Inflammatory Breast Cancer Alliances

Scripps Health Care, San Diego, California

MD Anderson Cancer Network held a half day Inflammatory Breast Cancer (IBC) Symposia with members of MD Anderson Cooper University Health Care in New Jersey, and Scripps Health Care in San Diego, CA to explore future collaborations in forming an IBC clinic at their locations. The meeting was held to educate both organizations in MD Anderson standard of care, ongoing clinical trials, basic and retrospective research accomplishments, patient advocacy and survivorship, advances in plastic surgery, and to discuss other areas of interest.

Dr. Thomas Buchholz, former Executive Vice President of MD Anderson, now Medical Director at Scripps MD Anderson Cancer Center had co-founded the world’s first IBC clinic, The Morgan Welch Inflammatory Breast Cancer Clinic at MD Anderson Cancer Center (MDACC) in Houston. He is now helping lead the way to establish and launch its first inflammatory breast cancer (IBC) clinic for patients with IBC at Scripps. The specialized multidisciplinary clinic is located at Scripps MD Anderson’s Torrey Pines Mesa facility and is geared specifically to diagnose, treat, and monitor IBC patients. Physicians at the new clinic will also be active in educating the public and primary care physicians about the signs and symptoms of this often-misdiagnosed disease. Joining Dr. Buchholz, as lead physicians with the Scripps MD Anderson IBC clinic, are surgeon Ayemoethu Ma, M.D., and medical oncologist Sonia Ali, M.D. All three are Scripps Clinic physicians. Additional physicians are expected to join the IBC clinic.

Dr. Vivian J. Bea, who received her training at MDACC in Houston, and is now a Breast Surgical Oncologist at MDACC at Cooper Division of Breast Surgical Oncology, is also moving forward with plans to expand clinical services for IBC patients who wish to be seen locally. Cooper coordinated a fast track clinic visit for IBC Patients which was launched in August 2018. The soft launch was successful and very encouraging. Plans to build an IBC Program from the ground up at Cooper were discussed at the IBC Symposium held February 2019.

The vision of a national MDA IBC network would leverage the high volume practice at MDACC Houston and provide options of care for patients closer to Cooper, Scripps and possibly other sites that may want to develop similar clinics in the future. A strategy to improve care for this rare disease and continued discussions on how to best develop and maintain a solid infrastructure across the country are ongoing.
IBC HIGH TEA / LITE BITES

In Honor of our
IBC Ambassadors, Advocates,
Patients & Caregivers

The 2018 IBC High Tea and Light Bites event was held Thursday, October 4, 2018. The event is held to honor our IBC Ambassadors, Advocates, Patients, and Caregivers. We are truly grateful to our ambassadors and advocates who contribute their personal time and effort to help fund and support the IBC Clinic and Research Program. We were especially honored to be joined by Honorable Sara Davis, former State of Texas Representative. All guest present were able to socialize with members of the Morgan Welch IBC Program, IBC Faculty, and IBC Research Team. A special thank you to Lilly USA, Dana Schuch and Delesa Sweet who provided the artwork for patients to draw and relax while enjoying the ambiance of music and food.

Photo Courtesy: Jangsoon Lee and Larry Coffer
An evening fundraiser to help raise awareness of Inflammatory Breast Cancer (IBC), and to raise funds for the IBC Boot Walk was held November 8, 2018. The fundraiser was chaired by Mrs. Phyllis Pittman of Phyllis Pittman Communications, Ltd. The event was generously underwritten by Debbie Stewart, Jenee Bobbora, Renee Jongebloed of the Erase IBC Foundation, and Phyllis Pittman. Mr. Forest Smith, owner of the Forest Club, was kind enough to allow the Morgan Welch IBC Program to host the evening fundraiser at no charge to the program. Mrs. Pittman used her personal time and resources to help make this event a huge success, and she personally invited Mrs. Susan Baker, wife of ex-senator James Baker and White House Chief of Staff for Ronald Reagan, to be the keynote speaker. Mrs. Baker, a cancer survivor, wrote a book "Passing it On" and spoke of her personal experience in battling cancer and the importance in continuing to seek a cure. The evening fundraiser was a huge success. We are grateful and thankful to all who contributed their personal time and monies to the event, without you we would cease to exist as a program.

