DATE: April 1, 2013

SUBJECT: CURRENT ENROLLING CLINICAL STUDIES FOR WEB SITES

Enrolling Clinical Studies being conducted at the Department of Ophthalmology, ACC Building, Suite 2400

Glaucma

1. **Title:** Primary Tube Versus Trabeculectomy (PTVT) Study  
   **PI:** James D. Brandt, M.D.  
   **Protocol #:** 244666  
   **Sponsor:** Department of Ophthalmology in collaboration with Bascom Palmer Eye Institute  
   **Purpose:** The purpose of this study is to determine if a trabeculectomy with mitomycin C or Baerveldt implant surgery works better with fewer complications. The ancillary endothelial study will compare the rates of loss of endothelial cells in the two randomized groups of this study.  
   **Indication:** Patients between the ages of 18 and 85 with inadequately controlled glaucoma undergoing their first incisional ocular surgery  
   **Coordinator:** Marisa Salvador, CRC, 734-6302

2. **Title:** Baerveldt Plate Area Comparison (BPAC)  
   **PI:** James D. Brandt, MD  
   **Protocol #:** 271065  
   **Sponsor:** Department of Ophthalmology in collaboration with Johns Hopkins Hospital and Glaucoma Research Network  
   **Purpose:** The objective of this study is to compare the safety and efficacy of the 250 mm² and 350 mm² Baerveldt glaucoma implants in subjects who have had previous ocular surgery. Outcome discrimination between the two treatment groups will be made using measures of visual function (visual acuity and visual field), IOP, need for supplemental medical therapy, surgical complications, and reoperation for glaucoma or complications.  
   **Indication:** Patients between the ages of 18 and 85 years with inadequately controlled glaucoma who may have had prior intraocular surgery  
   **Coordinator:** Katrina Imson, Sr. CRC, 734-6814

3. **Title:** Evaluation of Optic Nerve Structure and Function in Patients with Keratoprosthesis  
   **PI:** Michele C. Lim, MD  
   **Protocol #:** 223055  
   **Sponsor:** Department of Ophthalmology & Vision Science  
   **Purpose:** To better understand how to monitor patients with a Boston keratoprosthesis (K-pro) for optic nerve damage from glaucoma through optic nerve photography, spectral-domain OCT, kinetic visual fields, and Humphrey visual fields. Patients with a K-pro are at high risk for developing glaucoma and it is difficult to measure eye pressure (IOP) in these patients due to the rigid plastic material from which the K-pro is made. Therefore, finding other measures to evaluate patients with a keratoprosthesis are necessary.  
   **Indication:** Patients with a Boston keratoprosthesis  
   **Coordinator:** Yao Liu, MD
<table>
<thead>
<tr>
<th>Cornea</th>
<th>Title: Ocular Rosacea: Determining a Specific Diagnostic Test</th>
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<tbody>
<tr>
<td>4.</td>
<td>PI: Mark J. Mannis, MD</td>
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<td>Protocol #: 244669</td>
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<td>Sponsor: Department of Ophthalmology &amp; Vision Science</td>
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<td>Purpose: To determine whether a new diagnostic tool can accurately provide a rapid, cost-effective test for early detection of ocular rosacea. This will potentially lead to considerably earlier treatment and the avoidance of complications that accrue from chronic ocular inflammatory disease.</td>
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<td></td>
<td>Indication: Patients with ocular rosacea and with non-roseatic blepharitis, along with normal subjects</td>
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<td>Coordinator: Katrina Imson, Sr.CRC, 734-6814</td>
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<tr>
<th>Retina</th>
<th>Title: Study of Ocular Fluid, Serum and Urine for Biomarkers of Eye Disease in Patients</th>
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<tr>
<td>5.</td>
<td>PI: Lawrence S. Morse, MD, PhD</td>
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<tr>
<td></td>
<td>Protocol #: 216607</td>
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<tr>
<td></td>
<td>Sponsor: Departments of Ophthalmology &amp; Vision Science, and Endocrinology</td>
</tr>
</tbody>
</table>
|        | Purpose: 1) To determine if there is a concentration gradient for each biomarker studied between the aqueous and the vitreous humors.  
|        | a. To determine if the concentration gradient for each biomarker studied between the aqueous and vitreous humor depends on whether the patient is phakic or pseudophakic.  
|        | b. To determine if there is any correlation between the concentration of biomarkers in serum and ocular fluids.  
|        | c. To determine if there is any correlation between the concentration of these biomarkers and diabetes control and complications related to diabetes.  
|        | 2) To determine the presence of specific biomarkers for retinal disease in serum, urine or ocular fluids.  
|        | a. To establish a normal database of the signaling molecules and biomarkers in serum, urine, aqueous and vitreous humor of patients with known retinal disease and correlate this with levels from normal patients without retinal or ocular disease.  
|        | b. To better understand retinal disease based on the molecular signals in ocular fluids. |
|        | Indication: Patients 18 years of age and older who are scheduled for an ocular procedure during which vitreous and aqueous humor normally discarded is collected. |
|        | Coordinator: Katrina Imson, Sr.CRC, 734-6814                                           |

