

# CHRONOLOGICAL SUMMARY

## THURSDAY MORNING, 8 APRIL

### REGISTRATION

Thursday, 8 April  
BRC Building

7:30 am - Noon  
Prefunction Space

### SPECIAL TOPIC SYMPOSIUM: NUCLEAR RECEPTORS AND CO-REGULATORS: MECHANISMS AND TRANSLATIONAL POTENTIAL IN CANCER: PART I

Thursday, 8 April  
BRC Building

8:00 am - 12:30 pm  
Room: 103

8:00 WELCOME AND INTRODUCTIONS

8:10 O'Malley, Bert W. (Baylor College of Medicine)  
THE ROLE OF COACTIVATORS IN PHYSIOLOGY AND DISEASE

8:40 Tsai, Sophia (Baylor College of Medicine)  
THE ROLE OF COUP-TFII, AN ORPHAN NUCLEAR RECEPTOR, IN TUMOR  
GROWTH AND TUMOR METASTASIS

9:05 Tsai, Ming-Jer (Baylor College of Medicine)  
COUP-TFII IN ENERGY METABOLISM AND CELL FATE DETERMINATION OF  
MESENCHYMAL STEM CELLS

9:30 DeMayo, Francesco (Baylor College of Medicine)  
IN VIVO ANALYSIS OF PROGESTERONE RECEPTOR SIGNALING IN THE MOUSE  
UTERUS

9:55 Li, Qin (Baylor College of Medicine), Shu Wang (Baylor College of Medicine), Shao-Qing Kuang  
(Baylor College of Medicine), Arthur Chung (Baylor College of Medicine), Lan Liao (Baylor  
College of Medicine), and Jianming Xu (Baylor College of Medicine)  
USING MOUSE MODELS TO DEFINE THE ROLES OF THE SRC FAMILY IN BREAST  
AND PROSTATE CANCER

10:20 BREAK

10:50 Gustafsson, Ja-Åke (Baylor College of Medicine)  
ESTROGEN RECEPTOR BETA - A POTENTIAL TARGET FOR ANTI-CANCER DRUGS

11:15 Weigle, Nancy (Baylor College of Medicine)  
TARGETING ANDROGEN RECEPTORS IN ANDROGEN DEPENDENT AND  
ANDROGEN INDEPENDENT PROSTATE CANCER

11:40 Li, Wei (Baylor College of Medicine)  
A GENOMIC VIEW OF EPIGENETIC AND TRANSCRIPTION REGULATION: A CASE  
STUDY ON THE MOLECULAR MECHANISMS OF PROSTATE CANCER  
PROGRESSION

12:05 Fuqua, Suzanne (Baylor College of Medicine)  
NOVEL MECHANISMS OF HORMONE RESISTANCE IN BREAST CANCER

**SPECIAL TOPIC SYMPOSIUM: BIOLOGICAL NETWORKS**

Thursday, 8 April  
BRC Building

8:00 am - 12:40 pm  
Room: 287

Session Chair: Michael Deem (Rice University)

8:00 WELCOME AND INTRODUCTION

8:20 States, David (University of Texas, Houston, Health Sciences Center)  
QUANTITATIVE PROTEOMICS OF COMPLEX CELLULAR NETWORKS

8:35 Weinstein, John (Anderson Cancer Center)  
TBA

9:00 Ashcroft, Felicity (Baylor College of Medicine), Justin Newburg (Baylor College of Medicine), and  
Michael Mancini (Baylor College of Medicine)  
MULTI-PARAMETRIC HIGH CONTENT ANALYSIS OF ESTROGEN RECEPTOR  
FUNCTIONS REVEALS UNIQUE BIOLOGICAL RESPONSE FINGERPRINTS

9:25 Ram, Prahlad (M. D. Anderson Cancer Center)  
SYSTEMS BASED ANALYSIS OF CANCER CELL NETWORKS

9:50 Bennett, Matthew (Rice University), Wyming Pang (Institute for Systems Biology), Natalie Ostroff  
(UC San Diego), Bridget Baumgartner (UC San Diego), Sujata Nayak (UC San Diego), Lev  
Tsimring (UC San Diego), and Jeff Hasty (UC San Diego)  
METABOLIC GENE REGULATION IN A DYNAMICALLY CHANGING  
ENVIRONMENT

10:15 BREAK

10:30 Cooper, Tim (University of Houston)  
COMPETITION, EPISTASIS AND EVOLVABILITY IN EXPERIMENTALLY EVOLVED  
POPULATIONS OF *E. COLI*

10:55 He, Jiankui (Rice University) and Michael Deem (Rice University)  
EVOLUTION OF MODULARITY IN BIOLOGICAL NETWORKS

11:10 Bassler, Kevin E. (University of Houston), Yudong Sun (University of Houston), and Timothy F.  
Cooper (University of Houston)  
ROBUST HIERARCHICAL COMMUNITY DETECTION IN GENETIC EXPRESSION  
DATA

- 11:35 Gunaratne, Gemunu (University of Houston), Lars Seeman (University of Houston), and Andrei Torok (University of Houston)  
A NEW FORMULATION OF GENE NETWORKS
- 12:00 Nevozhay, Dmitry (UT M. D. Anderson Cancer Center), Rhys Adams (UT M. D. Anderson Cancer Center), and Gábor Balázi (UT M. D. Anderson Cancer Center)  
CONTROLLING CELLULAR MEMORY WITH SYNTHETIC GENE CIRCUITS
- 12:25 Ray, Christian (Rice University) and Oleg Igoshin (Rice University)  
GENE ORGANIZATION IN BACTERIAL CHROMOSOMES GUIDES POST-TRANSLATIONAL NETWORK DYNAMICS

