Dear Colleagues, Friends, and Guests,

Welcome to the 25th Anniversary Alumni Scientific Symposium and Scientific Retreat of the Department of Molecular and Human Genetics at the Baylor College of Medicine. This event has been a long awaited celebration of the four decades of history and achievements spanned by our organization, starting from the original faculty recruitments to a nascent concept of medical genetics to the most prominent Department in medical, human, and model organism genetics today. The genetic activities began in their current form at Baylor College of Medicine in 1971 when Drs. Caskey and Beaudet were recruited to Houston from the National Institutes of Health. In the early years, activities were based in sections of genetics in the Departments of Medicine and Pediatrics. Over the 40 years since the start of genetics activities, there have been many important developments most notable being the creation of the Institute for Molecular Genetics as a departmental equivalent in 1985. The name of the unit was changed to the Department of Molecular and Human Genetics (DMHG) in 1994. This was also the occasion for major new institutional commitments of space and funds on the part of Baylor College of Medicine, and there has been enormous growth of the Program since the change to department-like status in 1985. From the beginning, an integration of basic, translational, and clinical research with clinical training and service in medical genetics and laboratory diagnostic medicine has served as a national model of genetic activities at the institutional level. In developing this model, the environment has facilitated the training of physician and scientists who have gone on to leadership positions both locally, nationally, and internationally. As many of you know, this celebration has been in the planning for over three years and has overcome both natural (Hurricane Ike) and man-made disasters (the national and local financial meltdown)! We are glad that the event has finally arrived in a year of successes for both Baylor and the Department. The Historical Timeline documents key organizational landmarks that have made the Department what it is today. Most importantly, it has been the intellectual capital and generosity from the leadership, faculty, students, and staff that have and continue to make the Department a truly unique place. One metric of this success is of course the growth in faculty numbers and NIH funding. The best measures, we think, are the transformative scientific and medical discoveries that have come from the Department, and the ranks of prominent genetic leaders, scientists, and physicians that have been populated by our alumni trainees and faculty. We recognize this history by welcoming back alumni guests to our Alumni Scientific Symposium and celebrate the present and future with our annual 2012 Scientific Retreat.

Sincerely,

Brendan Lee, M.D., Ph.D.  Arthur L. Beaudet, M.D.
Organizing Committee  Chairman
ALUMNI SCIENTIFIC SYMPOSIUM
Monday, January 30, 2012

8:00am  Breakfast
         Brendan Lee, MD, PhD

9:00 – 10:30am  Symposium Session I, Moody II
   Allan Bradley, PhD - 13 Years In MHG, Lucky For Me
      Wellcome Trust Sanger Centre
   Markus Grompe, MD - Cell Therapy for the Liver
      Oregon Health & Science University
   Vicki Lundblad, PhD
      Salk Institute
         Moderator, Brendan Lee, MD, PhD

10:30 – 10:45am  Break

11:00 – 12:30pm  Symposium Session II, Moody II
   Mark Kay, MD, PhD – Transcription Based RNAi Therapeutics
      Stanford University School of Medicine
   Evan Eichler, PhD – Dynamic Mutations and Copy Number Variation
      University of Washington School of Medicine
   Gerard Karsenty, MD, PhD – The Pathogenesis of Obesity-Associated
      Asthma
      Columbia University
         Moderator, Huda Zoghbi, MD

12:30 – 1:30pm  Lunch and video appointments

2:00 – 3:30pm  Symposium Session III, Moody II
   Nicholas Katsanis, PhD – Modeling the Morbid Human Genome
      Johns Hopkins University School of Medicine
   Jeffrey Chamberlain, PhD – Muscular Dystrophy, PCR and Life in the
      Caskey Lab
      University of Washington School of Medicine
   Edward McCabe, MD, PhD – Shifting Paradigms: From Genes to
      Systems to Society
      University of Colorado, Denver
         Moderator, Richard Gibbs, PhD

3:30 – 3:45pm  Break

4:00 – 5:30pm  Symposium Session IV, Moody II
   Robert Nussbaum, MD - Genetic Insights into Parkinson Disease
      University of California, San Francisco
   Andrea Ballabio, MD - The Transcriptional Control of Cellular Clearance
      and Energy Metabolism
      TIGEM Italy
   Philippe Soriano, PhD - A Tale Of Three Coasts: Untangling The
      Gordian Knot
      Mount Sinai School of Medicine
         Moderator, Hugo Bellen, DVM, PhD

