MADRID 2017 ESMO congress

HOW MY ESMO FELLOWSHIP AND THE LEADERS GENERATION PROGRAM IMPACTED MY CAREER

Leticia De Mattos-Arruda, MD, PhD

Vall d'Hebron Institute of Oncology, Barcelona, Spain

ESMO Translational Research Fellowship recipient 2010-12

Leaders Generation Programme – class of 2017

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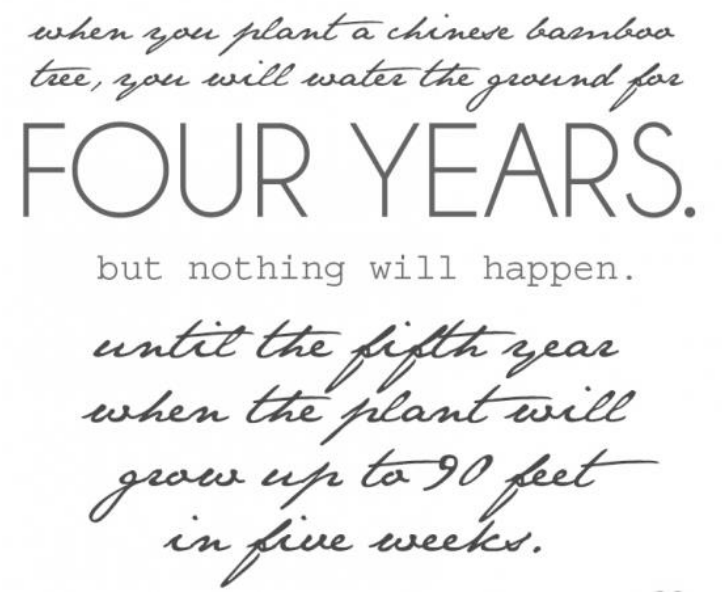
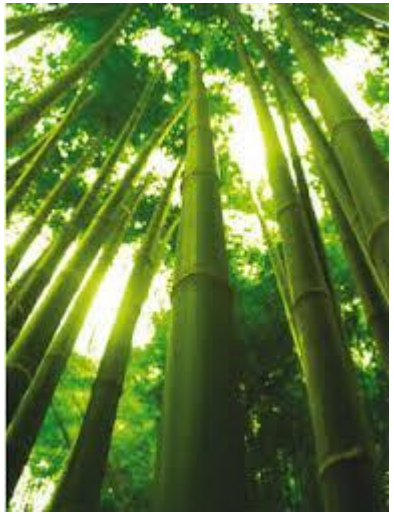
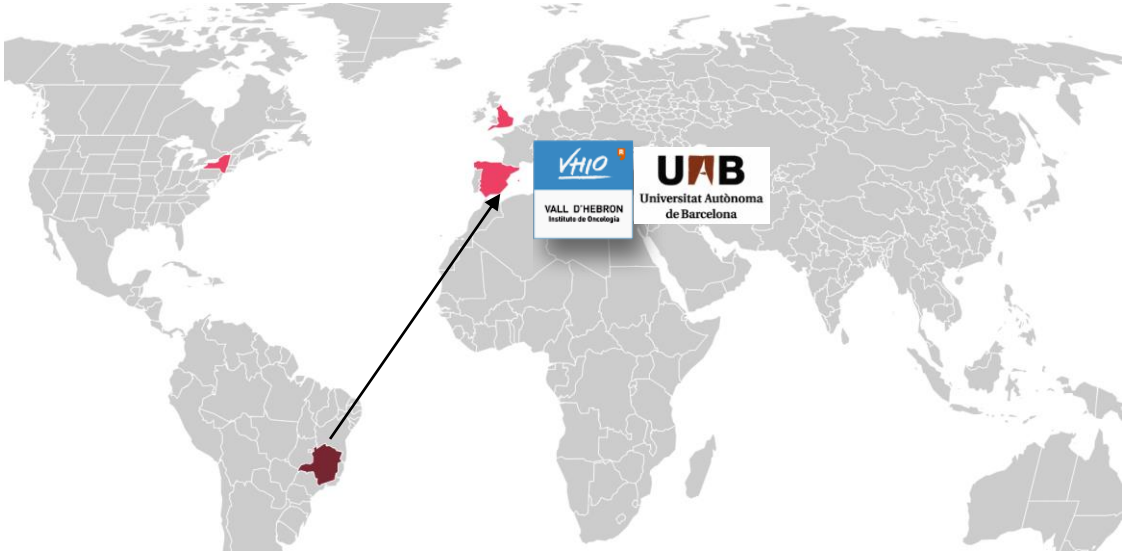
The story of the Chinese Bamboo Tree