The Morgan Welch Inflammatory Breast Cancer Research Program and Clinic

Your support is saving lives and making break-throughs!

The University of Texas MD Anderson Cancer Center Morgan Welch Inflammatory Breast Cancer (IBC) Research Program and Clinic is the first clinic in the world dedicated to fight against inflammatory breast cancer. IBC is an aggressive type of breast cancer that affects young women, especially young moms, as often as it affects grandmothers. It starts as a rash or red breast, is usually misdiagnosed as an infection, and is often missed on mammograms – sometimes when it is too late.

Our patients and advocates, working together, make this clinic and research program happen – and the effect is saving lives. Through grassroots donations and the support of the State of Texas, we have made great strides in understanding this disease and discovering new treatments. Our IBC patients are living longer today than before our clinic opened and have better outcomes than anywhere else in the country; however, a cure for all remains elusive for too many.

Our ultimate goal is to improve the survival of all IBC patients. Our mission is to reduce the suffering of IBC patients through translational research-driven, clinical medicine. We are poised to make great change.

We must defeat this disease.

Phyllis Pittman
Communications, LTD.
Philanthropy

April 24, 2019 - We were honored to be presented a check in the amount of $100,000 from the IBC Network Foundation raised by the Carter Lee Family in their biennial Hunt for Hope Adventure for Inflammatory Breast Cancer Research. Hunt for Hope is the signature event from the IBC Network Foundation now held around the country. The Houston events organized by the Carter Lee family are specifically allocated to research projects at MD Anderson. This year they raised funds to help in the research conducted by Dr. Naoto Ueno and Dr. Jangsoon Lee who are currently studying the inflammasome response in IBC - which is to study how non tumor cells in the breast influence the behavior of tumor cells.

November 10, 2018 – Boot Walk to End Cancer

The Annual Boot Walk to End Cancer, sponsored by MD Anderson Cancer Center, and held on Saturday, November 10, 2018 was very successful. Thanks to your support the 2018 Boot Walk to End Cancer raised over $2,000,000! One hundred percent of funds raised in this event are designated towards cancer research at our institution. Team “IBC Wranglers,” led by Jie Willey and Angela Alexander, were able to raise a total of $58,717.17 which will be used exclusively to support the IBC research program including patient assistance to participate in clinical trials. Members of the "IBC Wranglers" team included both staff and faculty, as well as IBC patient advocates and survivors, whom we wish to thank for all their hard work towards this cause. We'd love to have you join us this year as we begin to plan for the next Boot Walk in November. If you were not on the team last year but wish
to participate in future events, please contact us at ibcp@mdanderson.org and we will follow up with you later this spring/summer on how you can help.

IBC Patient Conference March 23, 2019

The IBC Patient Conference was organized by the Morgan Welch Inflammatory Breast Cancer (IBC) Program and hosted by Terry Arnold, Founder of the IBC Network. The conference was free for patients and caregivers who were interested in learning more about IBC research, treatments, and living well after diagnosis. IBC faculty and researchers participated in the conference as speakers and panelist giving the opportunity to patients and caregivers to ask the experts questions regarding this aggressive disease. Scholarships were provided by the IBC Network to patients who wanted to participate in the conference, and for those who could not make it the conference was live streamed on Facebook.

**IBC Faculty presented information as follows:**

Naoto T. Ueno, Professor, Breast Medical Oncology, UT MD Anderson Cancer Center, “Updates on Research in IBC”
Randa El-Zein, Professor of Radiology at Houston Methodist Research Institute, IBC Epidemiology, “What are we learning from the IBC Registry?”
Mark Schaverien, Professor of Plastic Surgery, UT MD Anderson Cancer Center, “Lymphedema Surgical Options and Reconstruction Strategies for IBC”

**Round Table and Panelist Discussions presented by UT MD Anderson IBC Faculty and Staff:**

Bora Lim, Assistant Professor, Breast Medical Oncology
Mediget Teshome, Assistant Professor, Breast Surgical Oncology
Amber Potter, APRN, IBC Multi-team clinic nurse practitioner
Terry Arnold – IBC Patient Advocate, IBC Network

**Recent Awards and Grants**

We congratulate the following individuals who have been recognized for their significant accomplishments in IBC research:

**Emily S. Villodre, B.Sc, M.Sc, Ph.D,** was awarded 3rd place at Basic Research Category of 8th Annual Postdoctoral Science Symposium, and the SABCS Basic Science Scholar Award.

