Posters and Presentations

June 2017: American Society of Clinical Oncology (ASCO) Annual Meeting

- Preliminary Correlative Analysis of PD-L1 expression from the SUNRISE Study. [View poster]

April 2017: American Association for Cancer Research (AACR) Annual Meeting

- IFN-γ Analysis in Blood and Tissue as a Potential Prognostic and/or Predictive Biomarker. [View poster]
- Targeting Phosphatidylserine in Combination with Adoptive T cell Transfer Eliminates Advanced Tumors Without Off-Target Toxicities in a Melanoma Preclinical Model. [View poster]
- Phosphatidylserine Targeting Antibody in Combination With Tumor Radiation and Immune Checkpoint Blockade Promotes Anti-tumor Activity in Mouse B16 Melanoma. [View poster]
- Monoclonal Antibodies Targeting Phosphatidylserine Augment Combinational Activity of LAG3 and PD-1 Targeting Antibodies In Murine TNBC Through Enhanced Reprogramming of the Immunosuppressive Tumor Microenvironment. [View poster]

November 2016: Society for the Immunotherapy of Cancer (SITC) Annual Meeting

- Phosphatidylserine Targeting Antibody in Combination with Checkpoint Blockade and Tumor Radiation Therapy Promotes Anti-cancer Activity In Mouse Melanoma. [View poster]
- Monoclonal Antibodies Targeting Phosphatidylserine Enhance Combinational Activity of LAG3 and PD-1 Targeting Antibodies and Establish Specific Long Term Tumor Surveillance in Murine Breast Cancers. [View poster]
- Anti-tumor Responses by Ibrutinib and Anti-PD-1 Blockade is Enhanced by PS-Targeting Antibody Therapy. [View poster]

April 2016: American Association for Cancer Research (AACR) Annual Meeting

- Phosphatidylserine Targeting Antibodies Augment the Anti-Tumorigenic Activity of Anti-PD-1 Therapy by Enhancing Immune Activation and Downregulating Pro-Oncogenic Factors Induced by T-Cell Checkpoint Inhibition in Murine Triple Negative Breast Cancers. [View poster]

November 2015: Society for Immunotherapy of Cancer (SITC) Annual
Meeting

- Targeting of Phosphatidylserine by Monoclonal Antibodies Augments the Activity of anti-PD-1 Therapy in Triple Negative Breast Carcinoma Murine Models.  
  View poster
- Targeting Phosphatidylserine Synergizes with Immune Checkpoint Blockade by Inducing De Novo Tumor Specific Immunity.  
  View poster
- New Method for ImmunoProfiling the Tumor Microenvironment of Cancer Patients by Opal™ Multiplex Quantitative Immunofluorescence (IF)Assays.  
  View poster

October 2015: American Society for Radiation Oncology (ASTRO) Annual Meeting

- Preliminary Results From a Phase I Trial of Radiation Therapy, Capecitabine, and the Phosphatidylserine-Targeting Antibody Bavituximab in the Neoadjuvant Treatment of Rectal Adenocarcinoma.  
  View Poster

September 2015: The 16th World Conference on Lung Cancer (WCLC)

- Bavituximab Activates CD8+ TILs in a 3D Ex Vivo System of Lung Cancer Patient Derived Tumors With Negative PD-L1 Expression.  
  View presentation
- SUNRISE: A Phase III, Randomized, Double-blind, Placebo-Controlled Multi-center Trial of Bavituximab Plus Docetaxel versus Docetaxel Alone in Patients with Previously Treated Stage IIib/IV Non-Squamous Non-Small-Cell Lung Cancer.  
  View poster
- Targeting phosphatidylserine-mediated immune suppression enhances the efficacy of immune checkpoint blockade in pre-clinical tumor models.  
  View presentation

August 2015: 10th Annual Immunotherapy and Vaccine Summit (ImVacs)

- Expansion and Activation of T Cells via the Targeting of the Immunosuppressive Ligand Phosphatidylserine (PS): Combination Strategy with Conventional, Targeted, and Checkpoint Inhibitor Therapy.  
  View presentation

