposable multifocal; n=104 habitual multifocal contact lens wearers; CVI data on file 2021. Prospective, subject-masked, randomized, bilateral, two-week dispensing study at 5 US sites with MyDay® daily disposable multifocal; n=58 habitual multifocal contact lens wearers.
5 CVI data on file 2020. Prospective, double-masked, bilateral, 1-week dispensing study with MyDay daily disposable multifocal; n=104 habitual MFLC wearers.

About CooperVision
CooperVision, a division of CooperCompanies (NYSE:COO), is one of the world’s leading manufacturers of contact lenses. The company produces a full array of daily disposable, two-week and monthly soft contact lenses that feature advanced materials and optics, and premium rigid gas permeable lenses for orthokeratology and scleral designs. CooperVision has a strong heritage of addressing the toughest vision challenges such as astigmatism, presbyopia, childhood myopia, and highly irregular corneas; and offers the most complete portfolio of spherical, toric and multifocal products available. Through a combination of innovative products and focused practitioner support, the company brings a refreshing perspective to the marketplace, creating real advantages for customers and wearers. For more information, visit www.coopervision.com.

About CooperCompanies
CooperCompanies (“Cooper”) is a global medical device company publicly traded on the NYSE (NYSE:COO). Cooper operates through two business units, CooperVision and CooperSurgical. CooperVision brings a refreshing perspective on vision care with a commitment to developing a wide range of high-quality products for contact lens wearers and providing focused practitioner support. CooperSurgical is committed to advancing the health of women, babies and families with its diversified portfolio of products and services focusing on medical devices and fertility & genomics. Headquartered in San Ramon, Calif., Cooper has a workforce of more than 12,000 with products sold in over 100 countries. For more information, please visit www.coopercos.com.

Media Contact: Mike McDougall, APR, Fellow PRSA, McDougall Communications, mike@mcdougallpr.com or +1-585-434-2150
The newest member of the ACUVUE® OASYS Brand Family is designed to deliver crisp, clear reliable vision at all distances, regardless of age or refractive error.

**Current lens wearers at risk of dropping out**

- 40% of current contact lens wearers are 40+
- 94% of those over 45 will discontinue as they develop presbyopia
- 50% expect to continue in contact lenses

**Designed for Superior Performance**

- **Crisp, Clear Reliable Vision**
  - Pupil Optimized Design: 100% of parameters tailored to pupil size variations across age and refraction vs <2% for the leading competitor

- **Precise Fit**
  - Hybrid Back Curve includes an aspheric center to help keep the optics in the right shape, and a spherical periphery to help keep optics in the right place

- **Never Beaten in Comfort**
  - The brand family of ACUVUE® OASYS has never been beaten in comfort in 25 clinical studies

**Leading Causes of Contact Lens Dropout Include**

- Dryness, Discomfort and Poor Vision

**ECPs fitting patients for the ACUVUE® OASYS MULTIFOCAL**
can also use the free ACUVUE® Fit Calculator to quickly and easily find the optimal trial lens power for patients.

† Compared to prior JJV multifocal design; technology optimized for both the parameters of refractive error and add power for a multitude of viewing distances and light levels.

‡ Compared to leading competitors’ designs; technology optimized for both the parameters of refractive error and ADD power.

# Intention to continue wearing contact lenses based on indicating “Definitely/Probably would continue wearing contact lenses in the next 12 months.”

JJV Data on File 2018. Growth Levers analysis based on IPSOS Global Incidence Tracker, retail outlet consumption data and national census population data covering the United States, United Kingdom, Russia, Japan, South Korea, and China.

^ Intention to continue wearing contact lenses based on indicating “Definitely/Probably would continue wearing contact lenses in the next 12 months.”

www.clinicaltrials.gov is a website maintained by the NIH. The 25 clinical studies evaluated subjective comfort as a primary or secondary endpoint for ACUVUE® OASYS Brand 2-weekly and ACUVUE® OASYS with Transitions™ Light Intelligent Technology. Review conducted as of November 12, 2020.


https://www.aaojournal.org/article/S0161-6420(17)33797-1/pdf. JJV Data on File 2020. Survey conducted with representative United States (n=1,000) and United Kingdom (n=1,000) consumers, ages 12-64. 2 JJV Data on File 2020. Survey conducted with representative United States (n=1,000) and United Kingdom (n=1,000) consumers, ages 12-64. 3 JJV Data on File 2020. ACUVUE® PUPIL OPTIMIZED DESIGN TECHNOLOGY: JJVC Contact Lenses, Design Features, and Associated Benefits. 4 JJV Data on File 2014. 1-DAY ACUVUE® MOIST MULTIFOCAL Designed for the Aging Eye.
Custom Aligned Optics Now Available in Ampleye® Scleral Multifocal Lenses

Grand Rapids, MI (September 1, 2021) – Because scleral lenses naturally decenter infero-temporally and optical alignment is an important consideration when fitting patients in multifocal lenses, Ampleye multifocal optics can now be customized to insure placement in front of the patient’s line of sight. The ability to precisely align optics with the center of the pupil improves visual performance at all ranges and increases chances of multifocal success for presbyopic patients. Chad Rosen, OD, MBA, FAAO, and Director of the Vision Research Institute at the Michigan College of Optometry at Ferris State University lead a pilot study to assist in developing the decenteration methodology, which Art Optical has been successfully implementing for several months. Dr. Rosen’s white paper is available to download at artoptical.com/ampleye.

