Cancer Evolution: Mechanisms of Vulnerability and Resistance

Symposia Co-Chairs:
Giulio Draetta, MD, PhD
Guillermina Lozano, PhD
Jeffrey J. Molldrem, MD
Jennifer Wargo, MD

October 6-7, 2016
The University of Texas MD Anderson Cancer Center
R. Lee Clark Clinic
Floor 11
1515 Holcombe Boulevard
Houston, Texas

For more information, please call the Department of CME/Conference Management at 713-792-2223 or visit our website at www.mdanderson.org/conferences
The emergence of a tumor requires numerous early stochastic events within a cell that confer a growth advantage relative to its normal counterparts. These initiating mutations generally support exponential growth and genomic instability that fuel the fitness of tumor cells through accelerated acquisition of mutations. The dynamic mutational landscape also results in highly heterogeneous tumors comprised of subclones harboring unique adaptations that support their survival and growth, initiate metastasis, allow them to evade immune response and render them sensitive or not to various pharmacological assaults. This Symposia will discuss emerging concepts in tumor heterogeneity, clonal evolution, and metastasis, with an emphasis on methods to evaluate and interpret the subclonal architecture of tumors and how these properties can inform translational research and personalized medicine.

Keynote speakers are Rene Bernards, PhD (Netherlands Cancer Institute) and Sean Morrison, PhD (UT Southwestern Medical Center). In addition, Carol L. Prives, PhD (Columbia University) will receive the Ernst W. Bertner Memorial Award and Arul M. Chinnaiyan, MD, PhD (University of Michigan Medical School) will receive the Heath Memorial Award. There will also be a poster session for participants to represent their findings. The symposia begins Thursday morning and will end Friday afternoon.
Target Audience
The program will be of broad interest to scientists, scientists-in-training, physicians, physicians-in-training, students, nurses, and fellows interested in hearing the latest methodologies to study tumor complexity and evolution, and how data emerging from this research are impacting personalized medicine.

Educational Objectives
After attending the Symposia, participants should be able to:

- Understand available technologies that aid in the investigation of tumor heterogeneity and clonal evolution;
- Relate the latest discoveries regarding the influence of the immune system, tumor microenvironment, and external perturbations to tumor evolution and drug response/resistance to basic and translational research or clinical practice;
- Apply clinical correlates or biomarkers in research to indicate tumor cell response to investigational agents.

Educational Methods
Lectures • Question-and-Answer Sessions • Panel Discussions • Posters
Call for Abstracts

Abstracts may be submitted for the Poster Session but must be received no later than August 5, 2016. Please submit to Research2016@mdanderson.org.

Trainees (undergraduate, graduate, medical students, or postdoctoral fellows) submitting abstracts for the Symposia may request to be considered for an oral presentation, and lunch with speakers by checking the appropriate box on the registration form. Submitted abstracts will be reviewed by the organizing committee, and eight abstracts will be chosen to give an 8 minute/2 minute Q & A oral presentation. This year, two Poster Awards will also be awarded and winners will be announced at the Symposia. Winners must be present to receive a prize.

Should you have difficulty with the submission, call the Department of CME/Conference Management at 713.745.5000 for guidance. Participants will be notified of their posters’ acceptance by mail or e-mail by August 26, 2016. Please indicate the person to whom correspondence should be sent if other than the first author and include an address, telephone number, fax number, and e-mail address (if available) when submitting the abstract. Registration for the symposia must be submitted at the same time as the abstract. Please register at www.mdanderson.org/conferences.

Young Investigator Travel Fellowship Awards

A limited number of travel fellowships will be available to graduate and medical students, postdoctoral fellows, and physicians-in-training. Only those applicants who submit abstracts will be considered for an award, which is intended to offset some of the expenses incurred by the recipient in connection with attending the Symposia. Anyone wishing to apply for a travel fellowship should check the appropriate box on the registration form and attach a letter of recommendation. This letter should be on official letterhead, signed by the dean or department head, and contain the following information about the applicant (due by August 5, 2016):

1. academic status
2. research activities in the subject area of the meeting
3. citations of recent articles in this subject area published in peer reviewed journals
Registration will open at 7:00 a.m. on Thursday, October 6, 2016.

Thursday, October 6, 2016

8:00 a.m.
Symposia Opening and Welcome
Ronald A. DePinho, MD

8:15
Keynote Lecture
Introduction:
Jennifer Wargo, MD

A Vulnerability of Drug Resistant Melanomas With Therapeutic Implications
Rene Bernards, PhD
Netherlands Cancer Institute
Amsterdam, Netherlands

SESSION I: TUMOR CELL HETEROGENEITY AND EVOLUTION

Session Chair: Jeffrey J. Molldrem, MD

9:15
Introduction
Jeffrey J. Molldrem, MD

9:20
Impact of Clonal Heterogeneity and Evolution on Chronic Lymphocytic Leukemia
Catherine J. Wu, MD
Dana-Farber Cancer Institute
Boston, Massachusetts

9:50
Break

10:05
Studying Clonal Dynamics in Response to Cancer Therapy Using High-Complexity Barcoding
Frank Stegmeier, PhD
KSQ Therapeutics
Cambridge, Massachusetts

10:35
Clonal Dynamics in Space and Time: Inference of Evolutionary Properties of Cancer
Sohrab Shah, PhD
British Columbia Cancer Agency Vancouver
Vancouver, British Columbia, Canada

11:05
Abstract Oral Presentation #1

11:20
Abstract Oral Presentation #2

11:35
Lunch
Trainee Lunch – Limited to 35 (by invite only)
Thursday, October 6, 2016 (continued)

SESSION II: THE MICROENVIRONMENT IN TUMOR ADAPTATION AND THERAPY RESISTANCE

Session Chair: Guillermina Lozano, PhD

12:35 p.m.