May 2015: American Society of Clinical Oncology (ASCO) Annual Meeting

- Phosphatidylserine targeting antibody in combination with anti-PD-1 antibody treatment activates infiltrating T lymphocytes of the spleen and tumor microenvironment in pre-clinical models of melanoma and breast cancer.  
  View poster
- Activation of CD8+ tumor infiltrating lymphocytes by bavituximab in a 3D ex vivo system of lung cancer patients.  
  View poster
- A phase I/II study of bavituximab and sorafenib in advanced hepatocellular carcinoma (HCC).  
  View poster
April 2015: American Association for Cancer Research (AACR) Annual Meeting

- Bavituximab modulates tumor microenvironment and activates CD8+ tumor infiltrating lymphocytes in a patient-derived 3D ex vivo system of lung cancer.  
  View poster
- Antibody-mediated phosphatidylserine blockade significantly enhances the efficacy of immune checkpoint blockades in K1735 and B16 mouse melanoma models.  
  View poster
- Targeting of Phosphatidylserine by Monoclonal Antibodies Enhances the Activity of Immune Checkpoint Inhibitors in Breast Tumors.  
  View poster

March 2015: Immune Checkpoint Inhibitors: Validate Novel Pathways, Discover Predictive Biomarkers, Optimize Clinical Strategy

- Expansion and Activation of T-cells via the Targeting of the Immunosuppressive Ligand Phosphatidylserine: Combination Strategy with Other Checkpoint Inhibitors  
  View slide presentation

March 2015: Society of Surgical Oncology 68th Annual Cancer Symposium

- A Phase II Study of Bavituximab and Sorafenib in Advanced Hepatocellular Carcinoma.  
  View slide presentation

February 2015: Keystone Symposium: Tumor Immunology: Multidisciplinary Science Driving Combination Therapy

- Antibody-mediated Blockade of Phosphatidylserine Enhances the Anti-tumor Activity of Immune Checkpoint Inhibitors by Affecting Myeloid Derived Suppressor Cells (MDSC) and Lymphocyte Populations in the Tumor Microenvironment.  
  View poster
- Phosphatidylserine-targeting Antibody Enhances the Anti-Tumor Activity of Immune Checkpoint Inhibitors.  
  View slide presentation

January 2015: Global Technology Community (GTC) 7th Immunotherapeutics & Immunomonitoring Conference

- Blockade of PS Enhances the Anti-tumor Activity of Targeted Therapy & Immune Checkpoint Inhibitors by Reducing Immunosuppressive Inflammatory Cells in the Tumor Microenvironment.  
  View slides

January 2015: ASCO Gastrointestinal Cancers Symposium

- A Phase II Study of Bavituximab and Sorafenib in Advanced Hepatocellular Carcinoma (HCC).  
  View poster
December 2014: San Antonio Breast Cancer Symposium (SABCS)

- Antibody-mediated Blockade of Phosphatidylserine Enhances the Anti-tumor Activity of Immune Checkpoint Inhibitor α-PD-1 by Affecting Myeloid Derived Suppressor Cells (MDSC) and Lymphocyte Populations in a Breast Tumor Microenvironment. View poster

November 2014: 29th Annual Meeting of the Society for the Immunotherapy of Cancer (SITC)

- Correlative studies of a Phase II study of Bavituximab and Sorafenib in Patients with Advanced Hepatocellular Carcinoma. View Poster
- Antibody-mediated Blockade of Phosphatidylserine Enhances the Anti-tumor Activity of Immune Checkpoint Inhibitor anti-CTLA-4 by Affecting Myeloid Derived Suppressor Cells (MDSC) and Lymphocyte Populations in a Melanoma Tumor Microenvironment. View poster
- Antibody-mediated Blockade of Phosphatidylserine Enhances the Anti-tumor Activity of Immune Checkpoint Inhibitor α-PD-1 by Affecting Myeloid Derived Suppressor Cells (MDSC) and Lymphocyte Populations in a Breast Tumor Microenvironment. View poster