**SPECIAL TOPIC SYMPOSIUM: POLYMER NANOCOMPOSITES: PART I**

Thursday, 8 April  
BRC Building

8:00 am - Noon  
Room: 280

Session Chairs: Luyi Sun (Texas State University) and Yutong Li

- 8:00 Beall, Gary (Texas State University-San Marcos)  
A HISTORICAL, TECHNICAL AND COMMERCIAL PERSPECTIVE OF POLYMER NANOCOMPOSITES
- 8:30 Guo, Bing (Texas A & M University)  
TBA
- 9:00 Li, Yu-Chin (Texas A&M University), Jessica Schulz (Texas A&M University), Sarah Mennan (Texas A&M University), and Jaime C. Grunlan (Texas A&M University)  
ANTI-FLAMMABLE THIN FILM COATINGS FOR FOAM AND FABRIC
- 9:15 Priolo, Morgan (Texas A&M University), Daniel Gamboa (Texas A&M University), Aaron Ham (Texas A&M University), and Jaime Grunlan (Texas A&M University)  
OXYGEN BARRIER OF NANO BRICK WALL THIN FILMS
- 9:30 BREAK
- 10:00 Feller, Jean-Francois (European University of Brittany), Mickaël Castro (European University of Brittany), and Bijandra Kumar (European University of Brittany)  
SMART CONDUCTIVE POLYMER NANOCOMPOSITES FOR SENSING APPLICATIONS
- 10:30 Sun, Luyi (Texas State University-San Marcos), Liu Jia (Texas A&M University), Kirumakki Sharath (Texas A&M University), Eric D. Schwerdtfeger (Texas A&M University), Robert J. Howell (Texas A&M University), Khalid Al-Bahily (Texas A&M University), Stephen A. Miller (Texas A&M University), Abraham Clearfield (Texas A&M University), and Hung-Jue Sue (Texas A&M University)  
DESIGNING NANOPLATELETS FOR THE PREPARATION OF POLYMER NANOCOMPOSITES

11:00 Zhu, Jiahua (Lamar University), Wei Suying (Lamar University), Chen Xuelong (Lamar University), Dan Rutman (Lamar University), Amar B. Karki (Louisiana State University), David P. Young (Louisiana State University), and Zhanhu Guo (Lamar University)  
ELECTROSPUN POLYIMIDE NANOCOMPOSITE FIBERS REINFORCED WITH CORE-SHELL STRUCTURED Fe@FeO NANOPARTICLES

11:15 Kim, Yeon Seok (Texas A & M University), Zachary Levin (Texas A & M University), Dasaroyong Kim (Texas A & M University), Jaime Grunlan (Texas A & M University), and Choongho Yu (Texas A&M University)  
THERMOELECTRIC BEHAVIOR OF SEGREGATED NETWORK POLYMER NANOCOMPOSITES

**TOPICAL LECTURE: THE GHOST MATERIALIZES. HOW THE BRAIN'S THREE MINDS THINK**

Thursday, 8 April  
BRC Building

10:00 am - 11:00 am  
Room: 284

10:00 Klemm, William (Texas A & M University)

**TOPICAL LECTURE: TERAHERTZ RADIATION: AN INTRODUCTION AND OVERVIEW OF LATE BREAKING FINDINGS OF THE LAST SPECTRAL BAND OF THE ELECTROMAGNETIC SPECTRUM**

Thursday, 8 April  
BRC Building

11:15 am - Noon  
Room: 284

11:15 Wilmink, Gerald J. (Air Force Research Laboratory)

**THURSDAY AFTERNOON, 8 APRIL**

**REGISTRATION**

Thursday, 8 April  
BRC Building

Noon - 5:30 pm  
Prefunction Space

**SPECIAL TOPIC SYMPOSIUM: POLYMER NANOCOMPOSITES: PART II**

Thursday, 8 April  
BRC Building

1:00 pm - 4:00pm  
Room: 280

Session Chairs: Jean-Francois Feller (European University of Brittany), and Zhanhu Guo (Lamar University)

1:00 Guo, Zhanhu (Lamar University)  
CONDUCTIVE POLYMER AND ITS NANOCOMPOSITES

1:30 Hanna, Paul (Baker Hughes)  
LOW MOLECULAR WEIGHT POLYPROPYLENE TECHNOLOGY

- 2:00 Sukhonosova, Galina (Texas A & M University) and Jaime Grunlan (Texas A & M University)  
ANTIMICROBIAL THIN FILM ASSEMBLIES CONTAINING QUATERNARY  
AMMONIUM SURFACTANTS
- 2:15 Wei, Ding (Lamar University), Suying Wei (Lamar University), Zhu Jiahua (Lamar University),  
Xuelong Chen (Lamar University), Dan Rutman (Lamar University), and Zhanhu Guo (Lamar  
University)  
ELECTROSPUN POLY (VINYL ALCOHOL) NANOFIBERS
- 2:30 BREAK
- 3:00 Sun, Liangfeng (University of Texas - Austin), Wei Jiang (University of Texas - Austin), and  
Jonathan Chen (University of Texas - Austin)  
NANO PARTICLE/CELLULOSE COMPOSITE FIBERS GENERATED FROM IONIC  
LIQUID SOLUTIONS
- 3:30 Yang, You-Hao (Texas A&M University), Frank Malek (Texas A&M University), and Jamie C.  
Grunlan (Texas A&M University)  
INFLUENCE OF DEPOSITION TIME ON GROWTH AND BARRIER BEHAVIOR OF  
CLAY-BASED THIN FILM ASSEMBLIES
- 3:45 Mavinakuli, Pallavi (Lamar University)  
CONDUCTIVE POLYMER NANOCOMPOSITES
- 4:00 Park, Yong Tae (Texas A&M University), Aaron Ham (Texas A&M University), and Jaime  
Grunlan (Texas A&M University),  
HIGHLY TRANSPARENT AND CONDUCTIVE CARBON NANOTUBE THIN FILM  
ASSEMBLIES
- 4:15 Chen, Xuelong  
ELECTROSPUN MAGNETIC FIBRILLAR POLYSTYRENE NANOCOMPOSITES  
REINFORCED WITH NICKEL NANOPARTICLES

