



***9th Annual
Innovative Approaches to
Brain Tumor Management***

Friday, February 9, 2024

Syllabus

ESTEEMED FACULTY

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Course Co-Chair

Director, Ben & Catherine Ivy Center
Swedish Neuroscience Institute
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Zachary N. Litvack, M.D., FAANS, FACS

Course Co-Chair

Director, Skull Base & Minimally Invasive Neurosurgery
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Alipi Bonm, M.D.

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Alon Orlev, M.D. (virtual)

Neurosurgeon
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Robert Prins, M.D.

Tumor Immunologist & Professor
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Ashish H. Shaw, M.D.

Assistant Professor

Director of Clinical Trials and Translational Research

Principal Investigator-Section of Virology and Immunotherapy

University of Miami Brain Tumor Initiative

Miami, Florida

AGENDA

7:30 a.m. Registration & Breakfast

7:55 a.m. Welcome & Announcements

Zachary N. Litvack, M.D., Charles Cobbs, M.D. & Alipi Bonm, M.D., Ph.D.

8 a.m. Clinical Trial with Pembrolizumab in Relapsed GBM Patients

Robert Prins, Ph.D.

Objectives:

- Identify the rationale for neoadjuvant treatment with immune checkpoint blockade in recurrent GBM patients
- Illustrate pharmacodynamic biomarkers for neoadjuvant immune checkpoint blockade that correlate with survival

8:15 a.m. Q&A

8:20 a.m. Oncolytic Immuoactivation Clinical Trials for GBM

Nino Chiocca, M.D.

Objectives:

- Identify basic concepts of oncolytic viral therapy
- Illustrate the role of viral gene delivery in immune activation

8:35 a.m. Q&A

8:40 a.m. DNA Methylation Profiling as a Clinical Diagnostic Tool for CNS Tumors

PJ Cimino, M.D., Ph.D.

Objectives:

- Illustrate the utility of DNA methylation profiling in CNS tumor diagnosis
- Explain the limitations of potential pitfalls of DNA methylation profiling

8:55 a.m. Q&A

9 a.m. A Phase I Clinical Trial of Personalized High Throughput Drug Screening for Up Front Treatment of Glioblastoma

Parvi Hothi, Ph.D.

Objectives:

- Identify high throughput drug screening
- Describe how cancer stem cells are good targets in GBM

9:15 a.m. Q&A

9:20 a.m. The Roles of Social Worker in Management of Glioblastoma Patient Care

Brenda Autobee-Bigalk, MSW, LICSW

Objectives:

- Demonstrate key roles for social workers in GBM care
- Identify how family dynamics impact GBM patients

- 9:35 a.m. Q&A
- 9:40 a.m. **Human endogenous retrovirus K contributes to a stem cell niche in glioblastoma**
Ashish H. Shah, M.D.
Objectives:
 - Describe what HERV's are
 - Illustrate implications of HERV-K expression in GBM
- 9:55 a.m. Q&A
- 10 a.m. **Breaks & Exhibits** (*not for CME credit*)
- 10:10 a.m. **Glioblastoma Brain Slice Culture and Potential Role in Identifying Glioblastoma Immune Activating Molecules**
Charles Cobbs, M.D.
Objectives:
 - Describe the role of a GBM slice culture in immunotherapy
 - Describe key concepts in making cold tumors hot
- 10:25 a.m. Q&A
- 10:30 a.m. **"Imaging Endpoint Strategies for Early & Later Stage Clinical Trials in Recurrent GBM"**
Benjamin Ellingson, Ph.D.
Objectives:
 - Describe key imaging characteristics of GBM progression
 - Illustrate unique imaging aspects of GBM in clinical trials
- 10:45 a.m. Q&A
- 10:50 a.m. **Potential Role of CRISPR for Treating Glioblastoma**
John Liu, M.D., Ph.D.
Objectives:
 - Identify key genes involved in GBM progression
 - Describe how CRISPR can inactivate tumor driven genes
- 11:05 a.m. Q&A
- 11:10 a.m. **Extracellular Vesicles for Delivery of mRNA for Glioblastoma Treatment**
Betty Kim, M.D., Ph.D., FRCSC, FAANS
Objectives:
 - Describe EV as a delivery system
 - Illustrate the potential of mRNA therapy for brain tumors
- 11:45 a.m. Q&A
- 11:50 a.m. **Metabolic Imaging of Brain Tumors**
Susan Chang, M.D.
Objectives:
 - Illustrate how key metabolic pathways of brain tumors can drive tumor biology
 - Describe imaging techniques in brain tumor management
- 12:05 a.m. Q&A

