Genentech Genentech Research in Ophthalmology Gary Sternberg, MD

At Genentech we focus our research and development practice on discovering and developing new medicines for unmet medical needs. The Genentech Research and Early Development pipeline has more than 30 new molecular entities in clinical development across all therapeutic areas including ophthalmology. The retina pipeline is arguably one of the strongest in the

pharmaceutical/biotechnology industry. The current retina pipeline will be discussed which will include, but is not limited to:

 \bullet Development plans for a proprietary implantable ocular device for the sustained delivery of Lucentis $\ensuremath{\mathbb{R}}$

• Overview of the development program for anti-factor D Fab fragment (AFD) that inhibits the alternative complement pathway to treat advanced dry age-related macular degeneration

 \bullet Discussion of bi-specific antibody fragment [F(ab')2] design that has the potential to be a lead future platform with multiple targets

• Development plans for the re-purposing of various commercially available and investigational compounds for the treatment of various retinal diseases

Regeneron:

Regeneron Development Overview: Focus on Ophthalmology

Michael Aberman, MD (VP of Strategy and Investor Relations)

Regeneron Pharmaceutical, Inc. is a fully integrated biopharmaceutical company that discovers and develops medicines for the treatment of serious medical conditions. Regeneron uses the proprietary VelocImmune and VelociGene technologies to produce the next generation of drug candidates for preclinical and clinical development. These technologies offer the potential to increase the speed and efficiency through which human monoclonal antibody therapeutics may be discovered and validated, thereby improving the overall efficiency of the early stage drug development activities. Based upon the Company's "Traps" fusion technology, currently marketed products include ziv-aflibercept injection for cryopyrin-associated periodic syndromes, and intravitreal aflibercept injection (IAI) for neovascular age-related macular degeneration and macular edema following central retinal vein occlusion. IAI is currently in clinical trials for the treatment of diabetic macular edema, macular edema following branch retinal vein occlusion, and neovascularization of the retina as a result of pathologic myopia. Novel targets in development for retinal disease are high affinity, fully human antibodies to angiopoietin-2 (ANG2) and platelet-derived growth factor receptor (PDGFR). Sarilumab, an antibody to the interleukin-6 receptor, is in clinical development for non-infectious uveitis.

- Regeneron discovers and develops medicines in several therapeutic areas including ophthalmology, oncology, cardiovascular disorders, and immunology.
- VelocImmune and VelociGene technologies are used to increase the speed and efficiency for discovery and validation of human monoclonal antibody therapeutics.
- In addition to vascular endothelial growth factor (VEGF), ANG2 and PDGFR are targeted for development of therapeutics for retinal diseases. Sarilumab, an antibody to the interleukin-6 receptor, is in clinical development for non-infectious uveitis.

Ohr Pharmaceutical

Squalamine Lactate Eye Drops for Topical Treatment of Posterior Segment Neovascular Disorders Irach B. Taraporewala, PhD

Squalamine Eye Drops for the Treatment of Retinal Neovascular Disorders Squalamine is a small molecule anti-angiogenic agent that inhibits multiple protein growth factors of angiogenesis including VEGF and PDGF through a unique intracellular mechanism of action. The drug had previously been tested in clinical studies for the treatment of exudative AMD using an intravenous formulation and demonstrated biological effect, gains and maintenance of visual acuity, and effect in advanced AMD eyes. Squalamine has been reformulated into an eye drop solution and in vivo studies confirm that concentrations achieved in the posterior ocular tissues are well in excess of anti angiogenic levels and consistently remain above that level on continuous administration. A Phase II, randomized, double blind, placebo controlled study is currently enrolling patients with exudative AMD and is expected to have interim data available early in the second quarter of 2014. Key takeaways from the presentation include:

- Proprietary formulation development of Squalamine has been completed
 - In vivo studies confirm that significant concentrations of Squalamine diffuse into the posterior ocular tissues
 - Consistent administration of Squalamine eye drops achieve sustained posterior segment trough level concentrations well above threshold anti-angiogenic activity levels
- A phase II, randomized, placebo controlled study for the treatment of exudative AMD is currently enrolling at 22 U.S. clinical sites, with interim results anticipated early in the second quarter of 2014
- Squalamine may have clinical utility in ophthalmic indications beyond exudative AMD

Acucela

A Developing Technology: Visual Cycle Modulation for the Potential Treatment of Retinal Diseases

Ryo Kubota, MD, PhD (Chairman, CEO & President, Acucela Inc.)