**SPECIAL TOPIC SYMPOSIUM: MICRORNAS IN DEVELOPMENT AND DISEASE**

Thursday, 8 April  
BRC Building

1:00 pm - 6:00 pm  
Room: 284

Session Chair: Preethi Gunaratne (University of Houston)

- 1:00 INTRODUCTION AND WELCOME
- 1:10 Gunaratne, Preethi H. (University of Houston)  
A FUNCTIONAL GENOMICS PLATFORM FOR IDENTIFICATION AND VALIDATION  
OF TUMOR SUPPRESSOR MICRORNAS FROM THE CANCER GENOME ATLAS  
(TCGA) CONSORTIUM DATA
- 1:35 Matzuk, Martin M. (Baylor College of Medicine)  
SMALL RNAS IN THE FEMALE REPRODUCTIVE TRACT OF MAMMALS

- 2:00 Anderson, Matthew L. (Baylor College of Medicine)  
MICRORNAS AS THERAPEUTIC TARGETS IN FEMALE REPRODUCTIVE TRACT  
CANCERS
- 2:25 Ludwig, Andrew (Baylor College of Medicine), Rajib Ghosh (University of Houston), Zaowen  
Chen (Baylor College of Medicine), Cristian Coarfa (Baylor College of Medicine), Preethi  
Gunaratne (University of Houston), and Jason Shohet (Baylor College of Medicine)  
A GENOME-WIDE SCREEN FOR MYCN REGULATED MICRORNAS WITH CHIP-SEQ  
REVEAL ONCOGNIC AND TUMOR SUPPRESSOR MICRORNAS IN NEUROBLASTOMA
- 2:45 BREAK
- 3:00 Lee, Soo-Kyung (Baylor College of Medicine)  
THE ROLE OF AN INTRONIC MICRORNA FAMILY IN THE GENE REGULATORY  
NETWORK DURING SPINAL CORD DEVELOPMENT PROGRAMS OF 3' UTR  
VARIATION IN NORMAL AND TRANSFORMED MAMMALIAN CELLS
- 3:25 Neilson, Joel (Baylor College of Medicine)  
GLOBAL PATTERNS OF 3' UNTRANSLATED REGION DYNAMICS IN CELLULAR  
ACTIVATION AND TRANSFORMATION
- 3:50 Cooper, Tom (Baylor College of Medicine)  
PROGRAMS OF 3' UTR VARIATION IN NORMAL AND TRANSFORMED  
MAMMALIAN CELLS
- 4:10 BREAK
- 4:25 Cooney, Austin J. (Baylor College of Medicine)  
MIRNA REGULATION OF PLURIPOTENCY FACTORS
- 4:45 Schwartz, Robert J. (University of Houston)  
SERUM RESPONSE FACTOR MICROMANAGES HEART DEVELOPMENT
- 5:15 Wilmink, Gerald (Air Force Research Laboratory), Caleb L. Roth (Air Force Research  
Laboratory), Bennett L. Ibey (Air Force Research Laboratory), Norma Ketchum (Air Force  
Research Laboratory), Joshua Bernhard (Air Force Research Laboratory), Cesario Z. Cerna (Air  
Force Research Laboratory), and William P. Roach (Air Force Research Laboratory)  
IDENTIFICATION AND CHARACTERIZATION OF MICRORNAS ASSOCIATED WITH  
HYPERThERMIA-INDUCED CELLULAR RESPONSE
- 5:35 RECEPTION

**SPECIAL TOPIC SYMPOSIUM: NUCLEAR RECEPTORS AND CO-REGULATORS:  
MECHANISMS AND TRANSLATIONAL POTENTIAL IN CANCER: PART II**

Thursday, 8 April  
BRC Building

2:00 pm - 8:00 pm  
Room: 103

- 2:00 Anakk, Sayeepriyadarshini (Baylor College of Medicine), Milton J. Finegold (Baylor College of Medicine), Randy L. Johnson (MD Anderson) and David D. Moore (Baylor College of Medicine).  
BILE ACIDS AND HIPPOS
- 2:25 Qin, Jun (Baylor College of Medicine)  
MAPPING ENDOGENOUS HUMAN NR CO-REGULATOR INTERACTIONS
- 2:50 Edwards, Dean (Baylor College of Medicine)  
TBA
- 3:15 Smith, Carolyn (Baylor College of Medicine)  
THE SMRT COREPRESSOR AS A DETERMINANT OF ESTROGEN RECEPTOR  
ACTIVITY IN BREAST CANCER
- 3:40 BREAK
- 4:00 Safe, Stephen (Texas A & M University) and Syng-ook Lee (Texas A & M Health Science Center)  
TR3 (NR4A1) IS A PRO-ONCOGENIC ORPHAN NUCLEAR RECEPTOR AND A DRUG  
TARGET FOR PANCREATIC CANCER CHEMOTHERAPY
- 4:25 Webb, Paul  
TBA
- 4:50 Lonard, David (Baylor College of Medicine)  
TBA
- 5:15 Niederreither, Karen (Institute of Biosciences & Technology (IBT), Song-Chang Lin (Baylor  
College of Medicine), Dolle Pacsal (IGBMC), Lucile Ryckebusch (Université de la Méditerranée),  
Michela Nosedà (Imperial College), Stephane Zaffran (Marseille), and Michael Schneider  
(Imperial College)  
ENDOGENOUS RETINOIC ACID REGULATES CARDIAC PROGENITOR  
DIFFERENTIATION
- 5:40 Brown, Powell  
TBA
- 6:00 CONTRIBUTED SYMPOSIUM POSTERS