5:30 – 6:30pm  Break and Video Appointments

6:30 – 8:30pm  Dinner and Keynote speeches, Moody I
   Arthur Beaudet, MD and C. Thomas Caskey, MD

8:45 – 1:00am  Party, Floral Ballroom
DEPARTMENT SCIENTIFIC RETREAT
Tuesday, January 31, 2012

7:30 - 8:20 am  Continental Breakfast
8:30 - 10:30 am  Oral Session I, Moody II
Daryl Scott, MD, PhD; Trey Westbrook, PhD; Meng Wang, PhD; Jaime Williams (Bertuch lab); Amanda Rosewell (Phil Ng lab); Brigitta Wastuwidyaningtyas (Jade Wang lab);
Moderator, Jade Wang, PhD

10:30 - 10:40 am  Break
10:45am - 12:15 pm  Oral Session II, Moody II
Hugo Bellen, DVM, PhD; David Nelson, PhD; Beatriz Santillan, (Wilson lab); Ruchi Masand (Graham lab)
Moderator, Greg Ira, PhD

12:30pm  Lunch
1:30 - 4:00 pm  Free Time and Video Appointments
4:00 - 6:00 pm  Poster Session I, Floral Ballroom
Wine, Beer and Snacks

6:00 - 7:00 pm  Dinner, Moody I
7:00 - 8:35 pm  Oral Session III, Moody II
Graeme Mardon, PhD; Ben Arenkiel, PhD; Hitisha Zaveri (Daryl Scott lab); Claudia Gonzaga-Jauregui (Lupski lab); Jia Peng (Matzuk lab)
Moderator, Antony Rodriguez, PhD

9:00pm - 12:00am  Skits

Wednesday, February 1, 2012

7:30 - 8:30 am  Continental Breakfast
8:45 - 10:45 am  Oral Session IV, Moody II
Martin Matzuk, MD, PhD; Eric Boerwinkle, PhD; Jade Wang, PhD; Adithya Raghavan (Craigen lab); Zach Zalewski (Nelson lab); Tyler Beck (Daryl Scott lab);
Moderator, Christophe Herman, PhD

10:45 - 12:45 am  Poster Session II, Floral Ballroom
11:30 pm  Pick up boxed lunches during poster session, Moody I
12:45 - 1:00 pm  Skit and paper awards, Moody II
David Nelson, PhD and Brendan Lee, MD, PhD
1:00 pm  Parting Comments, Moody II
Arthur Beaudet, MD
Alumni Speaker Biographies

**Alumni Speakers**

**Allan Bradley, Ph.D.**  
Professor and Director Emeritus,  
Wellcome Trust Sanger Institute  
Dr. Bradley began as Assistant Professor in 1987 at Baylor. He was a HHMI Investigator and departed in 2000 to become the Director of the Sanger Institute.

**Markus Grompe, M.D.**  
Professor, Department of Molecular and Medical Genetics and  
Ray Hickey Chair and Director of the Papé Family Pediatric Research Institute  
Oregon Health Sciences University  
Dr. Grompe was a postdoctoral fellow in the laboratory of Dr. Thomas Caskey and clinical genetics fellow at Baylor from 1987-1991.

**Vicki Lundblad, Ph.D.**  
Professor, Molecular and Cellular Biology Laboratory  
Salk Institute for Biological Studies  
Dr. Lundblad was faculty in the Department from 1991-2006.

**Mark Kay, M.D., Ph.D.**  
Dennis Farrey Family Professor  
Departments of Pediatrics and Genetics, Vice Chair for Research (Dept of Pediatrics)  
Stanford University School of Medicine  
Dr. Kay was a pediatrics resident, medical genetics fellow and postdoctoral fellow with Dr. Savio Woo at Baylor from 1987-1993.

**Evan Eichler, Ph.D.**  
Professor, Department of Genome Sciences and Investigator HHMI  
University of Washington  
Dr. Eichler was a graduate student with Dr. David Nelson and received his PhD from the Department in 1995.

**Gerard Karsenty, M.D.**  
Professor and Chair, Departments of Genetics and Development  
Columbia University Medical Center  
Dr. Karsenty was faculty in the Department from 1998 to 2006.

