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# Posters

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# Long-term survival case reports of two pediatric relapsed or refractory acute myeloid leukemia patients treated with bisantrene combination therapy

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**Background:** Bisantrene, an anthracene derivative topoisomerase II and telomerase-inhibitor, macrophage-activator without anthracyclines' induced-cardiotoxicity or MDR demonstrated historical CR in recurrent or refractory AML: 23% (Marty, 1985), 50% (Marty, 1987; Bezwoda, 1989) and 72% (Spadea, 1993). In pediatrics (Leblanc, 1994), 46% historical CR was reached in heavily pretreated patients. We report, two AML survivors cases, decades following the study.

**Case 1:** Patient S (female) born January 1977, diagnosed with AML type M3 in January 1984. Initially treated with multiple lines (cytarabine, daunorubicin, 6-mercaptopurine, methotrexate), relapsed in November 1984, treated in December 1984 with bisantrene 250mg/m2/day (7 days) followed by 6 consolidation cycles of amsacrine, cytarabine, reached historical CR in January 1985. Patient underwent two autologous BMT in 1985. Normal Cardiac ultrasound in May 1985. Post transfusion HIV infection treated in September 1997. Alive today, mother of 3 children.

**Case 2:** Patient A (female) born June 1977, diagnosed with AML type M1, t(8,21) in 1990, had multiple lines (cytarabine, mitoxantrone, VP-16, daunorubicin). BM cryopreservation in June 1991. Relapsed in November 1991. Following additional failed chemotherapy, received bisantrene 200mg/$m_2$/day (5 days) + VP16 100mg/$m_2$/day (5 days) + carboplatin 150mg/$m_2$/day (5 days) in December 1991, had historical CR in January 1992 with normal cardiac ultrasound. Received BM autograft after fractioned irradiation and cyclophosphamide in February 1992. Alive today, gave birth in June 2015.

**Conclusions:** Long-term case reports and published bisantrene efficacy results from prior salvage studies, support renewed interest in its clinical development as candidate with unique safety profile particularly appropriate in pediatric AML.

## Biography

Amir Sharaf is a Medical Doctor with additional experience in European Market Access of innovative pharmaceuticals, including early access of drug candidates in development for orphan indications and patients with rare diseases. His research interests include Immunology, Internal Medicine and Oncology. His research works focus on antibodies' diagnostic value in connective tissue diseases, as well as regulatory and economic requirements for the Market Access of Orphan and Innovative Therapeutics including Advanced Therapeutic Medicinal Products (ATMPs) in the EU. He has also been involved in the pricing of different molecules in Oncology and vaccination. Amir is CarthaGenetics® International Medical Manager and Business Development Director. He provides targeted methodology approaches for CarthaGenetics® projects, as well as scientific communications to physicians and health authorities worldwide. CarthaGenetics® is a company dedicated to the support of innovative treatments development and their access to patients in need worldwide. It was founded by Philippe Carteron de Balmont in 2004 based on his personal commitment to find innovative early patients access to Orphan Drugs. CarthaGenetics® is now a pioneer with one of the broadest experience in the field of Rare Diseases.

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## Characterization of pre-clinical models of luminal B breast cancer in orthotopic and bone metastasis settings