## THURSDAY EVENING, 8 APRIL

### **TOPICAL LECTURE: THE TALE OF THE BALL O' BUTTER AND OTHER PARABLES OF SCIENTIFIC PROFESSIONAL DEVELOPMENT**

Thursday, 8 April  
BRC Building

6:30 pm - 7:30pm  
Room: 103

6:30 Levine, Alaina G. (Quantum Success Solutions)

## FRIDAY MORNING, 9 APRIL

### **REGISTRATION**

Friday, 9 April  
BRC Building

7:30 am - Noon  
Prefunction Space

### **SPECIAL TOPIC SYMPOSIUM: DEVELOPING YOUR TEACHING AND EDUCATIONAL LEADERSHIP SKILLS: PART I**

Friday, 9 April  
BRC Building

8:30 am - Noon  
Room: 284

Session Chair: Elizabeth Nelson (Baylor College of Medicine)

8:30 Slaughter, Gayle (Baylor College of Medicine)  
FROM MENTEE TO MENTORING: PREPARING WOMEN FOR SUCCESS IN SCIENCE CAREERS

9:30 BREAK

9:45 O'Neill, Paula (University of Texas - Dental Branch)  
FINDING AND BEING A GOOD MENTOR

10:45 BREAK

11:00 Searle, Nancy (Baylor College of Medicine)  
TRICKS FOR SUCCESSFUL TEACHING IN SMALL GROUPS

### **SPECIAL TOPIC SYMPOSIUM: GENOME INSTABILITY AND TUMORIGENESIS: PART I**

Friday, 9 April  
BRC Building

9:00 am - 12:10 pm  
Room: 103

Session Chair: Pumin Zhang (Baylor College of Medicine)

9:00 Zhang, Pumin (Baylor College of Medicine), Min Li (Baylor College of Medicine) and Fang Xiao (Baylor College of Medicine)  
SENSING AND RESPONDING TO ANEUPLOIDY

- 9:30 Ke, Yuwen (University of Texas Southwestern Medical Center) and Hongtao Yu (University of Texas Southwestern Medical Center)  
A HELICASE COMPLEX RESOLVES ANAPHASE THREADS AND MAINTAINS CENTROMERE INTEGRITY
- 10:00 Rosenberg, Susan (Baylor College of Medicine)  
STRESS-INDUCED MUTAGENESIS: WHAT BACTERIA ARE TEACHING US ABOUT CANCER
- 10:30 BREAK
- 10:45 Donehower, Laurence (Baylor College of Medicine)  
HOMEOSTATIC REGULATION OF THE DNA DAMAGE RESPONSE BY THE ONCOGENIC PHOSPHATASE WIP1
- 11:15 Lin, Shiaw-Yih (University of Texas MD Anderson Cancer Center) and Guang Peng (University of Texas MD Anderson Cancer Center)  
THE ROLE OF BRIT1/MCPH1 IN CHROMATIN REMODELING, DNA DAMAGE RESPONSE, AND CANCER
- 11:45 Malkova, Anna (Indiana University-Purdue University Indianapolis), Angie Deem (Indiana University-Purdue University Indianapolis), and Chabes Andrei (Umeå University, Sweden)  
HIGHLY INACCURATE MODE OF DNA REPLICATION TRIGGERED BY DOUBLE-STRAND BREAK

**SPECIAL TOPIC SYMPOSIUM: SYNTHETIC BIOLOGY AND MOLECULAR NETWORKS**

Friday, 9 April

9:00 am - 12:30 pm

BRC Building

Room: 284

Session Chair: George Bennett (Rice University)

- 9:00 Bennett, George (Rice University)  
WELCOME AND INTRODUCTIONS
- 9:15 Fox, George  
5S rRNA AS A CARRIER FOR STABLE EXPRESSION OF SMALL RNAS
- 9:45 Bennett, Matthew (Rice University), Wyming Pang (Institute for Systems Biology), Natalie Ostroff (UC San Diego), Bridget Baumgartner (UC San Diego), Sujata Nayak (UC San Diego), Lev Tsimring (UC San Diego), and Jeff Hasty (UC San Diego)  
METABOLIC GENE REGULATION IN A DYNAMICALLY CHANGING ENVIRONMENT
- 10:15 Silberg, Jonathan  
FLUORESCENT PROTEIN REPORTERS FOR IMAGING THE NETWORKS OF IRON AND SULFUR RELAY THAT UNDERLIE METALLOCLUSTER BIOGENESIS
- 10:45 Gao, Xiaolin (University of Houston)  
TOWARDS THE NEXT GENERATION DNA SYNTHESIS TECHNOLOGY

11:15 Kavarki, Lydia (Rice University) and Heath Allison (Rice University)  
TBA

11:45 Bennett, George (Rice University)  
TBA

**SPECIAL TOPIC SYMPOSIUM: NANOTECHNOLOGY IN BIOLOGY AND MEDICINE**

Friday, 9 April

9:25 am - 12:00 pm

BRC Building

Room: 287

Session Chair: Robert Raphael (Rice University)