Introduction
Guillermina Lozano, PhD

12:40

Transcriptional Regulation of Differentiation in Pancreatic Cancer
Gioacchino Natoli, PhD
European Institute of Technology
Milan, Italy

1:10

Hypoxia, Metabolism, and Tumor Progression
Celeste Simon, PhD
Abramson Family Cancer Research Institute
Philadelphia, Pennsylvania

1:40

Identification of Metabolic Vulnerabilities of Ras-Driven Cancer Cells
Eileen White, PhD
Rutgers Cancer Institute of New Jersey
New Brunswick, New Jersey

2:10
Abstract Oral Presentation #3

2:25
Abstract Oral Presentation #4

2:40
Break

SESSION III: IMMUNE SURVEILLANCE AND EVOLUTION

Session Chair: Valerie Le Bleu, PhD

2:55

Introduction
Valerie Le Bleu, PhD

3:00

Genes, Mutations and Immunotherapy Response
Timothy A. Chan, MD, PhD
Memorial Sloan-Kettering Cancer Center
New York, New York

3:30

In Vivo Discovery of Novel Targets for Cancer Immunotherapy
Kai Wucherpfennig, MD, PhD
Dana-Farber Cancer Institute
Boston, Massachusetts
Thursday, October 6, 2016 (continued)

4:00  The Multifaceted Functions of PD-1 Pathway
      Arlene Sharpe, MD, PhD
      Harvard Medical School
      Boston, Massachusetts

4:30  Abstract Oral Presentation #5

4:45  Abstract Oral Presentation #6

5:00  Ernst W. Bertner Award Lecture and Presentation
      Introduction: Helen Piwnica-Worms, PhD
      The Complexity of p53:
      Tumor Suppressor and Oncogene
      Carol L. Prives, PhD
      Columbia University
      New York, New York

6:00-7:00 p.m.  Poster Session and Reception

Friday, October 7, 2016

9:00 a.m.  Keynote Lecture
      Introduction: Andrea Viale, MD
      Mechanisms of Melanoma Metastasis
      Sean Morrison, PhD
      UT Southwestern Medical Center
      Dallas, Texas

SESSION IV: TUMOR STEMNESS, DORMANCE AND METASTASIS

Session Chair: David Piwnica-Worms, MD, PhD

10:00  Introduction
      David Piwnica-Worms, MD, PhD

10:05  A Wnt-er of Discontent:
      Effects of Age on Melanoma Metastasis
      Ashani T. Weeraratna, PhD
      The Wistar Institute
      Philadelphia, Pennsylvania
Friday, October 7, 2016 (continued)

10:35       Break

10:55       Stromal Niche Mediates Metastasis and Treatment Resistance of Breast Cancer
            Yibin Kang, PhD
            Warner-Lambert/Parke-Davis
            Princeton, New Jersey

11:25       Lung Stem Cell Approaches to Understanding Differentiation, Disease and Therapy
            Carla F. Kim, PhD
            Harvard Stem Cell Institute
            Boston, Massachusetts

11:55       Lunch

1:00        Abstract Oral Presentation #7

1:15        Abstract Oral Presentation #8

1:30        Wilson Stone Award Presentation and Lecture
            Introduction:  Jennifer Wargo, MD

2:15        Heath Award Lecture and Presentation
            Introduction:  Roeland Verhaak, PhD

2:15        The Application of Integrative Sequencing for Precision Oncology
            Arul M. Chinnaiyan, MD, PhD
            University of Michigan Medical School
            Ann Arbor, Michigan

3:15        Closing Remarks
            Andrew Futreal, PhD

3:30        Adjourn

Agendas are subject to change because we are always striving to improve the quality of your educational experience. MD Anderson may substitute faculty with comparable expertise on rare occasions necessitated by illness, scheduling conflicts, and so forth.

Photographing, audiotaping and videotaping are prohibited.
Registration Information

On-site registration opens at 7:00 a.m., Thursday, October 6, 2016. The opening session will begin at 8:00 a.m. on October 6, and the symposia will adjourn at 3:30 p.m. on Friday, October 7, 2016. Advance registration is encouraged as space and materials are limited. Please see registration form for applicable fees. The deadline for advance registration is September 23, 2016.