A Developing Technology: Visual Cycle Modulation for the Potential Treatment of Retinal Diseases The visual cycle is a process by which cells located in the back of the eye convert dietary vitamin A to a light-sensitive compound. The visual cycle is an extremely active process during exposure to bright light and can also produce toxic vitamin A by-products. Over time, these toxic by-products accumulate and can damage cells, resulting in decreased retinal pigment epithelial and photoreceptor function which can, in turn, compromise vision. In addition, exposure of the eye to certain types of light is known to cause photo-damage to the retina and apoptosis of photoreceptors. Also, reducing oxygen consumption during the night may be potentially beneficial to the eye by avoiding an anoxic process that can lead to retinal disease. Acucela Inc. is currently exploring the hypothesis that modifying visual cycle activity may reduce the production of toxic by-products and protect the retina against light and/or anoxic damage. This novel therapeutic approach is called visual cycle modulation (VCM). The Company's VCM-based product candidates are orally administered small molecules that have produced pre-clinical and clinical data to date, supporting visual cycle modulation and indicating the possibility that a VCM-based approach may be applied to treat retinal diseases such as age-related macular degeneration (AMD). A Phase 2b/3 clinical study is currently underway with the lead compound emixustat hydrochloride in patients with geographic atrophy associated with dry AMD (ClinicalTrials.gov identifier: NCT01802866). Key Takeaway VCM-based therapies may represent a novel treatment approach to retinal diseases, such as AMD.

Allegro Ophthalmics

Integrin Peptide Therapy: A Novel Approach to Neovascular Eye Diseases Vicken Karageozian, MD (Co-Founder & CTO, Allegro Ophthalmics, LLC)

First human demonstration of the successful use of an RGD class anti-integrin oligopeptide in wet AMD. This family of compounds is currently being developed for the treatment of wet AMD, VMA, and DME with US and International Phase 2 studies targeted to begin in late 2013. This study demonstrates the successful use of an anti-integrin oligopeptide (ALG-1001)in monotherapy in wet AMD human subjects. An average improvement in ETDRS BCVA of +8 letters in the 3.2mg group was seen in monotherapy after 3 monthly loading doses. The improvements in BCVA mirrored subfoveal anatomic improvements demonstrated by OCT CMT (average reduction in OCT CMT was 38%). The average improvement after the loading dose was sustained for at least 3 months OFF TREATMENT with some study subject sustaining their improvements in BCVA and OCT CMT to 5 months OFF TREATMENT in monotherapy.

Aerpio Therapeutics AKB-9778 for Diabetic Macular Edema: A Novel Patient Self-administered Drug Targeting the Angiopoietin/Tie2 Pathway

Joseph H. Gardner, Ph.D. (CEO)

Diabetic macular edema (DME) is a major cause of vision loss in the working age population that could increase dramatically given the emerging epidemic of diabetes. Despite major advances in treatment, particularly the development of anti-VEGF agents, there are many patients that are treatment refractory or require frequent intravitreal injections. Thus, new agents addressing novel pathways are urgently needed. Aerpio Therapeutics is developing AKB-9778, a novel small molecule that targets VE-PTP (vascular endothelial protein tryrosine phosphatase) to activate the Tie2 pathway in vascular endothelial cells restoring normal vascular permeability and blocking pathologic angiogenesis. In contrast to anti-VEGF agents and steroids, AKB-9778 is administered by daily subcutaneous injections. In preclinical retinopathy models, AKB-9778 markedly reduced vascular leak and neovascularization. In preclinical safety studies and in a single ascending dose study in healthy volunteers, AKB-9778 was well tolerated with no safety signals to preclude advancing to DME patients. Aerpio is currently exploring safety and pilot efficacy of AKB-9778 in a multiple ascending dose study in preclinical models and early clinical trial data will be discussed.