- 12:10 p.m.** **Lunch Break & Exhibits** (*not for CME credit*)
- 12:40 p.m.** **Augmented Reality in Neuro-Oncology** (*not for CME credit*)
Stephen Monteith, M.D.
- 12:45 p.m.** **Q&A**
- 12:50 p.m.** **Update on Endoscopic Skull Base** (*not for CME credit*)
Alon Orlev, M.D.
- 1:05 p.m.** **Q&A**
- 1:10 p.m.** **Breaks & Exhibits** (*not for CME credit*)
- 1:40 p.m.** **Preclinical Modeling for Improved Drug Delivery & Immunotherapeutic Approaches to Glioblastoma**
Sean Lawler, Ph.D.
Objectives:
- Explain pre-clinical modeling for drug delivery in GBM
 - Illustrate immunotherapeutic approaches to GBM
- 1:55 p.m.** **Q&A**
- 2:00 p.m.** **“Living Drugs” – Changing the Way We Treat Patients with Brain Cancer**
Rajiv Khanna, M.D.
Objectives:
- Describe T-cell targets for GBM
 - Illustrate how CMV targeting can impact GBM
- 2:15 p.m.** **Q&A**
- 2:20 p.m.** **“Molecular Targeted Therapy for Glioma”**
Alipi Bonm, M.D., Ph.D.
Objectives:
- Describe the landscape of targetable mutations and genetic alterations in gliomas
 - Illustrate the relevant literature and guidelines supporting use of targeted therapies
- 2:35 p.m.** **Q&A**
- 2:40 p.m.** **“A Novel Mechanism of T Cell Antitumor Immunity”**
Peter Fecci, M.D., Ph.D.
Objectives:
- Identify the traditional role of MHC in T cell activation and target killing
 - Illustrate the role of the NKG2D-NKG2DL axis in mediating a novel mechanism of T cell killing
- 2:55 p.m.** **Q&A**
- 3:00 p.m.** **Adjourn**

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Course Planning Committee

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Course Evaluation

Please take a moment to complete our online evaluation, which will be emailed to you. Your feedback helps to ensure the effectiveness of this CME activity, as well as improve future educational activities. All responses are considered anonymous. <https://www.surveymonkey.com/r/BrainT2024>

If you do not receive the survey via email, please call (206) 732-6500 or email cme@seattlesciencefoundation.org.

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Identifying and Resolving Conflicts of Interest

Purpose: The information provided addresses several requirements of the ACCME to help **ensure purpose** in CME activities. Everyone in a position to control the content of a CME activity must disclose all relevant financial relationships with commercial interests to the CME provider. This information must be disclosed to participants prior to the beginning of the activity. Also, CME providers must resolve current conflicts of interest prior to the educational activity.

Definitions: “Financial relationships” are those relationships in which the individual benefits by receiving a salary, royalty, intellectual property rights, consulting fee, honoraria for promotional speakers’ bureau, ownership interest (e.g., stocks, stock options or other ownership interest, excluding diversified mutual funds), or other financial benefit. Financial benefits are usually associated with roles such as employment, management position, independent contractor (including contracted research), consulting, speaking and teaching, membership on advisory committees or review panels, board membership, and other activities from which remuneration is received, or expected. ACCME considers relationships of the person involved in the CME activity to include financial relationships of a spouse or partner.

The ACCME defines a **“commercial interest”** as any entity producing, marketing, re-selling or distributing health care goods or services consumed by, or used on, patients. Among the exemptions to this definition are government organizations, non-health care related companies and non-profit organizations that do not advocate for commercial interests.

Circumstances create a **“conflict of interest”** when an individual has an opportunity to affect CME content about products or services of a commercial interest with which he/she has a financial relationship.

ACCME focuses on financial relationships with commercial interests in the 12-month period preceding the time that the individual is being asked to assume a role controlling content of the CME activity. ACCME has not set a minimal dollar amount for relationships to be significant. Inherent in any amount is the incentive to maintain or increase the value of the relationship.