October 2014: Chicago Multidisciplinary Symposium in Thoracic Oncology

- A phase Ib study of bavituximab plus carboplatin and pemetrexed in chemotherapy naïve stage IV non-squamous non-small cell lung cancer. View poster

October 2014: Cancer Research Institute (CRI), "Cancer Immunotherapy: Out of the Gate"

- Antibody-mediated blockade of phosphatidylserine enhances the anti-tumor activity of immune checkpoint inhibitors by affecting myeloid-derived suppressor cell (MDSC) and lymphocyte populations in the tumor microenvironment. Poster presentation by Dr. Rolf Brekken. View poster

August, 2014: ImVacS, the 9th Annual Immunotherapies and Vaccine Summit

- Phosphatidylserine (PS)-Targeting Antibodies Enhance Activity of Immune Checkpoint Inhibitors by Repolarizing Immunosuppressive Immune Cells Populating the Tumor Microenvironment. presentation by Jeff Hutchins. View Presentation

May, 2014: Cancer Research Institute Webinar
- Breakthroughs in Cancer Immunotherapy: Dr. Rolf Brekken, Reactivating Your Immune System to Fight Cancer. [View webinar]

April, 2014: AACR Annual Meeting

- Antibody-mediated blockade of phosphatidylserine combined with radiation improves survival and tumor eradication in a rat model of non-small cell lung cancer. [View poster]
- Phosphatidylserine-targeting antibody synergizes with anti-PD-1 antibody to inhibit tumor growth in K1735 mouse melanoma model. [View poster]
- Targeting of Phosphatidylserine by Monoclonal Antibodies Enhances Activity of Immune Checkpoint Inhibitors in Tumors. [View poster]

March, 2014: Keystone Symposium: Immune Evolution in Cancer

- Phosphatidylserine-Targeting Antibodies Induce M1 Macrophage Polarization, Promote Myeloid Derived Suppressor Cell Differentiation and Boost Tumor-Specific Immunity. [View poster]
- Phosphatidylserine Targeting Antibodies Enhance the Activity of Immune Checkpoint Inhibitors in Tumors. [View poster]

March, 2014: Keystone Symposium: HIV Pathogenesis - Virus vs. Host

- Phosphotidylserine-targeting antibody Triggers β-Chemokine Release from Monocytes by Cell-Cell Crosslinking and is a potent inhibitor of HIV-1 in vitro. [View poster]

March, 2014: ITOC-1 Immunotherapy of Cancer Conference

- Bavituximab: A Novel PS-Targeting Immunotherapy for the Treatment of Cancer. [View presentation slides]

June, 2013: ASCO Annual Meeting Posters

- Randomized, blinded, placebo-controlled phase II trial of docetaxel and bavituximab as second-line therapy in locally advanced or metastatic non-squamous non-small cell lung cancer. [View poster]
- Phase I clinical trial of bavituximab and paclitaxel in patients with HER2-negative metastatic breast cancer. [View poster]
- Randomized, open-label, phase II trial of gemcitabine with or without
bavituximab in patients with nonresectable stage IV pancreatic adenocarcinoma.  

**November, 2013: Society for Immunotherapy of Cancer Annual Meeting**

- Targeting of Phosphatidylserine by Monoclonal Antibodies Induces Innate and Specific Anti-tumor Responses.  
  View poster
- Phosphatidylserine-Targeting Antibody Induces M1 Macrophage Polarization, Promotes Myeloid Derived Suppressor Cell Differentiation, Boosts Tumor-Specific Immunity.  
  View poster

**April, 2013: AACR Annual Meeting**

- Phosphatidylserine-targeting antibody reactivates tumor immunity and destroys tumor vasculature in mice.  
  View poster
- Predicting Anti-tumor Responses to Phosphatidylserine Targeting Antibodies Using Tumor Imaging.  
  View poster
- Phosphatidylserine-Targeting ‘Betabodies’ for the Treatment of Cancer.  
  View poster

**May, 2012: New York Academy of Sciences Symposium**  
Phosphatidylserine Asymmetry and Cell Survival: Therapeutic Applications in Cancer and Infectious Disease