9:25 Raphael, Robert (Rice University)  
INTRODUCTION

9:30 Souza, Glauco (Nano 3D Biosciences, Inc.)  
3D CELL CULTURE BY MAGNETIC LEVITATION - THE BIO-ASSEMBLER

9:50 Quattrocchi, Nicoletta (University of Texas, Health Science Center at Houston), Mauro Ferrari (University of Texas, Health Science Center at Houston), and Ennio Tasciotti (University of Texas, Health Science Center at Houston)  
A "LEUKOLIKE" MULTISTAGE DELIVERY SYSTEM TO BEAT BIOLOGICAL BARRIERS

10:10 Cooper, Laurence  
DEVELOPING CLINICAL-GRADE T CELLS TO DELIVER NANO-PARTICLES

10:30 BREAK

11:00 Carpin, Laura  
T CELL-MEDIATED DELIVERY OF GOLD THERAPEUTICS

11:20 Richards-Kortum, Rebecca  
TBA

11:40 West, Jennifer  
TBA

**SPECIAL TOPIC SYMPOSIUM: ADVANCES AND IMPACT IN COMPUTATIONAL BIOLOGY**

Friday, 9 April

10:00 am - Noon BRC

Building

Room: "Library"

Session Chair: Monte Pettitt (University of Houston)

10:00 Deem, Michael (Rice University)  
VACCINE DESIGN FOR INFLUENZA

10:30 Avezedo, Ricardo (University of Houston) and Rolf Lohaus (University of Houston)  
COMPLEXITY AND ROBUSTNESS IN ARTIFICIAL CELL LINEAGES

11:00 TBA

11:30 Pettitt, Monte (University of Houston)  
FOLD OF THE UNFOLDABLE

## FRIDAY AFTERNOON, 9 APRIL

### REGISTRATION

Friday, 9 April  
BRC Building

Noon - 5:00 pm  
Prefunction Space

### SPECIAL TOPIC SYMPOSIUM: REGULATION OF EMBRYONIC AND TISSUE SPECIFIC STEM CELLS

Friday, 9 April  
BRC Building

12:00 pm - 8:00 pm  
Room: 280

12:00 WELCOME AND INTRODUCTION

12:30 Zwaka, Thomas (Baylor College of Medicine)  
CASPASES AND RONIN IN EMBRYONIC STEM CELLS

12:55 Barton, Michelle (MDACC)  
TBA

1:20 Liang, Jiancong (Baylor College of Medicine), Ma Wan (Baylor College of Medicine), Dong Yang (Baylor College of Medicine), Sung Yun Jung (Baylor College of Medicine), Jun Qin (Baylor College of Medicine), Dan Liu (Baylor College of Medicine), Thomas Zwaka (Baylor College of Medicine), and Zhou Songyang (Baylor College of Medicine).  
NANOG ASSOCIATES WITH A RING1B COMPLEX WITH OPPOSING ACTIVITIES ON H3K4 METHYLATION

1:45 BREAK

2:00 Cooney, Austin (Baylor College of Medicine)  
A NEW SIGNALING AXIS SUPPORTING PLURIPOTENT GENE EXPRESSION

2:25 Schwartz, Robert (University of Houston)  
TBA

2:50 Gunaratne, Preethi (University of Houston)  
TBA

3:15 Behringer, Richard (Baylor College of Medicine)  
TBA

3:40 BREAK

- 4:10 McCarrey, John (University of Texas - San Antonio)  
ENHANCED MAINTENANCE OF GENETIC INTEGRITY IS A FUNDAMENTAL  
PROPERTY OF PLURIPOTENT STEM CELLS
- 4:35 Nguyen, Hoang (Baylor College of Medicine)  
REGULATION OF EPIDERMAL HOMEOSTASIS
- 5:00 Dineen, Benjamin (Baylor College of Medicine)  
TBA
- 5:25 Challen, Grant (Baylor College of Medicine) and Margaret Goodell (Baylor College of Medicine)  
  
HEMATOPOIETIC STEM CELL FUNCTIONAL HETEROGENEITY
- 6:00 SYMPOSIUM POSTER SESSION

**SPECIAL TOPIC SYMPOSIUM: DEVELOPING YOUR TEACHING AND EDUCATIONAL  
LEADERSHIP SKILLS: PART II**

Friday, 9 April  
BRC Building

1:00 pm - 5:00 pm  
Room: 284

- 1:00 Nelson, Elizabeth (Baylor College of Medicine)  
NEGOTIATING SKILLS FOR ACADEMIC SUCCESS - A WORKSHOP
- 3:00 BREAK
- 3:15 McNeil, Sara (University of Houston)  
DEVELOPING A DYNAMITE PRESENTATION - LARGE GROUP TEACHING AT ITS  
BEST

**SPECIAL TOPIC SYMPOSIUM: GENOME INSTABILITY AND TUMORIGENESIS: PART II**

Friday, 9 April  
BRC Building

1:15 pm - 5:25 pm  
Room: 103

- 1:15 Fu, Guosheng (University of Texas Southwestern Medical Center) and Hui Zou (University of  
Texas Southwestern Medical Center)  
TAF-IB IS INVOLVED IN RECRUITING SHUGOSHIN TO THE KINETOCHORES
- 1:45 Gregory, Ira (Baylor College of Medicine), Chung Woo-Hyun (Baylor College of Medicine), and  
Chen Xuefeng (Baylor College of Medicine)  
MECHANISM AND REGULATION OF DOUBLE STRAND BREAK RESECTION
- 2:15 Nickoloff, Jac (Colorado State University) and Robert Hromas (University of New Mexico)  
METNASE PROMOTES RESTART OF STALLED AND COLLAPSED DNA  
REPLICATION FORKS AND PROMOTES CHROMOSOME DECATENATION