For additional information on the full suite of Ampleye options and support resources, visit artoptical.com/ampleye.

About Art Optical Contact Lens, Inc.
Art Optical Contact Lens, Inc. is the nation’s largest independent specialty lens laboratory. Dedicated to serving ophthalmic professionals with custom contact lenses made to exacting standards for the correction of myopia, hyperopia, astigmatism, presbyopia, and a broad array of irregular corneal conditions, their 63-year legacy of custom contact lens manufacturing makes them the most experienced specialty lens maker in the U.S. and a widely recognized world leader in the design, production, and application of custom contact lenses.
As VTI has grown, so have our responsibilities to the community and to practitioners and to patients. Those responsibilities include new innovative products, and channels of education and practice support for high need patients with myopia, keratoconus and astigmatism. Responsibilities also include contributing to the body of data for potential new therapies. We take these responsibilities seriously and are rising to meet them.

Please join Dr. Snowdy as he shares news about new products, new people and new initiatives geared to help eye care practitioners provide better vision care to patients around the world.

For more information regarding the event, please contact Layna Mendlinger, lmendlinger@vtivision.com or 678-570-4200 or via info@vtivision.com.
For more information about VTI and NaturalVue Contact Lenses, call 1-844-VTI-LENS (1-844-884-5367) ext. 116 or visit vtitvision.com.
Asymptomatic Patient Preference for Toric Soft Multifocal and Orthokeratology Lenses

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**Purpose:** There are limited treatment options for myopia management of moderate to high astigmats. Current optical treatments include soft multifocal contact lenses and orthokeratology lenses. The purpose of this study was to assess subjective patient preferences and acceptance of soft toric multifocal (STM) and toric orthokeratology (TOK) contact lens wear.

**Methods:** Thirty adults with refractive myopia (0.00-5.00 D) and astigmatism (1.25-3.50 D) completed the Ranked Symptoms Scale (RSS) survey and VOTE Survey (VS) to ascertain self-reported comfort, vision, handling and cost of lenses. These surveys were performed at baseline in regard to the subjects’ habitual soft toric lenses (n=29) and repeated after 10 +/- 2 days of TOK wear and STM (+2.50 D center distance add) wear. Order of wear was randomized and separated by a 14 +/- 2 day washout period. At the end of the study, subjects completed forced choice questions regarding preference between the two lens types. Friedman tests and post-hoc Wilcoxon Signed Rank tests were performed with Bonferroni correction for multiple comparisons. Pearson chi-square tests were used for forced choice responses.

**Results:** On the RSS (scale 0-10, where 0 is excellent), subjects rated both TOK and STM worse than their habitual lenses for comfort (median score, habitual = 2.0, TOK = 5.5, STM = 3.0) and vision (habitual = 1.5, TOK = 4.0, STM = 5.0, all p < 0.016) and TOK worse for handling (habitual = 1.0, TOK = 2.0, STM = 0.5, p = 0.001). When comparing TOK to STM, subjects rated TOK worse for comfort and handling, but STM worse for vision (all p < 0.014). The most commonly ranked symptoms in regard to comfort with TOK were awareness of lens (87%), grittiness (36%), and tearing (33%) (Figure 1). For handling TOK, 47% of subjects reported the lens was hard to remove and 30% disliked the time taken handling lenses overall. The most common symptoms reported with STM for vision included blurred vision when looking far away (77%), unstable vision (63%), and blurred vision when looking close (30%).

On the VS (scale 0-10, where 0 is excellent), subjects were bothered by fluctuating vision throughout the day, vision in dim lighting, and vision in bright lighting with both TOK (median score 5.5, 6.0, 3.0, respectively) and STM (6.5, 6.0, 3.0) lenses compared to their habitual soft contact lenses (2.0, 2.0, 1.0, all p < 0.014); there was no difference compared to each other. In a forced choice between TOK and STM, subjects preferred TOK for vision (p = 0.039) and STM for cost (p < 0.001), with no significant difference for comfort, handling, or overall (all p > 0.05).

**Conclusion:** Habitual soft toric contact lens wearers reported worse comfort, vision, and handling with both TOK and STM. When forced to choose between the two modalities used for myopia control, subjects preferred TOK for vision and STM for cost.