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<tr>
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<th>Title: Retinal and RPE Autoimmunity in AMD: Assessment of Correlation with Degree of Response to Ranibizumab Therapy</th>
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<tr>
<td>6.</td>
<td>PI: Lawrence S. Morse, MD, PhD</td>
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<tr>
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<td>Protocol #: 217330</td>
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<td>Sponsor: Dr. Morse; funded by Genentech, Inc.</td>
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<tr>
<td></td>
<td>Purpose: To determine if “wet” AMD patients differ from population normals in the production of anti-Retinal Pigment Epithelium (RPE) or anti-retinal antibody formation. (RPE is the pigment cell layer just outside the retina that nourishes retinal visual cells, and is firmly attached to underlying choroids and overlying retinal visual cells.)</td>
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</table>
For “wet” AMD patients, to determine if ranibizumab responders differ from anti-VEGF treatment initial non-responders in the production of anti-RPE or anti-retinal antibody formation.

To determine if “wet” AMD patients differ from “dry” AMD patients in the production of anti-RPE or anti-retinal antibody formation.

Indication: Patients 50 years of age and older who either have 1) neovascular “wet” AMD, 2) normal vision, 3) neovascular “wet” AMD which has not responded to Anti-VEGF treatment (such as Lucentis) after 4 or more consecutive injections, or 4) “dry” AMD. Currently only enrolling those who qualify for Group 3.

Coordinator: Marisa Salvador, CRC, 734-6302

7. Title: A Phase III, Multinational, Multicenter, Randomized, Double-Masked, Study Assessing the Safety and Efficacy of Intravitreal Injections of DE-109 (three doses) for the Treatment of Active, Non-Infectious Uveitis of the Posterior Segment of the Eye

PI: Lawrence S. Morse, MD, PhD
Protocol #: 350350
Sponsor: Santen, Inc.
Purpose: The primary purpose of the trial is to evaluate the safety and efficacy of intravitreal injection of three doses of DE-109 (44 µg, 440 µg, 880 µg) for the treatment of active, non-infectious uveitis of the posterior segment of the eye. Additional trial objectives are to evaluate: - The long term safety of multiple intravitreal injections of 880 µg dose of DE-109 beyond Mo. 5. - Also, the durability of effect of 880 µg dose(s) of DE-109.
Indication: Patients 18 years of age or older with active uveitis of posterior segment determined to be non-infectious, with vision ≥ 20/200 in the non-study eye.
Coordinator: Cindy Wallace, CRC, 734-6393