Fellowship: foundation for the future academic life

My path



Med School | Residency | **Fellowships** | PhD | Post Doc → Junior PI Clinician-Scientist

TRU visit

Want I wanted

VHIO VALL D'HEBRON Institute of Oncology

Translational Research towards Precision Oncology

PRECLINICAL RESEARCH
From the preclinical side, results from the laboratory are rapidly applied to patients.

TRANSLATIONAL RESEARCH
Translational research is the fastest route to offering effective alternative treatments to patients. This type of research is only possible thanks to the coexistence of researchers from two distinct areas: clinical research, closely involved with the patients and their treatments; and basic research, carried out in laboratories.

CLINICAL RESEARCH
From the clinical side, samples from patients are analyzed and studied in the laboratory.

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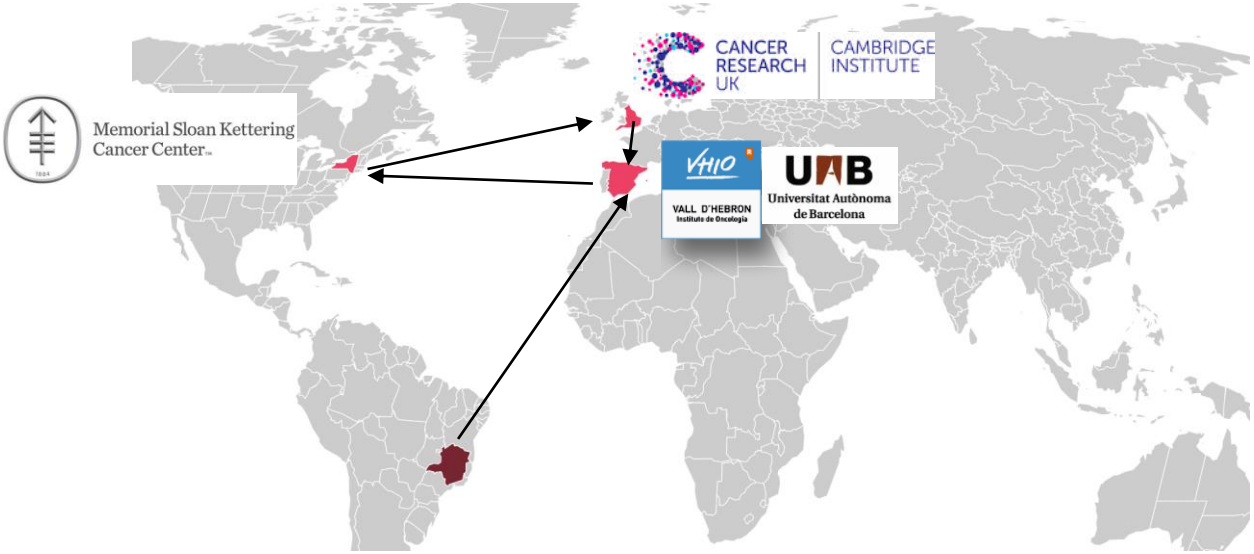
My path



Med School | Residency | **Fellowships** | PhD | Post Doc → Junior PI Clinician-Scientist