**Nicholas Katsanis, Ph.D.**  
Brumley Professor, Departments of Cell Biology and Pediatrics  
Duke University Medical Center  
Dr. Katsanis was a postdoctoral fellow and junior faculty with Dr. James Lupski from 1997-2004.

**Jeffrey Chamberlain, Ph.D.**  
McCaw Endowed Chair in Muscular Dystrophy and Professor, Departments of Neurology, Medicine, and Biochemistry  
University of Washington  
Dr. Chamberlain was a postdoctoral fellow in the lab of Dr. Thomas Caskey.

**Edward McCabe, M.D., Ph.D.**  
Executive Director Linda Crnic Institute for Down Syndrome, Anna and John J Sie Endowed Chair in Down Syndrome Research and Clinical Care, and Professor, Department of Pediatrics  
University of Colorado School of Medicine  
Dr. McCabe was recruited to the Baylor in 1986 to direct the Robert J Kleberg, Jr. Clinical Genetics Center, and became vice chair of the Institute. He also established the IDDRC at Baylor and departed in 2004 to become Executive Chair of Pediatrics at UCLA.
Alumni Speaker Biographies

**Robert Nussbaum, M.D.**
Holly Smith Professor of Medicine and Chief, Division of Medical Genetics in the Department of Internal Medicine
University of California San Francisco
Dr. Nussbaum was at Baylor from 1978-1984 and was a postdoctoral research fellow in Dr. Thomas Caskey's lab, and a Clinical Fellow in Medical Genetics. He was Associate Investigator in the HHMI and Assistant Professor of Medicine when he left in 2004.

**Andrea Ballabio, M.D.**
Director, Telethon Institute of Genetics and Medicine (TIGEM) and Professor of Medical Genetics at the Federico II University of Naples, Italy
Dr. Ballabio was in the Institute of Molecular and Human Genetics from 1989 to 1994, first as a post-doctoral fellow in Dr. Thomas Caskey's lab, and then faculty in the Department.

**Philippe Soriano, Ph.D.**
Professor, Department of Developmental and Regenerative Biology, Department of Oncological Sciences, and Associate Director, Tisch Cancer Institute
Mount Sinai School of Medicine
Dr. Soriano was faculty in the Department from 1987-1993.
1971
Dr. Caskey is recruited to Internal Medicine to head Medical Genetics

1973
Dr. Beaudet is recruited to Pediatrics

1976
Medical genetics clinical training program begins

1978
Cytogenetics Referral Laboratory and Biochemistry Laboratory are established

1984
BCM Executive Faculty approves creating an Institute of Molecular Genetics

1985
Dr. Caskey is appointed Director of the Institute of Molecular Genetics

1987
The Ph.D. program in Genetics is established

1990
The training grant begins for the Ph.D. program

1993
BCM Executive Faculty approves advancing Genetics to Department status

1994
Dr. Caskey leaves BCM and accepts a position at Merck

1995
Dr. Beaudet is named interim Chairman

1996
Human Genome Sequencing Center (HGSC) is established

1997
Dr. Beaudet is appointed Chairman

1999
HGSC is chosen as one of three sites from the pilot program to complete the Human Genome Project

2003
DNA Diagnostic, Cytogenetics, and Biochemical Laboratories combine to become the Medical Genetics Laboratories

2004
Chromosomal Microarray Analysis is officially launched at the BCM Medical Genetics Laboratories

2011
The Cancer Genetics Laboratory and the Whole Genome Laboratory are established
ACKNOWLEDGEMENTS

Lisa Folloder for coordination of the Anniversary Gala, Alumni Scientific Symposium, and Scientific Retreat

Chad Shaw and his laboratory staff Pavel Zuloaga-Zamora for developing the retreat website and compiling the abstract book; Mitchell Rao for his contributions to the website database.

Brendan Lee for organizing the Anniversary Gala and the Alumni Scientific Symposium

Jue D. Wang for organizing the Scientific Retreat Program

David Nelson for organizing the Skit Competition


Ruth SoRelle for Anniversary Video and History Project

Amy Wallis for Anniversary History Project and Timeline

Ayelet Erez, Sandesh Nagamani, Zhechao Ruan, and Brian Dawson for the Anniversary Logo

William Butler for historical notes on the Department

All alumni, current faculty, fellows, students and staff who participated in this retreat and over 25\(\times^{3}\) years of success in science and medicine at BCM MHG!