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Luminal B breast cancer is a hormone receptor (ER and/or PR) positive and HER2 positive or negative carcinoma with high proliferation rate and poor prognosis. Luminal B breast cancer has increased risk to relapse in incurable bone metastasis. Scarce availability of pre-clinical luminal B type of breast cancer bone metastasis models sets a challenge for development of more efficient treatments for luminal B breast cancer where therapeutic resistance is common. Aim of this study was to verify and compare the ER, PR and HER2 status in luminal B type orthotopic and bone metastasis xenograft models. BT-474 (ER+, PR+, HER2+) human breast ductal carcinoma cells were inoculated into the mammary fat pad or tibia bone marrow of female immunodeficient CIEA NOG mice, presenting orthotopic and bone metastasis models, respectively. The orthotopic study was performed with and without estradiol (E2) supplement and the bone metastasis study without E2 supplement. Tumor growth was followed for eight weeks and histopathological evaluation and ER, PR and HER2 immunoperoxidase stainings were performed at endpoint. The orthotopic tumors with E2 supplement expressed ER, PR and HER2. Without E2 supplement the tumors in the orthotopic and bone metastasis studies were ER and HER2 positive but PR negative. Orthotopic tumors without E2 grew only to 38% of the animals, whereas 100% take rate was observed with E2 supplement and in the bone metastasis study. This study highlights the importance of careful characterization of pre-clinical models when developing new cancer therapies. Focus should be addressed not only to primary tumors but also to bone metastases. The characterized orthotopic and bone metastasis models can be used to study new treatments for luminal B breast cancer, e.g. targeting the IGF-1 or FGF signaling pathways that are known to affect treatment resistance and cell proliferation.

### Biography

Anniina Luostarinen has graduated in Biomedical Sciences major from University of Turku in 2016. After upgrading her education from a Biomedical Laboratory Scientist who graduated in 2006, she has worked in Pharmatest Services, a preclinical contract research organization, concentrating in development of cancer and skeletal disease treatments. Her whole career has focused on the physiology of bone and the interaction of bone microenvironment and cancer. Particularly the bone histology as well as radiology is in her interest.

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# Angioimmunoblastic T-cell lymphoma: Case report of a diagnostic challenge presented as a lymphoproliferative syndrome

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Brazilian female patient, 51-year-old, born in the State of Bahia, rural worker, married, catholic, was living in São Paulo for two months. She was admitted to the Emergency Department at Santa Casa of São Paulo in October/2014 complaining of abdominal pain, nausea, vomiting, lymphadenomegaly, fever, night sweats and weight loss (10 kg) that had begun about three months ago. She smoked one pack of cigarettes per day for 36 years; however she denied any past medical history or agrotoxic exposure. The complete blood count (CBC) showed anemia, eosinophilia and thrombocytopenia. All the serologies for infectious diseases were negative, except for IgM EBV, which was positive. Abdominal ultrasound showed homogeneous hepatosplenomegaly, periportal lymphadenomegaly, and simple cyst in the right kidney and small amount of ascites. CT scan of the chest showed small nodules in the lungs, small amount of pericardial effusion, increased number of lymph nodes in mediastinal, tracheal and infracarinal regions, increased size of lymph nodes in hilar region bilaterally as well as in the chains of diaphragm, clavicles, and in the axillaries chains. Myelogram ruled out Leishmaniasis. The bone marrow biopsy was only hypercellular, showing hyperplasia of the three myeloid types. Lastly, the cervical lymph node biopsy was done with immunophenotyping: CD45 diffusely positive; CD3 positive in the small and medium cells; CD20 positive in immunoblasts; CD4 positive in most of the lymphocytes–T-cell lymphoma with angioimmunoblastic features.

## Biography

Leticia Alves Antunes has completed her Medical Degree from Federal University of Sao Carlos and is a former Resident in Internal Medicine from Santa Casa de Sao Paulo, Brazil. She is now applying for Medical Residency in the United States.

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## Immunohistochemical expression of VEGF in relation to other pathological parameters of breast carcinoma

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**Background:** Several molecular markers have been detected that are important in clinical aspect of malignancies especially in breast cancer. More recently, the expression of vascular endothelial growth factor (VEGF), the most potent endothelial cell mitogen and also a regulator of vascular permeability, is emerging as a prognostic marker in patients with several types of cancer including breast cancer. This study assessed the expression of VEGF in a series of breast cancers in correlation with HER-2/neu and steroid receptors (ER and PR) in standard clinicopathological parameters in an attempt to clarify its potential clinical importance in Iraqi females of Middle Euphrates area.