- 2:45 Li, Yi (Baylor College of Medicine)  
DEFINING THE ATM-MEDIATED BARRIER TO TUMORIGENESIS IN SOMATIC MAMMARY CELLS FOLLOWING ERBB2 ACTIVATION
- 3:15 BREAK
- 3:30 Wang, Bin (University of Texas MD Anderson Cancer Center)  
BRCA1 A COMPLEX AND DNA DAMAGE INDUCED UBIQUITIN SIGNALING
- 4:00 Pati, Debananda (Baylor College of Medicine)  
TARGETING ANEUPLOIDY FOR CANCER THERAPY: THE SEPARASE ROUTE
- 4:30 Li, Kaiyi (Baylor College of Medicine), Liang Yulong (Baylor College of Medicine), Zhang Pumin (Baylor College of Medicine), and Shiawiyh Lin (M.D. Anderson Cancer Center)  
BRIT1/MCPH1 IS ESSENTIAL FOR MITOTIC AND MEIOTIC RECOMBINATION DNA REPAIR AND MAINTAINING GENOMIC STABILITY IN MICE
- 5:00 Li, Chonghua (University of Texas Health Science Center at Houston), Zhifeng Yu (University of Texas Health Science Center at Houston), Li Wang (University of Texas Health Science Center at Houston), and Jianping Jin (University of Texas Health Science Center)  
CONTROL OF DNA REREPLICATION THROUGH THE REGULATION OF P21

## SATURDAY MORNING, 10 APRIL

### REGISTRATION

Saturday, 10 April  
BRC Building

8:00 am - Noon  
Prefunction Space

### CONTRIBUTED PAPERS: SESSION I

Saturday, 10 April  
BRC Building

9:00 am - 12:20 pm  
Room: 284

- 9:00 Lauter, Judith (Stephen F. Austin State University), Katherine Jones (Stephen F. Austin State University), Ruby Rojo (Stephen F. Austin State University), Elizabeth Mathukutty (Stephen F. Austin State University), and Brandon Scott (University of New Orleans)  
OBJECTIVE PHYSIOLOGICAL MEASURES OF RESPONSES TO VIDEO-GAME SOUND EFFECTS: AUDITORY BRAINSTEM RESPONSES, EYE MOVEMENTS, SPEECH PRODUCTION
- 9:25 Dolliver, Debra (Southeastern Louisiana University) Megan Lanier (Southeastern Louisiana University), Jordan Dinser (Southeastern Louisiana University), Veronica Wills (Southeastern Louisiana University), and Artie S. McKim (Gaylord Chemical)  
SYNTHESIS OF SINGLE GEOMETRIC ISOMERS OF OXIME ETHERS OF UNSYMMETRICAL BENZOPHENONES BY PALLADIUM-CATALYZED CROSS COUPLING REACTIONS
- 9:50 DeBoer, Gary (LeTourneau University)  
POGIL: PRELIMINARY RESULTS IN THE GENERAL CHEMISTRY CLASSROOM

- 10:15 BREAK
- 10:40 White, Judith (University of New Mexico)  
TEACHING COMMUNICATORS SCIENCE: BOON TO PUBLIC SCIENCE LITERACY OR FRUITLESS ENDEAVOR?
- 11:05 Stephanopoulos, Athena (Wichita State University)  
SCOURGE OF THE OSAGE FROM THE HAND THAT HELD THE QUILL: THE DARWINIAN SURVIVAL AND SUCCESS OF THE OSAGE NATION WHILE PLAGUED BY INDIAN REMOVAL
- 11:30 Chi, Eric (Rice University) and Scott David (Rice University)  
ROBUST STATISTICAL MODELING IN HIGH DIMENSIONS
- 11:55 Eskew, Russell (University of Texas - Austin)  
GRAVITY AND TRIG

**CONTRIBUTED PAPERS: SESSION II**

Saturday, 10 April  
BRC Building

9:00 am - 12:10 pm  
Room: 287

- 9:00 Apt, Tyner (USAF Academy), Jeffrey Nelson (USAF Academy) and Michael Brothers (USAF Academy)  
EXERCISE AS A COUNTERMEASURE TO MITIGATE TOTAL HEMOGLOBIN LOSS DURING THREE WEEKS AT SEA LEVEL AMONG MODERATE ALTITUDE RESIDENTS
- 9:25 Steinhaus, Mara (Arizona State University)  
A TWO-DIMENSIONAL SPATIAL MODEL FOR THE SPREAD OF RABIES THROUGH THREE RESERVOIR POPULATIONS IN ARIZONA
- 9:50 McWilliams, Edward (Texas A&M University)  
THE CULTIVATED FLORA, CLIMATE CHANGE AND PLANT INVASIONS
- 10:15 BREAK
- 10:30 Heuberger, Shannon (University of Arizona) and Yves Carriere (University of Arizona)  
GENE FLOW FROM GENETICALLY ENGINEERED PLANTS: THE CONTROVERSY AND A CASE STUDY
- 10:55 Van Driessche, Jeremy (USAF Academy) and Thomas Unangst (USAF Academy)  
COYOTE ABUNDANCE AND DISTRIBUTION ON THE US AIR FORCE ACADEMY (1990-2009)
- 11:20 Powell, Thomas (USAF Academy) and David Welge (USAF Academy)  
EFFECTS OF GINGER ON MOTION SICKNESS IN USAF ACADEMY SOARING CADETS