TRU visit

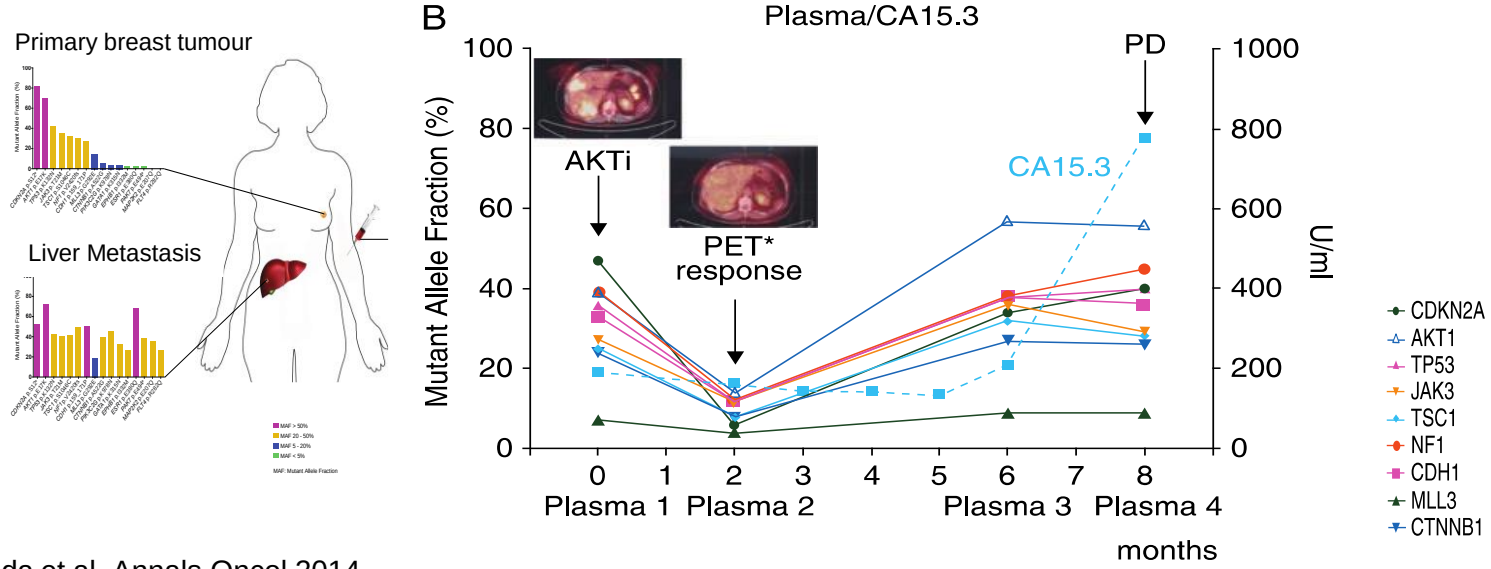
Leaders generation Program

ESMO Translational Research Fellowship
How it impacted my career

- Learned about scientific thinking
- Obtained experiences and skills to be prepared for my future endeavors (PhD) and then to become a researcher
- Worked with leaders that inspired me
- Always had something new to learn and accomplish

Today: applications of ctDNA Characterisation and Monitoring

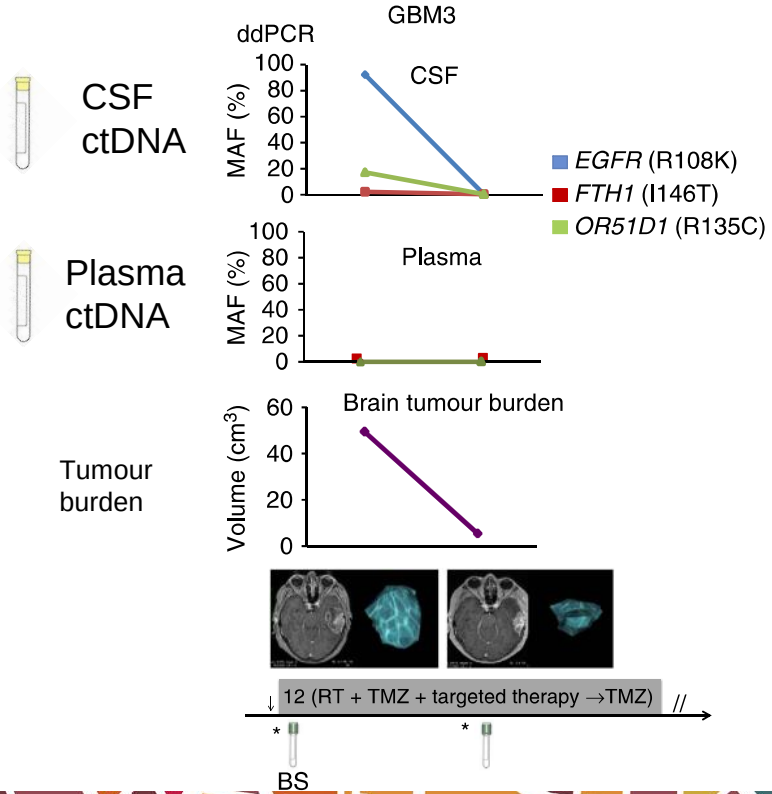
Longitudinal monitoring during the course of AKT targeted therapy