**Jangsoon Lee, Ph.D.,** received the BCRF grant for “Developing a novel combination therapy of androgen receptor inhibitor.”
Yating Cheng, Ph.D., received a scholarship to attend the grant-writing workshop "Write Winning NIH Career Development Award Proposals" hosted by Scientific Publications.

Naoto T. Ueno, MD, Ph.D., FACP, was awarded the "2018-2019 MD Anderson's Distinguished Clinical Faculty Mentor Award"

Sangeetha Reddy, received the "CPRIT Recruitment Award of First-Time, Tenure-Track Faculty Members Award"

Yating Cheng, Ph.D., received the Sheskey Family Endowed Fellowship in Breast Cancer Research award.

Wendy Woodward, MD, Ph.D, received notification from MD Anderson Sister Institution Network Fund (SINF) that her application titled “Geographic and treatment response variation in gut and breast skin microbiome among women with locally advanced breast cancer” has been recommended for funding in the amount of $100,000 over a two-year period.

| THE 7TH ANNUAL HOUSTON ALUMNAE ASSOCIATION OF ZETA TAU ALPHA FELLOWSHIP AWARD IN INFLAMMATORY BREAST CANCER RESEARCH | Awarded To |
| --- |
| **Xiaoping Wang, Ph.D.**  
Assistant Professor  
Department of Breast Medical Oncology  
**Abstract:** Immune modulation with humanized anti-EGFR antibody panitumumab in an immunocompetent mouse model for inflammatory breast cancer  
**Authors:** Xiaoping Wang, Shan Shao, Troy Pearson, Yating Cheng, James M. Reuben, Debu Tripathy, and Naoto T. Ueno |

| **Yating Cheng, Ph.D.**  
Postdoctoral Fellow,  
Department of Breast Medical Oncology  
**Abstract:** TP-0903, an AXL kinase inhibitor, reduces inflammatory breast cancer aggressiveness and macrophage polarization through additional mechanisms that may include JAK2 and Aurora B  
**Authors:** Yating Cheng, Yohei Funakoshi, Xiaoping Wang, Steven L. Warner, David J. Bearss, and Naoto T. Ueno |

Recent Publications/Presentations

**Thrombocytosis as a prognostic factor in inflammatory breast cancer** was accepted for publication by Breast Cancer Research and Treatment. Kenichi Harano, Takahiro Kogawa, Evan Cohen, Dr. Lim, Dr. Reuben. Breast Cancer Research and Treatment, 166(3), 819-832. [https://doi.org/10.1007/s10549-017-4463-6](https://doi.org/10.1007/s10549-017-4463-6)

Androgen receptor expression on circulating tumor cells in metastatic breast cancer was accepted for publication by PLOS One. Takeo Fujii, James Reuben, Lei Huo, Jose Rodrigo Espinosa, Yun Gong, Rachel Krupa, Mahipal V. Suraneni, Ryon P. Graf, Jerry Lee, Stephanie Greene, Angel Rodriguez, Lyndsey Dugan, Jessica Louw, Bora Lim, Carlos Barcenas, Angela Marx, Debu Tripathy, Yipeng Wang, Mark Landers, Ryan Dittamore, and Naoto Ueno. PLOS ONE. 12. e0185231. 10.1371/journal.pone.0185231.