- AKB-9778 is a first in class small molecule Tie2 activator for diabetic macular edema Consistent with Tie2 activation, AKB-9778 markedly reduces vascular leak and neovascularization in preclinical retinopathy models
- A novel mechanism of action and route of administration that avoids intravitreal injection, position AKB-9778 to address the unmet need in DME either alone or in combination with current therapies

Envision Diagnostics Inc. Automating the Eye Exam With Binocular OCT Alexander Walsh, MD

Envision Diagnostics is developing an automated, binocular, OCT system capable of performing a comprehensive eye exam in a clinic waiting room, pharmacy, school or even home. By combining the power of OCT, advanced hardware and optical technology and the versatility of software applications, Envision's binocular system should be able to perform the functions of dozens of diagnostic instruments without the need for technicians or operators. Like an ATM, this should allow eye exams to be conducted nearly anytime and anywhere. It may also usher in an era of true teleophthalmology where completely digital, comprehensive eye exams can be stored and shared by eye care providers around the world. And in a time when our healthcare system needs it the most, we expect that this technology will:

- Lower the cost
- Increase the efficiency
- Improve the quality of eye care around the world

Case Western Reserve University

A Novel Device for Noninvasive Measurement of Ocular Blood Flow Suber S. Huang, MD, MBA

Together with NASA, we have developed a hand-held, trans-scleral, noninvasive laser Doppler probe that is being used to assess retinal and choroidal blood flow in ROP. If this technology successfully differentiates between vascularized and avascular retinal tissue, we may reduce the need for timeintensive ROP examinations, reduce morbidity for infants, and improve the cost efficiency of ROP surveillance programs. The ability to noninvasively and inexpensively measure blood flow will further permit the development of quantifiable and clinically significant biomarkers for all peripheral vascular diseases of the eye and for a myriad of systemic conditions related to blood flow.

Bausch + Lomb Driving Innovation in Retina at Bausch + Lomb Calvin Roberts, MD

At Bausch + Lomb, we have a 160 year history of developing innovative products for our customers. Today, we remain more committed than ever to developing and delivering products that will have a meaningful impact on doctors and their patients. It is our goal to grow our product pipeline of retinal solutions by partnering with the doctors we serve to develop differentiable solutions to retinal conditions. We are actively seeking business development opportunities, and we have become a partner of choice for small biotech and device companies looking to bring their innovations to market. This discussion will address the Bausch + Lomb approach to developing retinal products and review some of the innovations that are in our current portfolio and pipeline. Takeaways:

- Bausch + Lomb is an active, committed innovator in developing solutions to retinal conditions
- Bausch + Lomb is seeking to quickly grow its pipeline of retinal solutions through collaboration with doctors, biotech companies and device companies
- Bausch + Lomb has developed, and continues to develop, innovative retinal products that span its three business segments: Surgical, Pharmaceutical, and Vision Care

Second Sight

The Argus II Retinal Prosthesis System: A Treatment Option in the US for Severe Retinitis Pigmentosa, Brian Mech, PhD, MBA (Vice President of Business Development)

The Argus II Retinal Prosthesis System was recently approved for commercial use in the US by the FDA. This represents the worlds' first and only approved retinal prosthesis for the treatment of patients with severe to profound retinitis pigmentosa. The system works by providing electrical stimulation of the retina to induce visual perception, and is set to launch later in 2013. In this presentation we will summarize:

- Indications/ contraindications
- Clinical results
- Treatment Pathway
- System features
- Current launch status and future plans

ArcticDx

Genome-Directed AREDS Vitamin Therapy Improves Outcomes, Gregory Hines (President and CEO, ArcticDx Inc)

AREDS Ocular Vitamins with Zinc are the standard of care for patients who present with AREDS Category 3 age-related macular degeneration. Recent advances in the understanding of AMD genetics now show that the efficacy of AREDS Ocular Vitamins containing Zinc and Antioxidants is linked to two genes, Complement Factor H (CFH) and ARMS2.

A prospective genetic analysis of the AREDS study was performed and is currently 'In Press'. Two variants in the Complement Factor H gene affect the performance of Zinc in patients with Intermediate Dry AMD. For patients in the AREDS study, with a high-risk CFH genotype, Zinc was deleterious. For patients with no CFH risk alleles zinc was the best treatment. An ARMS2 insertion/deletion variant had a similar effect on antioxidants (Vitamin C, Vitamin E, Beta Carotene - Carotenoid).

A genetic analysis for all AREDS Category 3 patients is recommended to optimize visual outcomes and minimize the potential negative impact of zinc and antioxidant containing formulations. These proprietary genetic analyses are available for doctors through Arctic Medical Laboratories (www.macularisk.com).