**Findings:** The present investigation was performed over a period starting from September 2011 through September 2012. Formalin-fixed, paraffin-embedded blocks from 52 patients with breast cancer (44 ductal and eight lobular carcinoma) were included in this study. A group of 20 patients with fibroadenoma was included as a comparative group, and 20 samples of normal breast tissue sections were used as controls. Labeled streptavidin-biotin (LSAB+) complex method was employed for immunohistochemical detection of VEGF, HER-2/neu, ER and PR. The detection rate of VEGF, HER-2/neu, ER and PR was 59.62%, 36.96%, 34.62% and 36.54% respectively. There was a significant difference in immunoexpression between ductal and lobular carcinoma, but not significantly different among tumor sizes, tumor grades, axillary lymph node involvement and age of the patients. However, VEGF was positively correlated with tumor grade, tumor size, nodal involvement and HER-2/neu, but negatively correlated with ER and PR, which show the most unfavorable bio pathological profile.

**Conclusion:** VEGF overexpression play an important role in pathogenesis of breast carcinoma evolution, as its positivity associated with biologically aggressive tumors, so incorporation of this biomarker with other parameters into a prognostic index will more accurately predict clinical outcome and determine the effects of anti-cancer therapy.

### Biography

Mais M Salim Mohammedhasan Almurtadha has completed her Master's degree in Histopathology from Al Kufa University and PhD degree in Histopathology from Iraqi Board for Medical Specialization and is a fellow of the Iraqi Board for Medical Specialization in Histopathology. Since 2014, she is a Lecturer in Faculty of Medicine, Kufa University. She has published two papers in reputed journals.

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# Antimicrobial activity of lactic acid bacteria isolated from camel raw and fermented (Garis) milk against pathogenic bacteria isolated from urinary tract infected patients, Sudan

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This was a cross-sectional study carried out to isolate, identify and test the antimicrobial activity of lactobacillus species against pathogenic bacteria. Three strains of Lactobacillus species (*Lactobacillus acidipiscis, Lactobacillus rhamanosus* and *Lactobacillus lactis* subsp. *hordinae*) were isolated from camel milk, and 30 bacterial species were isolated from urinary tract infected patients by using various cultured media. Strains isolated were characterized by phenotypic, physiological and biochemical properties. Identification of Lactobacilli species was confirmed by sequencing of 16S rRNA gene. Well diffusion method was used for antimicrobial activity of Lactobacillus species and commonly used antibiotic, against pathogenic bacteria. Results showed that Escherichia coli was the most frequently isolated urinary pathogen 9 (30%) followed by *Klebsiella pneumoniae* 8 (26.7%), *Enterococcus faecalis* 6 (20%), *Staphylococcus aureus* 5 (16.7%), *Pseudomonas aeruginosa* 1 (3.3%) and *Proteus mirabilis* 1 (3.3%). Most of the isolated organisms were resistant to co-trimoxazole 24 (80%), norfloxacin 12 (40%), ciprofloxacin, nitrofurantoin 10 (33.3%) and chloramphenicol 10%. Four (13.3%) isolates of pathogenic bacteria were susceptible to *Lactobacillus lactis* subsp. hordinae activity, followed by 2 (6.9%) isolates susceptible to *Lactobacillus rhamanosus* and 1 (3.3%) susceptible Lactobacillus acidipiscis, *Lactobacillus lactis* subsp. hordinae could be used for the treatment and prevention of multidrug resistant urinary tract infected bacteria.

## Biography

Nahed Adam Abdalla Jebrel has completed her MA from National University of Sudan and BSc in Histopathology and Cytology from Sudan International University. She has published one paper in a reputed journal and has expertise in DNA sequencing and sequences analysis, NGS sequencing and data analysis, bioinformatics techniques (Modeling, Mutation analysis, immunoinformatics (BLAST and NCBI)), PCR technique and DNA sequencing and sequences analysis.

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