Eicosapentaenoic acid in combination with EPHA2 inhibition shows efficacy in preclinical models of triple-negative breast cancer by disrupting cellular cholesterol efflux was accepted for publication by Oncogene. Angie Torres-Adorno, Heidi Vitrac, Yuan Qi, Lin Tan, Kandice R. Levental, Yang-Yi Fan, Peiying Yang, Robert S. Chapkin, Bedrich L. Eckhardt, and Naoto Ueno. Oncogene, 38(12), 2135-2150. https://doi.org/10.1038/s41388-018-0569-5


A phase Ib study of entinostat plus lapatinib with or without trastuzumab in patients with HER2-positive metastatic BC that progressed during trastuzumab treatment was accepted by the British Journal of Cancer. Bora Lim, Rashmi Murthy, Jangsoon Lee, Summer Jackson, Toshiaki Iwase, Darren...
Non-phosphorylatable PEA15 reverts epithelial-mesenchymal transition (EMT) induced in triple negative breast cancer by regulating IL-8 expression was selected for poster competition by the 2018 Annual Postdoctoral Science Symposium (APSS). Jihyun Park, Gaurav Chauhan, Evan N. Cohen, Jangsoon Lee, Naoto T. Ueno, Venkata L. Battula, Debu Tripathy, James M. Reuben, Chandra Bartholomeusz

**Inflammatory Breast Cancer – CNS Treatment and Targets.** Presented by Wendy Woodward, MD., Ph.D. at the International Breast Cancer Conference in Spain September 2018

**Inflammatory Breast Cancer – a Role for Stroma.** Presented by Wendy Woodward, MD., Ph.D. at the Graduate School of Biomedical Sciences and at the Methodist Hospital in Houston. She also presented at the University of Austin, the University of Colorado, and at the Susan E. Donelan Hope for the Future Lecture at Dana Farber Boston.

**December 2018 SABCS Abstracts accepted and Presented**

**PEA15-AA, an unphosphorylatable mutant of PEA15, as a novel therapeutic gene for triple-negative breast cancer.** Jihyun Park, Gaurav Chauhan, Evan N. Cohen, Naoto T. Ueno, Venkata L. Battula, Debu Tripathy, James M. Reuben, Chandra Bartholomeusz

**Overcoming MEK Inhibitor resistance in triple-negative breast cancer by targeting myeloid cell leukemia-1 (MCL1), an anti-apoptotic protein.** Maria Gagliardi, Gaurav Chauhan, Mary Kathryn Pitner, Lakesla Iles, Yuan Qi, Lajos Pusztai, Debu Tripathy, Geoffrey Bartholomeusz, Chandra Bartholomeusz


**Immune modulation with humanized anti-EGFR antibody panitumumab in an immunocompetent mouse model for inflammatory breast cancer.** Xiaoping Wang, Shan Shao, Troy Pearson, Yating Cheng, James M. Reuben, Debu Tripathy, and Naoto T. Ueno. This is a poster presentation. It reported the establishment of the first IBC immunocompetent mouse model to study the tumor microenvironment and immune response.

**TP-0903 inhibits inflammatory breast cancer progression and M2 macrophage polarization**

Yating Cheng, Yohei Funakoshi, Xiaoping Wang, Steven L. Warner, David J. Bearss, and Naoto T. Ueno. This is a poster presentation. This study demonstrated the dual functions of TP-0903 in targeting both IBC cells and macrophages. In addition, we presented that STAT6 signaling is a key player of TP-0903 modulating macrophage polarization.

**March 2019 AACR Annual Meeting - Abstracts accepted and Presented**

**Humanized Anti-EGFR Antibody Panitumumab Inhibits Growth of Inflammatory Breast Cancer by Inducing Antitumor Immunity.** Xiaoping Wang, Shan Shao, Takashi Semba, Troy Pearson, James M. Re,
Debu Tripathy, Naoto Ueno. *This is an oral presentation. It reported the effects of panitumumab, a humanized anti-EGFR antibody, on IBC SUM149 tumor growth and tumor immune microenvironment in SUM149 humanized mouse model. It also reported the changes of cytokines/chemokines by panitumumab treatment.*

**Characterization of the LAR subtype triple negative breast cancer population.** James Crespo, Seth Sahil, Elizabeth Ravenberg, Lei Huo, Kenneth Hess, Lumarie Santiago, Beatriz Adrada, Gaiane Rauch, Damodaran Senthil, Rashmi Murthy, Jennifer Litton, Debu Tripathy, Naoto Ueno, Stacy Moulder, Bora Lim