11:45 Franklin, Dustin (Arizona State University), Sal Salazar (Arizona State University), and Ryan Haines (Arizona State University)  
**HOW LARGE SHOULD A FORECAST ENSEMBLE BE FOR A COMPLEX ATMOSPHERIC FLOW??**

**SPECIAL TOPIC SYMPOSIUM: PHYSICAL BIOLOGY: FROM MEMBRANES TO MOTORS**

Friday, 9 April

9:30 am - 12:15 pm

BRC Building

Room: 280

Session Chair: Robert Raphael (Rice University)

- 9:30 Raphael, Robert (Rice University)  
**INTRODUCTION: PHYSICAL BIOLOGY FROM MEMBRANES TO MOTORS**
- 9:40 Biswal, Lisa (Rice University)  
**LATERAL PRESSURE OF SUPPORTED LIPID BILAYERS MEASURED USING MICROCANTILEVERS**
- 10:00 Slater, John (Rice University) and Wolfgang Frey (University of Texas at Austin)  
**MODULATION OF ENDOTHELIAL CELL MOTILITY BY LIMITING ADHESION SITE MATURATION**
- 10:30 Cheung, Margaret (University of Houston)  
**PROTEIN STRUCTURE, STABILITY, AND FOLDING IN THE CELL IN SILICO BIOPHYSICAL APPROACHES**
- 10:50 **BREAK**
- 11:10 Taylor, J. Nick (Rice University), Dmitrii E. Markov (University of Texas at Austin), and Christy F. Landes (Rice University)  
**DENOISING SINGLE -MOLECULE FRET TRAJECTORIES**
- 11:30 Jamison, Kenneth (Rice University), Jonathan Driver (Rice University), Arthur Rogers (Rice University), and Pamela Constantinou (Rice University), and Michael Diehl (Rice University)  
**LOAD-DEPENDENT TRANSPORT OF SUB-CELLULAR COMMODITIES BY MULTIPLE MOTOR PROTEINS**
- 11:50 Kolomeisky, Anatoly (Rice University) and Karthik Uppulury (Rice University)  
**CHANNEL-FACILITATED MOLECULAR TRANSPORT ACROSS CELLULAR MEMBRANES**

**GENERAL POSTER SESSION**

Saturday, 10 April

9:30 am - Noon

BRC Building

Room: "Hub"

- (#1) Nordine, Jeffrey (Trinity University), Amanda Chapman (International School of the Americas) and Penny McCool (STEM Academy at Lee High School)  
**RETHINKING ENERGY INSTRUCTION IN HIGH SCHOOL PHYSICS**

- (#2) Lu, Benjamin (Rice University), Diana Yoon (Rice University), Erica Bakota (Rice University), Jeffrey Hartgerink (Rice University), F. Kurtis Kasper (Rice University), and Antonios Mikos (Rice University)  
CONTROLLING THE RELEASE OF BONE MORPHOGENETIC PROTEIN-2 USING GELATIN MICROPARTICLES AND MULTI-DOMAIN PEPTIDES IN POROUS POLY(PROPYLENE FUMARATE) SCAFFOLDS FOR BONE TISSUE ENGINEERING APPLICATIONS
- (#3) Mao, Qilong (Baylor College of Medicine) and Pati Debananda (Baylor College of Medicine)  
STRUCTURAL ANALYSIS OF HUMAN SORORIN AND SEPARASE
- (#4) Throneberry, Kyle (Baylor University), Mitra M. Salighedar (Baylor University), Hien H. Nguyen (Baylor University), Rachel Medlin (Baylor University) and Bryan Gibbon (Baylor University)  
SUPPRESSION OF OPAQUE2 PHENOTYPES BY ALTERED STARCH GRANULE STRUCTURE
- (#5) Jayaweera, Thilanka (Texas State University), Sunethra Dharmasiri (Texas State University), and Nihal Dharmasiri (Texas State University)  
REGULATION OF THE EXPRESSION OF PIC115 GENE IN ARABIDOPSIS
- (#6) Karunarathna, Nirmala (Texas State University), Sunethra Dharmasiri (Texas State University), and Nihal Dharmasiri (Texas State University)  
THE GAIN-OF-FUNCTION MUTATION IAA28-2 IN ARABIDOPSIS CAUSES SEVERE DEFECTS IN GROWTH AND DEVELOPMENT.
- (#7) Alexander, Blythe (University of Kansas) and Rudolf Jander (University of Kansas)  
NO VIEWPOINT EXTRAPOLATION IN HOMING HOUSE MICE (MUS MUSCULUS)
- (#8) Yang, You-Hao (Texas A & M University), Frank Malek (Texas A & M University), and Jaime C. Grunlan (Texas A&M University)  
INFLUENCE OF DEPOSITION TIME ON GROWTH AND BARRIER BEHAVIOR OF CLAY-BASED THIN FILM ASSEMBLIES
- (#9) Mukherjee, Malini (Baylor College of Medicine), Ge Gouqing (Baylor College of Medicine), Allan Herron (Baylor College of Medicine), Eryong Huang (Baylor College of Medicine), and Debananda Pati (Baylor College of Medicine)  
HAPLO-INSUFFICIENT LOSS OF SEPARASE COOPERATES WITH THE LOSS OF P53 IN THE INITIATION AND PROGRESSION OF LYMPHOMA IN MICE
- (#10) Norwood, David (Southeastern Louisiana University)  
STUDENT ENTREPRENEURS AS ACTIVE LEADERS
- (#11) McCullum, Elizabeth (Baylor College of Medicine) and Pati Debananda (Baylor College of Medicine)  
DEVELOPING NOVEL PEPTIDE INHIBITORS TO CHROMOSOMAL COHESION USING MRNA DISPLAY FOR “NANO-DRUG” DELIVERY IN BREAST CANCER THERAPY
- (#12) Panigrahi, Anil (Baylor College of Medicine), Nenggang Zhang (Baylor College of Medicine), and Pati Debananda (Baylor College of Medicine)  
EXPLORING THE COHESIN PROTEIN INTERACTOME