De Mattos-Arruda et al. Annals Oncol 2014

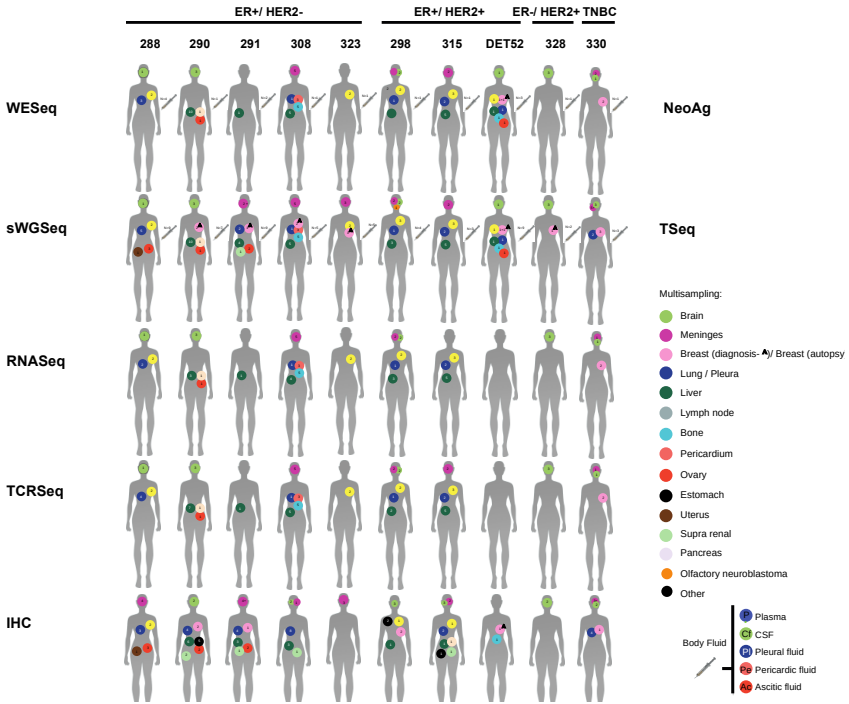
CSF ctDNA better represents the genomic alterations of brain tumours than plasma