ThromboGenics

Pioneering Research & Development for Ophthalmic Disorders Keith Steward, MD (ThromboGenics Global Head of Medical Affairs)

ThromboGenics is an integrated biopharmaceutical Company focused on developing and commercializing innovative ophthalmic and oncology medicines. The Company's lead product, JETREA® (ocriplasmin), was launched in the US on January 14, 2013 through the Company's own commercial organization. JETREA® was granted approval by the US FDA for the treatment of symptomatic VMA in October 2012 and is the first drug to be approved for this important indication. ThromboGenics signed a strategic partnership with Alcon (Novartis) for the commercialization of JET REA® outside the United States in March 2012.

Under the terms of the agreement, ThromboGenics has already received €75 million in upfront and milestone payments. It is eligible to receive up to a total of €375 million. In addition, the Company will

receive significant royalties from Alcon's net sales of JETREA® outside the US. A further important part of this strategic alliance is that ThromboGenics and Alcon will share the costs equally of developing JETREA® for a number of new vitreoretinal indications.

On March 15, 2013, the European Commission approved JET REA® in the European Union for the treatment of vitreomacular traction (VMT), including when associated with macular hole of diameter less than or equal to 400 microns. VMT, which in the US is referred to as symptomatic VMA, is an age-related progressive, sight-threatening condition that may lead to visual distortion, decreased visual acuity and central blindness as a result of a macular hole. The approval and launch of JET REA® in Europe triggers a €90 million payment to ThromboGenics, €45 million for approval and €45 million for first sale of the product.

ThromboGenics is also exploring anti-PIGF (Placental Growth Factor), formerly referred to as TB-403, for the treatment of ophthalmic and oncology indications.

Central to ThromboGenics achieving its corporate goals is pioneering research and development, which has played a crucial role in ThromboGenics' success to-date. Today, the Company has highly qualified research personnel focused on developing new treatments for both ophthalmic and cancer indications.

As part of its corporate evolution, ThromboGenics has been building a team consisting of scientists, sales and marketing experts with deep commercial ophthalmic and retina experience. Investing in this capability is designed to generate the best returns for our shareholders and to place the Company in a strong position to achieve its goal of becoming a major global ophthalmic player. ThromboGenics is headquartered in Leuven, Belgium, and has offices in Iselin, NJ (US) and Dublin,

Ireland. The Company is listed on the NYSE Euronext Brussels exchange under the symbol THR.

Oraya Therapeutics

Rays of Hope: The Challenge of Innovation in Wet AMD Therapy and Beyond Jim Taylor (President & CEO, Oraya Therapeutics)

Oraya Therapeutics is a privately held company that has developed an innovative and non-invasive therapy for wet age-related macular degeneration, or wet AMD. Oraya is dedicated to advancing the treatment of wet AMD through the development and commercialization of the Oraya Therapy, which utilizes a low-voltage, stereotactic, radiosurgical device designed specifically for treatment in an outpatient setting. Oraya Therapy delivers a precise dose of radiation non-invasively to the macula using an automated positioning system, a proprietary localizing algorithm, and a novel methodology for eye stabilization and tracking.

The INTREPID study demonstrated that a patient population previously treated with anti-VEGF for up to three years experienced a 32% reduction of injections with substantially drier retinas following the Oraya Therapy compared to the control group at twelve months. Twenty-five percent of Oraya Therapy patients needed no further injections and mean visual acuity of these patients was maintained over one year.

Furthermore, those patients with persistent significant macular edema, minimal fibrosis, and CNV size \leq 4 mm had a 54% reduction in injections and nearly seven letters of vision superiority as compared to the control group. INTREPID results showed that this population had a 33% chance of needing no further injections, compared with 0% chance of no injections using anti-VEGF alone.

ZyDoc

Dictation for EHR Data Capture and Analytics James Maisel, MD

MediSapien is an enterprise-class web-based platform for conversion of unstructured text into fully coded structured data. MediSapien accepts dictation or text from transcription vendors, legacy data and EHRs. The fully coded structured output, including ICD-10, is suitable for insertion into EHRs and facilitates interoperability. MediSapien also performs computer-assisted coding (CAC) for revenue cycle management companies and data mining optimized for health data analytics. The MediSapien platform supports independent application developers. -Dictate to populate your EHR with structured data and text -Text can be mined for analytic reporting -Text can be converted to ICD-10 for revenue cycle management -legacy unstructured text or semi-structured EHR data can be converted to Stage II EHR structured data.