8. Title: AMD Phenotype and Genotype Study (APGS)

PI: Lawrence S. Morse, MD, PhD
Protocol #: 392140
Sponsor: National Eye Institute, National Institutes of Health, Department of Health and Human Services, USA, and the Beckman Foundation (Coordinating Center: The EMMES Corporation)
Purpose: This study is a pilot to test the ability to create an archive of data, biological samples, measures of visual function and ophthalmic images collected over time from a very well clinically characterized population of participants with a diagnosis of Age-related Macular Degeneration (AMD). The database will also include a control group consisting of participants without a diagnosis of AMD. The goal is to develop a research resource to support the investigation of phenotypes (observable characteristics of an individual resulting from the interaction of its genotype with the environment) and genotypes (genetic constitution of an individual organism) of AMD.
Indication: Patients 60 years of age or older with AMD; patients 60 years of age or older with normal eyes (no AMD, opacity, other ocular conditions, high myopia, nystagmus, and/or glaucoma with visual field defects)
Coordinator: Cindy Wallace, CCRC, 734-6393
9. Title: Phase 1/2 Randomized Prospective Double-Blinded Trial Comparing Intravitreal Administration of Inhibitors of Vascular Endothelial Growth Factor Combined with Proton Beam Irradiation versus Intravitreal Administration of Vascular Endothelial Growth Factor Combined with Sham Irradiation in Treating Exudative Age-related Macular Degeneration

PI: Susanna S. Park, MD, PhD
Protocol # 223071
Sponsor: Dr. Park and Department of Ophthalmology & Vision Science

Purpose: The specific aim of the study is to test the hypothesis that low dose proton beam irradiation combined with intravitreal administration of inhibitor of vascular endothelial growth factor (anti-VEGF) is safe and more effective than treatment with anti-VEGF alone in treating exudative age-related macular degeneration (eAMD). Specifically, the Primary Objective of this study is to determine the safety and efficacy of proton beam radiation combined with ranibizumab (Lucentis) or bevacizumab (Avastin) in treating patients with exudative AMD.

Indication: Patients 50 years of age or older with “wet” age-related macular degeneration.

Coordinator: Katrina Imson, Sr.CRC, 734-6814

10. Title: A Pilot Clinical Trial of the Feasibility and Safety of Intravitreal Autologous Adult Bone Marrow Stem Cells in Treating Eyes with Vision Loss from Retinopathy

PI: Susanna S. Park, MD, PhD
Protocol # 305805
Sponsor: Dr. Park and Department of Ophthalmology & Vision Science

Purpose: This proposed pilot study is to investigate the feasibility and safety of intravitreal autologous Bone Marrow Stem Cell therapy in treating people with irreversible vision loss from retinal degenerative conditions or retinal vascular disorders. Fifteen subjects with vision loss that meet the inclusion and exclusion criteria of this study will be injected intravitreally with autologous CD34 positive BMSCs.

Indication: Patients 18 years of age or older with 20/100 to Count Fingers visual acuity; vision loss due to “dry” age-related macular degeneration, retinitis pigmentosa, retinal vein occlusion, diabetic retinopathy, and hereditary maculopathy.

Coordinator: Marisa Salvador, CRC, 734-6302

Neuro-Ophthalmology

11. Title: CAR-PON Smokers

PI: John L. Keltner, MD
Protocol # 349887
Sponsor: Department of Ophthalmology & Vision Science

Purpose: The exact incidence of retinal and optic nerve auto-antigens in normal patients who formerly or currently smoke, with or without an established diagnosis of cancer, is not known. Therefore, the purpose of our study is:
(1) To determine the incidence of CAR and PON-related auto-antigens in former or current smokers with or without a diagnosis of systemic malignancy
(2) To compare the incidence of (1) with age-matched controls who are otherwise healthy and do not have a smoking history, and neither cancer-associated retinopathy (CAR) nor paraneoplastic optic neuropathy (PON) syndrome.