Glioblastoma



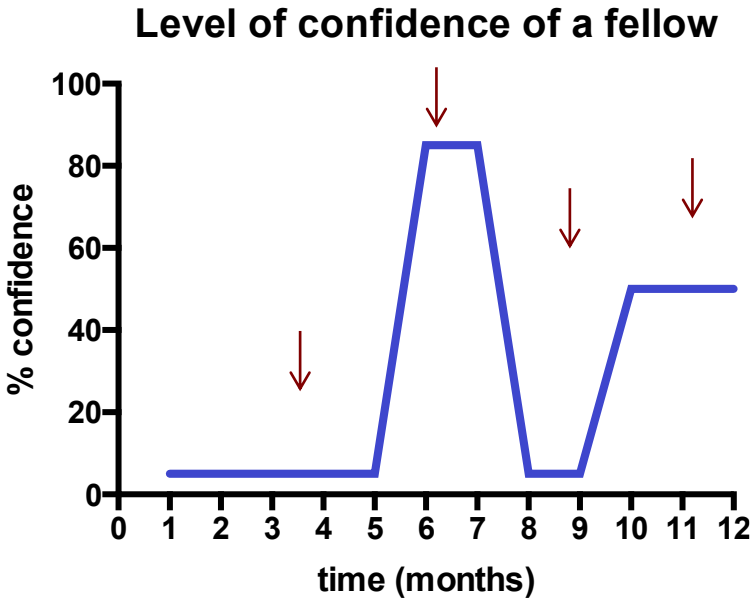
De Mattos-Arruda et al Nature Comm 2015

The integrated genomic and immune landscapes of lethal metastatic breast cancer



Caldas et al AACR – Plenary session 2017

Not easy but…
….. making small contributions to the field



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Not easy but…
….. making small contributions to the field

Nature Reviews Clinical Oncology **10**, 377-389 (July 2013) | doi:10.1038/nr

Circulating tumour cells and cell-free DNA as tools for managing breast cancer

Leticia De Mattos-Arruda, Javier Cortes, Libero Santarpia, Ana Vivancos, Josep Tabernero, Jorge S. Reis-Filho & Joan Seoane

Circulating blood biomarkers promise to become non-invasive real-time surrogates for tumour tissue-based biomarkers. Circulating biomarkers have been investigated as tools for breast cancer diagnosis, the dissection of breast cancer biology and its genetic and clinical heterogeneity, prognostication, prediction and

EDITOR'S CHOICE

Capturing intra-tumor genetic heterogeneity by *de novo* mutation profiling of circulating cell-free tumor DNA: a proof-of-principle FREE

L. De Mattos-Arruda, B. Weigelt, J. Cortes, H. H. Won, C. K. Y. Ng, P. Nuciforo, F.-C. Bidard, C. Aura, C. Saura, V. Peg S. Piscuoglio, M. Oliveira, Y. Smolders, P. Patel, L. Norton, J. Tabernero, M. F. Berger, J. Seoane, J. S. Reis-Filho

Annals of Oncology, Volume 25, Issue 9, 1 September 2014, Pages 1729–1735,

nature COMMUNICATIONS

Cerebrospinal fluid-derived circulating tumour DNA better represents the genomic alterations of brain tumours than plasma

Leticia De Mattos-Arruda[1,2,3], Regina Mayor[1], Charlotte K.Y. Ng[2], Britta Weigelt[2], Francisco Martínez-Ricarte[3,4], Davis Torrejon[1], Mafalda Oliveira[1], Alexandra Arias[1], Carolina Raventos[1], Jiabin Tang[5], Elena Guerini-Rocco[2], Elena Martínez-Sáez[4], Sergio Lois[4], Oscar Marín[4], Xavier de la Cruz[4,6], Salvatore Piscuoglio[2], Russel Towers[7], Ana Vivancos[1], Vicente Peg[4], Santiago Ramon y Cajal[3,4], Joan Carles[1], Jordi Rodon[1], María González-Cao[8], Josep Tabernero[1,3], Enriqueta Felip[1,3], Joan Sahuquillo[3,4], Michael F. Berger[5,9], Javier Cortes[1,3], Jorge S. Reis-Filho[2] & Joan Seoane[1,3,6]

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ESMO Leaders Generation Programme class of 2017

ESMO Leaders Generation Programme class of 2017

- Aimed at building your confidence in your professional interaction with ESMO, important stakeholders including regulatory agencies, international scientific societies and industry leaders

- Designed to offer you tools to help you get optimal results by helping you build your professional position and ability to motivate the people you work with

- An opportunity for close networking between participants from across Europe as well as with ESMO leaders

ESMO Leaders Generation Programme class of 2017

LEAN IN

WOMEN, WORK, AND THE WILL TO LEAD

SHERYL SANDBERG

ESMO GOOD SCIENCE BETTER MEDICINE BEST PRACTICE

Women for Oncology

A dynamic network of women oncology professionals

#women4onco

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Chicken or Eagle? The Choice is Ours

Fellowship, leadership: choices we can make

ESMO is giving us opportunities to develop our skills for flying higher

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Acknowledgements

ESMO GOOD SCIENCE BETTER MEDICINE BEST PRACTICE

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MSKCC

Jorge Reis-Filho and lab

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