- (#13) Moon, Sung-Hwan (Baylor College of Medicine), Thuy-Ai Nguyen (Baylor College of Medicine), Yolanda Darlington (Baylor College of Medicine), and Lawrence Donehower (Baylor College of Medicine)  
THE ONCOGENIC ROLE OF WIP1 PHOSPHATASE IN DNA DAMAGE RESPONSE
- (#14) Shee, Chandan (Baylor College of Medicine), Janet L. Gibson (Baylor College of Medicine), and Susan M. Rosenberg (Baylor College of Medicine),  
DOUBLE-STRAND-BREAK-ASSOCIATED STRESS-INDUCED MUTAGENESIS IN CHROMOSOMES OF FEMALE E. COLI
- (#15) Akilla, Neeraja (Baylor University), Serena Greene (Baylor University), Bingzhi Yang (Baylor Research Institute), and Jiahuan Ding (Baylor Research Institute)  
NOVEL GENE THERAPY FOR POMPE DISEASE
- (#16) Wagner, Ryan (Baylor College of Medicine), Xueping Xu (Baylor College of Medicine), Fei Yi (University of Illinois at Chicago), Bradley Merrill (University of Illinois at Chicago) and Austin Cooney (Baylor College of Medicine)  
CANONICAL WNT/B-CATENIN REGULATION OF LIVER RECEPTOR HOMOLOG-1 MEDIATES PLURIPOTENCY GENE EXPRESSION
- (#17) Tennakoon, Jayantha (University of Houston), Austin Cooney (Baylor College of Medicine), Preethi Gunaratne (University of Houston), Cristi Coarfa (Human Genome Sequencing Center), Hongran Wang (Baylor College of Medicine), Samir Panthikar (Baylor College of Medicine), Thomas Shide (University of Houston), and Aleksandar Milosavljevic (Baylor College of Medicine)  
GENOME-WIDE DICER-DEPENDENT H3K9ME2 PATTERNS IN EMBRYONIC STEM CELLS REVEAL CONFLICTING SIGNALS AT THE EPIGENETIC AND POST-TRANSCRIPTIONAL LEVELS
- (#18) Benham, Ashley (University of Houston) and Jong Kim (University of Houston)  
ESTABLISHING A NOVEL MICRORNA DISCOVERY PLATFORM FOR MAPPING UNCHARTED REGIONS OF THE HUMAN GENOME
- (#19) Qin, Li (Baylor College of Medicine), Michael Toneff (Baylor College of Medicine), Xian Chen (Baylor College of Medicine), Yelin Wu (Baylor College of Medicine), Yi Li (Baylor College of Medicine), and Jianming Xu (Baylor College of Medicine)  
SRC-1 UP-REGULATES INTEGRIN ALPHA5 EXPRESSION AND ENHANCES BREAST CANCER METASTASIS
- (#20) Wu, Yelin (East China Normal University), Qingtian Li (Baylor College of Medicine), Li Qin (Baylor College of Medicine), Lan Liao (Baylor College of Medicine), and Jianming Xu (Baylor College of Medicine)  
AIB3 HYPOMORPHIC SUPPRESSES BREAST CANCER METASTASIS IN POLYOMA MIDDLE-T MICE

- (#21) Coarfa, Christian (Baylor College of Medicine), Benjamin Soiban (University of Houston), Alan Harris (Baylor College of Medicine), Andrew Jackson (Baylor College of Medicine), Preethi Gunaratne (University of Houston), and Aleksandar Milosavljevic (Baylor College of Medicine)  
A FRAMEWORK FOR ANALYSIS OF TRANSCRIPTION REGULATION USING THE GENBOREE DISCOVERY SYSTEM
- (#22) Serkan, Erdin (Baylor College of Medicine), R. Matthew Ward (Baylor College of Medicine), and Oliver Lichtarge (Baylor College of Medicine)  
EVOLUTIONARY TRACE ANNOTATION: STRUCTURE-BASED PROTEIN FUNCTION PREDICTION METHOD

## SATURDAY AFTERNOON, 10 APRIL

### *JOHN WESLEY POWELL MEMORIAL LECTURE*

#### “DARK ENERGY AND THE FUTURE OF SCIENCE”

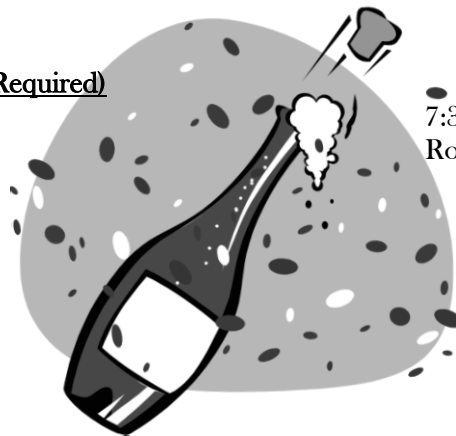
Dr. Stephon Alexander  
*Haverford College*

2:00 pm - 3:00 pm  
BRC Building  
Room: 103

## SATURDAY EVENING, 10 APRIL

### SWARM AWARDS BANQUET (Tickets Required)

Saturday, 10 April  
Hilton Houston Plaza



7:30 pm - 9:00 pm  
Room: Travis A