Indication: Patients who are 18 and older with a known or current smoking history of at least 10 pack-year history, who do not have any history of eye disease (except cataract, refractive error, or amblyopia), no history of known autoimmune diseases (such as rheumatoid arthritis, lupus, multiple sclerosis), and no known diabetic retinopathy. Also, Normal age-matched control, never-smoked subjects will also be enrolled, who have never smoked in the past, do not have any history of eye disease (except cataract, refractive error, or amblyopia) with normal eye
exam within the last 1-2 years OR no significant past ocular history and without any visual complaints, with or without history of known cancer, no known autoimmune diseases (such as rheumatoid arthritis, lupus, multiple sclerosis), no known diabetic retinopathy and are willing to participate.

Coordinator: Katrina Imson, Sr.CRC, 734-6814

Studies being conducted at Department of Ophthalmology Cadillac Dr. Clinic, 77 Cadillac Dr., Sacramento (Enrollment for both studies below currently on hold)

12. Title: INTERMITTENT EXOTROPIA STUDY 1 (IXT1): A Randomized Trial of Bilateral Lateral Rectus Recession versus Unilateral Lateral Rectus Recession with Medial Rectus Resection for Intermittent Exotropia
   PI: Mary O'Hara, M.D.
   Protocol #: 217739
   Sponsor: National Eye Institute / Jaeb Center for Research
   Purpose: The specific aim of the proposed research is to evaluate the effectiveness of bilateral lateral rectus muscle recession versus unilateral lateral rectus recession with medial rectus resection procedures for the treatment of basic type and pseudo divergence excess types of intermittent exotropia. These are both currently standard of care for the treatment of exotropia.
   Indication: Children 3 to <11 years old with intermittent exotropia.
   Coordinator: Dr. O'Hara, via Barbara Holderreed, 734-6303

13. Title: INTERMITTENT EXOTROPIA STUDY 2 (IXT2): A Randomized Clinical Trial of Observation versus Occlusion Therapy for Intermittent Exotropia
   PI: Mary O'Hara, M.D.
   Protocol #: 256411
   Sponsor: National Eye Institute / Jaeb Center for Research
   Purpose: To determine the effectiveness of occlusion (covering one eye) for the treatment of Intermittent Exotropia (IXT) among patients aged 1 to < 11 years who have baseline near stereoacuity of 400 arcsec or better by Preschool Randot stereotest
   Indication: Children age 12 months to <11 years with intermittent exotropia.
   Coordinator: Dr. O'Hara, via Barbara Holderreed, 734-6303

Visual Psychophysics Laboratory

14. Title: Ophthalmic Imaging Using Adaptive Optics and Optical Coherence Tomography
   PI: John S. Werner, PhD.
   Protocol #: 223362
   Sponsor: National Institutes of Health
   Purpose: To learn more about how vision and retinal structure change with age and/or disease
   Indication: Males and females age 8 years and older with normal eyes, or males and females with one of the various eye diseases we are studying
   Coordinator: Susan Garcia, COT, CRC
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<th></th>
<th>Title</th>
<th>PI</th>
<th>Protocol#</th>
<th>Sponsor</th>
<th>Purpose</th>
<th>Indication</th>
<th>Coordinator</th>
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<tbody>
<tr>
<td>15.</td>
<td>Temporal Impulse Response Changes Across the Life Span</td>
<td>John S. Werner, PhD.</td>
<td>230420</td>
<td>National Institutes of Health</td>
<td>To learn more about age-related changes in the ability to detect flicker or movement</td>
<td>Males and females age 18 years and older with normal eyes</td>
<td>Susan Garcia, COT, CRC</td>
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<tr>
<td>16.</td>
<td>Age-Related and Disease-Related Changes in the Photopic and Scotopic Full-Field and Multifocal ERGs</td>
<td>John S. Werner, PhD.</td>
<td>218967</td>
<td>National Institutes of Health</td>
<td>To learn more about how the response of the retina changes with age and a disease affecting central vision called &quot;Age-Related Macular Degeneration&quot; (AMD)</td>
<td>Males and females age 18 years and older with normal eyes or with AMD</td>
<td>Susan Garcia, COT, CRC</td>
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