**Characterization of a small molecule inhibitor for GD3 synthase (ST8SIA1), a novel target in breast cancer stem-like cells.** Appalaraju Jappupilli, Khoa Nguyen, Stanley Ly, Michael Andreeff, Prashen Chelikani, Venkata Lokesh Battula

**Evaluation of 6-mercaptopurine in a cell culture model of adaptable triple-negative breast cancer with metastatic potential.** Balraj Singh, Vanessa N. Sarli, Anthony Lucci

April 2019 The 5th Annual Immuno-Oncology Young Investigators’ Forum, Houston, Texas

**Humanized anti-EGFR antibody panitumumab inhibits tumor growth of inflammatory breast cancer by inducing antitumor immunity.** Xiaoping Wang, Shan Shao, Takashi Semba, Troy Pearson, James M. Reuben, Debu Tripathy, and Naoto T. Ueno. *This is an oral presentation. It reported the effects of panitumumab, a humanized anti-EGFR antibody, on IBC SUM149 tumor growth and tumor immune microenvironment in SUM149 humanized mouse model. It also reported the changes of cytokines/chemokines by panitumumab treatment.*

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**News/Events**

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<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
<th>Location/Address</th>
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<tbody>
<tr>
<td>May 18, 2019</td>
<td>Advanced Breast Cancer: Local Management and Other New Perspectives Conference</td>
<td>MD Anderson, Dan L. Duncan Building (aka Cancer Prevention Building) Conference Center, Floor 8 1155 Pressler Street Houston, TX 77030</td>
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<tr>
<td>May 2019</td>
<td>ZTA Fellowship Award Call for Abstracts</td>
<td>Submission dates: July 29, 2019-August 23, 2019</td>
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<td>Announcement</td>
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<td>Application form</td>
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<td>October 4, 2019</td>
<td>IBC High Tea / Lite Bites Event</td>
<td>Rotary House 1600 Holcombe Blvd., RHI.202abc Houston, TX 77030</td>
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<td>November 9, 2019</td>
<td>Boot Walk</td>
<td>Registration is now open. Please visit the Boot Walk website to register and kick start your fundraising. <a href="http://www.mdanderson.org/bootwalk">www.mdanderson.org/bootwalk</a></td>
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**facebook Live**

Join us monthly, every 3rd Thursday at Noon for a discussion with Dr. Naoto Ueno about medical oncology topics in IBC and clinical trials.
IBC Program Presentations (September 2018 – May 2019)

Hybrid epithelial/mesenchymal phenotype and cluster-based dissemination in IBC
Mohit Kumar Jolly, Ph.D.,
Postdoctoral Fellow, Center for Theoretical Biological Physics, Rice University

Quantitative Estrogen Receptor (ER) Expression Analysis and Gene Expression Analysis in ER+ IBC vs Non-IBC
Toshiaki Iwase, MD, Ph.D.
Postdoctoral Fellow, Breast Medical Oncology

Biomarker analysis plan in IBC
Bora Lim, MD
Assistant Professor
Breast Medical Oncology

Challenges and successes from radiosensitization studies of IBC
Omar Rahal, Ph.D.
Postdoctoral Fellow
Radiation Oncology

Immune modulation with humanized anti-EGFR antibody panitumumab in an immunocompetent mouse model for inflammatory breast cancer
Maggie Wang, Ph.D. (ZTA Awardee)
Assistant Professor, Breast Medical Oncology

TP-0903 inhibits inflammatory breast cancer progression and M2 macrophage polarization
Yating Cheng, Ph.D. (ZTA Awardee)
Postdoctoral Fellow, Breast Medical Oncology

Role of lymphatics and inflammation in IBC growth and metastasis: Insights from the novel xenograft model of IBC
Mihaela Skobe Ph.D.,
Associate Professor, Department of Oncological Sciences, Icahn School of Medicine at Mount Sinai

The impact of genetic ancestry and genomic aberrations on cell type origin and chemosensitivity of breast cancer: lessons learned from studying the normal breast
Harikrishna, Nakshatri, B.V.Sc., Ph.D.
Professor, Departments of Surgery and Biochemistry and Molecular Biology; Associate Director of Education and Co-Program Leader, Breast Cancer Program, IU Simon Cancer Center Indiana University School of Medicine