On May 1, 2012, the New York Academy of Sciences (NYAS) hosted a symposium covering the topics of the role that phosphatidylserine (PS) plays in suppressing immune response and therapeutic applications of targeting PS. Philip Thorpe, PhD, inventor or Peregrine’s PS-targeting antibody technology and scientific advisor to the company, gave the final presentation, titled, **Targeting Tumor Vasculature and Reactivating Tumor Immunity with Bavituximab**. The entire symposium including audio replay and presentation slides are available on the NYAS website here.
November, 2012: Society for Immunotherapy of Cancer Annual Meeting

- Targeting of Phosphatidylserine by Monoclonal Antibodies Induces Innate and Specific Anti-tumor Responses. [View poster]

April, 2012: AACR Annual Meeting Clinical Poster Presentations

- A phase Ib study of bavituximab plus carboplatin and pemetrexed in chemotherapy naïve stage IV non-squamous non-small cell lung cancer. [View poster]

- A Phase I Study of Bavituximab and Sorafenib in Patients with Advanced Hepatocellular Carcinoma. [View poster]

- Microparticle Generation and Activation after Treatment with Paclitaxel and Bavituximab Combination Therapy in Metastatic Breast Cancer. [View poster]

April, 2012: AACR Annual Meeting Preclinical Poster Presentations

- Tumor Detection and Measurement of Responses to Chemotherapy Using Human Phosphatidylserine Targeting Antibody Fragments. [View poster]

- Cure of castration-resistant prostate cancer in TRAMP mice by reactivating tumor immunity with a phosphatidylserine-targeting antibody. [View poster]

- Increased Fc-FcR Interaction of Human Phosphatidylserine Targeting Antibody Enhances Pro-Inflammatory and ADCC Mechanisms. [View poster]

- In Vivo Binding of chTNT-1/B Antibodies (Cotara) to DNA/Histone Complexes in Tumors Using Near-Infrared Optical Imaging. [View poster]
June, 2012: AACR Pancreatic Cancer Conference: Progress and Challenges

- A randomized, open-label phase 2 trial of gemcitabine with or without bavituximab in patients with previously untreated stage IV pancreatic cancer.  View poster

September, 2011: World Molecular Imaging Congress Poster Presentations

- Imaging of Human Tumor Xenografts in Mice Using Near-Infrared Fluorescent-Labeled Phosphatidylserine Targeting Antibodies  View poster...

- Multimodal Imaging of Exposed Phosphatidylserine in a Mouse Glioma Model  View poster...

April, 2011: AACR Annual Meeting Poster Presentations:

- Prostate Cancer: Targeting Phosphatidylserine to Improve Hormone Therapy of Prostate Cancer  View poster...

- Advanced Liver Cancer: Phosphatidylserine-Targeting Antibody Combined with Sorafenib has Strong Anti-Tumor Activity Against Human Hepatocellular Carcinomas in Mice  View poster...

- Mechanism of Action: Phosphatidylserine-Targeting Antibody Induces Differentiation of Myeloid-Derived Suppressor Cells into M1-Like Macrophages  View poster...
- **Prostate Cancer:** PS-Targeting Antibody Enhances Survival Benefit of Androgen Deprivation Therapy of Mice Bearing Syngeneic Prostate Cancer.

April, 2010: AACR Annual Meeting Poster Presentations:

- **Mechanism of Action:** Phosphatidylserine on Dying Tumor Cells Suppresses Dendritic Cell Activation and Inhibits Tumor Immunity: Reversal with PS-Targeting Antibody.

- **Imaging:** Phosphatidylethanolamine is a marker of tumor vasculature and can be used as a target for optical imaging.

- **Imaging:** Monitoring Tumor Response to Chemotherapy by *In Vivo* Real-Time Imaging of Phosphatidylserine-Targeting Antibodies.

**Bavituximab in Action**

Experiments in animals have shown that bavituximab recruits immune cells into the tumor environment.

**Before Therapy**

**After Therapy**

**Key**
- Blue: tumor cell nuclei
- Red: blood vessels
- Green: immune cells (macrophages)
Read about the growing body of published research validating bavituximab’s broad-spectrum potential...