There are three ways to register:
1. On-line at www.mdanderson.org/conferences
2. Mail to: Department of CME/Conference Management – Unit 1781, The University of Texas MD Anderson Cancer Center, P. O. Box 301407, Houston, Texas 77230-1407.
3. Fax to 713-794-1724

We accept the following forms of payment:
1. Check (payable through U.S. banks only)
2. Money Order
3. Credit Cards (MasterCard, VISA, and American Express)
4. Cash (on-site registration)

When registering on-line a receipt/confirmation letter will be automatically e-mailed to the e-mail address you listed on the registration form. If you register by fax or mail, a receipt/confirmation letter will be sent to you within ten working days of receipt of your fee.

The full symposia registration fee includes the tuition, breaks, lunches, and reception. The student registration fee includes all of the above except lunches. Students wishing to participate in the lunches must pay an additional fee of $24.00.

Students: A reduced registration fee has been established for full-time students and physicians-in-training (interns, residents, and fellows). All students claiming this reduced fee are required to submit a letter of introduction from the chairperson of their department with their registration form. Students wishing to participate in the lunches must pay an additional fee of $24.00.

MD Anderson Alumni: Alumni is defined as any faculty member (research or clinical) who has worked at MD Anderson and has retired or resigned, or any educational trainee who has trained at MD Anderson.

Refund /Cancellation Policy: The registration fee, minus a $50 administrative handling fee, is refundable if a written request is received on or before September 23, 2016. No refunds will be granted after that date. The request for a registration refund must include the tax identification number of the company or institution if registration was paid by a company or institution check. For additional information, contact CME/Conference Management at 713-792-2223 or toll free at 866-849-5866.

The Department of CME/Conference Management reserves the right to cancel activities prior to the scheduled date, if low enrollment or other circumstances make it necessary. Each registrant will be notified by mail, e-mail, or the contact numbers as given on the registration form. In case of activity cancellation, liability of the Department of CME/Conference Management is limited to the registration fee. CME/Conference Management will refund the full registration fee.
The Department of CME/Conference Management has the right to limit the number of participants in a program and is not responsible for any expenses incurred by an individual whose registration is not confirmed and for whom space is not available.

For additional information, contact the Department of CME/Conference Management at 713-792-2223 or 866-849-5866.

**Special Assistance**

Contact the Department of CME/Conference Management at 713-792-2223 or 866-849-5866 if you have any special dietary or ADA accommodation needs.

**Accommodations**

- A block of rooms has been reserved for symposia attendees at the Hotel ZaZa, 5701 Main Street, Houston, Texas.
- Early hotel reservation is suggested.
- The hotel phone number is 713-526-1991.
- When you make reservations be sure to mention MD Anderson’s Research Symposia to be assured of receiving the special meeting rate of $219.00 single or double occupancy.
- Please add 17% Texas state and local taxes.
- Reservations and deposits received after September 5, 2016, will be confirmed if space is available and at current hotel published guest room rates.

**Ground Transportation**

- Houston is served by two airports, George Bush Intercontinental (IAH) and William P. Hobby (HOU).
- Taxicabs are available at an estimated cost of $40-60, to or from William P. Hobby Airport or George Bush Intercontinental Airport.
- Super Shuttle operates a shuttle bus between George Bush Intercontinental Airport and the Hotel ZaZa for $23 one-way and $42 round-trip. For more information, call 713-523-8888 or toll-free at 800-258-3826 or on-line at www.supershuttle.com.
- Super Shuttle operates a shuttle bus between William P. Hobby Airport and the Hotel ZaZa for $18 one-way and $32 round-trip. For more information, call 713-523-8888 or toll-free at 800-258-3826 or on-line at www.supershuttle.com.

Please let us know what specific topics, issues or questions you wish to see addressed or emphasized in this activity. Fax or e-mail CME/Conference Management. All responses will be forwarded to the Program Chairs for consideration.
**Symposia on Cancer Research 2016**

**Cancer Evolution: Mechanisms of Vulnerability and Resistance – October 6-7, 2016**

THIS IS NOT A SELF-MAILER. Address to:
Symposia on Cancer Research 2016
Cancer Evolution: Mechanisms of Vulnerability and Resistance
October 6-7, 2016
Department of CME/Conference Management – Unit 1781
The University of Texas MD Anderson Cancer Center
PO Box 301407, Houston, TX 77230-1407
or fax to 713-794-1724
Make check or money order payable to:
The University of Texas MD Anderson Cancer Center

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**Physician**

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**MD Anderson Interdepartmental Transfer (IDT) No.:**

*Fund Group 90 will not be accepted*

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**Full Symposia Registration Fee**

| Before September 23, 2016 | $300.00 |
| After September 23, 2016  | $375.00 |

**One Day Registration Fee**

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**MD Anderson Alumni**

| Before September 23, 2016 | $225.00 |
| After September 23, 2016  | $280.00 |

**Student Registration Fee**

| Before September 23, 2016 | $100.00 | Lunch Fee | $24 |
| After September 23, 2016  | $125.00 | Lunch Fee | $30 |

**MD Anderson Faculty, Staff, Trainees (Exempt)**

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**Travel Fellowship Applicant**

I wish to be considered for an oral abstract presentation.