Guest Speakers

Rebastinib + Paclitaxel
Filip Janku, MD, Ph.D.
Associate Professor
Investigational Cancer Therapeutics
MD Anderson Cancer Center

IBC Research Collaboration with Egypt Challenges and Opportunities

Mona M. Mohamed, Ph.D.
Professor, Director of Cancer Biology Research Laboratory

Mohamed El-Shinawi, MD, FACS
Professor, General Surgery-Ain Shams University
Current Clinical IBC Trials Open for New Patient Enrollment

**Neoadjuvant (newly diagnosed):**

2016-0177 – A randomized phase II study of neoadjuvant Carboplatin/Paclitaxel (CT) versus Panitumumab/Carboplatin/Paclitaxel (PaCT) Followed by Anthracycline-containing regimen for newly diagnosed primary triple-negative inflammatory breast cancer

2016-0537 - A phase 1b study of neratinib, pertuzumab and trastuzumab with taxol (3HT) in metastatic and locally advanced breast cancer, and phase II study of 3HT followed by AC in HER2 + primary IBC, and neratinib with taxol (NT) followed by AC in HR+ /HER2- primary IBC

2018-0002 - Phase II study of combination ruxolitinib (INCB018424) with preoperative chemotherapy for triple negative inflammatory breast cancer

**Adjuvant (after surgery and radiation):**

2016-0096 – A phase II study of anti-PD1 (Pembrolizumab) in combination with hormonal therapy in patients with hormone-receptor (HR)-positive localized inflammatory breast cancer (IBC) who did not achieve a pathological complete response (pCR) to neoadjuvant chemotherapy

2018-0550 - Atorvastatin in triple-negative breast cancer (TNBC) patients who did not achieve a pathologic complete response (pCR) after receiving neoadjuvant chemotherapy, a multicenter pilot study

**Radiation:**

SWOG1706 - A phase II randomized trial of olaparib administered concurrently with RT vs RT alone for inflammatory breast cancer

**Metastatic IBC:**

2014-0034 – A phase II study using T-VEC for inflammatory breast cancer (IBC) or non-IBC patients with inoperable local recurrence

2014-0533 – A phase II study of anti-PD1 (MK-3475) therapy in patients with metastatic inflammatory breast cancer (IBC) or non-IBC triple negative breast cancer (TNBC) who have achieved clinical response or stable disease to prior chemotherapy.

2016-1096 – A Phase I Study of OTS167PO, a MELK inhibitor, to Evaluate Safety, Tolerability and Pharmacokinetics in Patients with Advanced Breast Cancer and Dose-Expansion Study in Patients with Triple Negative Breast Cancer.

2016-0890 – A phase II study of triple combination of Atezolizumab, Cobimetinib and Eribulin (ACE) in patients with chemotherapy resistant metastatic inflammatory breast cancer
Current Clinical IBC Lab Studies

2006-1072 – IBC Registry

PA12-0097 – Prognostic utility of CTCs assessed by Adnagen Technology and Clinical Outcome of Patients with Stage III Breast Cancer

PA14-0778 – Gene profiles in androgen-receptor-positive CTC in patients with metastatic breast cancer

PA15-1026 – Department of Breast Medical Oncology University Blood Bio-Repositories

PA16-0507 – Monitoring of CTCs in newly diagnosed metastatic breast cancer

PA17-0437 – Genomic profiling of therapy resistance in mTNBC using liquid biopsies

PA17-0503 – Breast tissue comparison - cancer vs normal

PA17-0975 - Defining Cell Types and States in Inflammatory Breast Cancer (Pending activation)

PA17-0542 – The clinical role of circulating adipose tumor cells and cancer associated macrophage like cells on obesity induced inflammation for patients with breast cancer

If you are interested in learning more about our clinical trials, or lab studies, please email the Morgan Welch Inflammatory Breast Cancer Research Program and Clinic directly at ibcp@mdanderson.org. We are happy to provide general information and eligibility guidelines for our clinical trials and lab studies.