The ACCME defines **“relevant financial relationships”** as financial relationships in any amount occurring within the past 24 months that create a conflict of interest.

CME Activity Planning Committee Members: If a conflict of interest exists, the Planning Committee member must withdraw from the Planning Committee unless the conflict can be resolved. Resolution may be made by one of the following methods: (1) Peer review of CME content will be conducted at another oversight level to assure no commercial bias exists; (2) Change in focus of course so the activity does not include information related to products or services about which the planning committee member has a conflict; (3) Severing relationship(s) between the member and any related commercial interest; (4) Others to be determined by SSF CME Committee.

CME Activity Presenter: When a conflict of interest exists, the Planning Committee must address the conflict by one of the following methods: (1) Review content to be presented by speaker in advance to assure content balance; (2) Change topic so the presentation is not related to products or services where a conflict exists; (3) Select a different presenter without any related commercial interest; (4) Include presentations by other faculty to provide an overall balance to the content of the course; (5) Limit or specify the sources for recommendations that the presenter can use. Each speaker is required to give a balanced, evidence-based presentation based on published research. No conclusions or recommendations without external validation may be made by a speaker with a conflict of interest.

Faculty Disclosure Summary

The following planners and presenters, in the past 24 months, have/had a financial relationship with a commercial interest: (S = Speaker; P = Planner)

Nino Chiocca, M.D., Ph.D. (S): Advisor: Candel Therapeutics, Inc., Genenta, Inc., DNATRIX, Inc., Seneca Therapeutics, Sythetic Biologics, Amacathera, Bionaut Labs; Ownership: Ternalys

Benjamin Ellingson, M.D., Ph.D. (S): Consulting Fee: Alpheus Medical, Inc., Chimerix Inc., Erasca, Global Coalition for Adaptive Research (GCAR), Imaging Endpoints, Medicenna, Voiant, Monteris, Neosoma, Orbus Therapeutics, Sagimet Biosciences, Sapience Therapeutics, Servier Pharmaceuticals, SonALAsense, Sumitomo Dainippon Pharma Oncology, NIH/NCI Cancer Imaging Steering Committee; Membership on Advisory Committees or Review Panels, Board Membership, etc.: Alpheus Medical Inc., Cathera, Chimerix Inc, Global Coalition for Adaptive Research (GCAR), Medicenna, Voiant, Monteris, Neosoma, Orbus Therapeutics, Sagimet Biosciences, Sapience Therapeutics, Servier Pharmaceuticals, SonALAsense, Sumitomo Dainippon Pharma Oncology, NIH/NCI Cancer Imaging Steering Committee; Grant or research support: Siemens

Peter Fecci, M.D., Ph.D. (S): Consulting Fee: Monteris; Grant or research support: Monteris

Zachary Litvack, M.D. (P): Grant or research support: NxDev/Medexus Pharma; Stocks or stock options, excluding diversified mutual funds: CWTCH, Inc

Stephen Monteith, M.D. (S): Consulting Fee: Microvention

Robert Prins, Ph.D. (S): Independent Contractor (included contracted research): Merck| Consultant - Biomarker Development

The following planners and presenters, in the past 24 months, have/had no financial relationship with a commercial interest: (S = Speaker; P = Planner)

Brenda Autobee-Biglak MSW (S); **Alipi Bonm, M.D., Ph.D.**; **Susan Chang, M.D.**; **P.J. Cimino, M.D., Ph.D.**; **Charles Cobbs, M.D.** (P, S); **Parvidner Hothi, Ph.D.** (S); **Rajiv Khanna, Ph.D.** (S); **Betty Kim, M.D., Ph.D.** (S); **Sean Lawler, Ph.D.** (S); **John Liu, M.D., Ph.D.** (S); **Alon Orlev, M.D.** (S); **Ashish Shah, M.D.** (S); **Clifford Pierre, M.D.** (P); **Cory Kepler** (P)

All planners and presenters attested that their content suggestions and/or presentation(s) will provide a balanced view of therapeutic options and will be entirely free of promotional bias. All presentations have been reviewed by a planner with no conflicts of interest to ensure that the content is evidence-based and unbiased.