

EADC Resident and Research Fellow Section (RRFS) Exchange through internship programs

Name and location EADC hosting
center **Ace Alzheimer Center Barcelona**

Link to center's website
<https://www.fundacioace.com/en>

PI of the EADC hosting center

Prof. Mercè Boada, MD, PhD

Neurologist

Chief Medical Officer

Distinguished Professor at the Universitat Internacional de Catalunya, Barcelona

PI of CIBERNED in neurodegenerative diseases

Contact person of the EADC hosting center

Dr. Yahveth Cantero Fortiz, MD, MSC

Research Associate

Associate Professor

Ace Alzheimer Center Barcelona

ycantero@fundacioace.org

Description of the center

Introduction

Ace Alzheimer Center is a recognized leader in cognitive care, renowned for its solid dedication to diagnostic precision, treatment efficacy, research innovation, training, and public awareness. Our sphere of expertise encompasses the entire spectrum of cognitive conditions, ranging from normal cognitive function to the complexities of mild cognitive impairment and dementia.

Our multidisciplinary team, comprising neurologists, geriatricians, neuropsychologists, social workers, and nursing professionals, collectively make the mission of Ace Alzheimer Center possible. We integrate clinical experience with the scientific rigor of basic, clinical and social research and we participate in multiple national and international research projects.

Ace Alzheimer Center is formed by 6 functional units: Daily Care Unit, Diagnostic Unit, Research Unit, Educational Unit, Neuromodulation Unit and Therapeutic Apheresis Unit.

Daily Care Unit

Established in 1991, the Alzheimer Educational Center (ACE) stands as the pioneer of Daily Care Centers in Spain. Initially conceived as a Day Hospital in October 1992, Ace underwent an evolution, culminating its transformation into a government-affiliated specialized therapeutic Day Center for individuals afflicted with dementia in October 1993. Actually, housed within the Daily Care Unit, these services encompass the Memory Workshops, the Day Hospital, and the Day Center. The Unit holds an approximate of 80 users in the Day Hospital, 168 in the Day Center and 63 in the Memory Workshops, per year each.

Diagnostic Unit

Established in 1995, it operates as an independent unit focused on neurodegenerative diseases, providing tailored care and comprehensive assistance for individuals affected by cognitive impairment, Alzheimer's, or other dementias. The unit offers a multidisciplinary approach with diagnostic services, ongoing monitoring, pharmacological and non-pharmacological treatments, personalized guidance, family-oriented support, training, and caregiver assistance. The unit receives more than 8.000 patients per year, of whom 2.000 are new patients.

Research Unit

Research serves as a foundational cornerstone within the realm of Ace Alzheimer Center Barcelona. In 2006, the establishment of the Research Unit formalized the center's resolute dedication to addressing its scientific endeavors in a holistic manner. Throughout the years, this unit's trajectory and output have solidified its standing as a notable influencer on both national and international fronts. Its impact is evidenced not only by the extensive volume of conducted clinical trials but also by its distinction as the possessor of Europe's largest collection of genetic samples for Alzheimer's research. At the heart of this unit lies a central mission: the advancement of dementia knowledge through a comprehensive and interdisciplinary lens. With this core objective, the unit is organized into five principal programs: Applied (clinical trials), Genomics, Clinical, Medical, and Social Psychology. The unit participate in 25 active clinical trials, with more than 350 patients included.

Therapeutic Apheresis Unit

In 2021, the Ace Alzheimer Center Barcelona, in collaboration with Grifols, open the Alzheimer Management by Albumin Replacement (AMBAR) programme. This pioneering approach introduces an innovative treatment for individuals in the mild to moderate stages of Alzheimer's that has shown substantial promise in decelerating the advancement of the disease. The unit holds more than 75 patients per year.

Educational Unit

The Educational Unit was formed to respond to the needs specific to family caregivers of people with dementia. It started offering structured training and support groups enhancing caregivers' understanding, skills, and emotional well-being. This unit has ground significantly during the last years, nowadays comprising various components: Internal Training (designed to enrich the knowledge and skills of professionals within the

organization), External Training (Barcelona-Pittsburgh Conference, Global Research Summit), Sensitization of Society and Caregivers Classroom.

Neuromodulation Unit

The Neuromodulation Unit is at the forefront of pioneering interventions, offering innovative approaches to address cognitive disorders and elevate the quality of care for individuals and their families. It encompasses advanced techniques in cognitive care: Magnetic Transcranial Stimulation (TMS) and Direct Transcranial Stimulation (tDCS).

Internship program

Optimal duration of the internship: 2 or 4 weeks

The Neurology Internship Programme offers a platform for individuals seeking a comprehensive immersion into the realm of cognitive care. By merging clinical involvement with research exploration, this program provides participants with an opportunity to cultivate an understanding of neurology's role in addressing cognitive disorders.

Components of the Programme

- **Clinical Engagement:** Interns will gain hands-on experience by shadowing our experts, acquiring insights into diagnostic methodologies, treatment modalities, and patient interaction.
- **Research Integration:** Interns will become integral contributors to our dynamic research initiatives, actively participating in national and international research undertakings.
- **Guided Mentorship:** Our team of neurologists, geriatricians, and other specialists will serve as mentors, providing personalized guidance to ensure the assimilation of knowledge, adherence to best practices, and the embodiment of Ace Alzheimer Center's holistic ethos.
- **Educational Enrichment:** Interns will have access to educational seminars, workshops, and academic discussions. These sessions cover a broad spectrum of topics, spanning diagnostics, treatment advancements, ethical considerations, and more.
- **Collaborative Environment:** Interns will engage in collaborative activities alongside a diverse cohort of professionals. This interaction cultivates interdisciplinary dialogue, fostering innovation and comprehensive cognitive care solutions.

Objectives of the Programme

General Objectives:

- Comprehend and acquire the knowledge and competencies essential for clinical and research practices in the comprehensive management of cognitive disorders and dementia.

Specific Objectives:

Develop proficiency and expertise in the following domains:

- Recognize prevalent cognitive disorders in the adult population.
- Master the accurate execution of neurological clinical histories and cognitive assessments.
- Understand diagnostic protocols and the significance of neuropsychological evaluations.
- Identify tools for early-stage diagnosis.
- Familiarize yourself with biomarkers employed in Alzheimer's disease diagnosis.
- Grasp the methodology behind determining the progression of cognitive pathology.
- Recognize the importance of a holistic diagnostic and treatment approach, orchestrated by a multidisciplinary team.
- Gain insight into therapeutic options and disease progression.
- Acquire knowledge of pharmacological and non-pharmacological strategies to manage symptoms associated with cognitive disorders.
- Comprehend the care model that seamlessly integrates clinical practice with research.
- Familiarize yourself with prominent research avenues and cultivate proficiency in both basic and clinical research methodologies.
- Engage actively in daily discourse, participating in the analysis of clinical cases handled within the Diagnostic Unit.

[Neurology Internship Programme Schedule](#)

2-WEEK PROGRAMME OPTION:

Week 1: Diagnostic Unit and Neuromodulation Unit

Welcome and Introduction to Ace Alzheimer Center;

Clinical Department Tour and Introduction to Multidisciplinary Team;

Neurology

Clinical Observations: Patient Consultations and Evaluations;

Overview of Cognitive Disorders and Alzheimer's disease;

Neuropsychology

Neuropsychological Assessment Techniques and Cognitive Assessment Tools;

Clinical application of NBACE diagnostic battery;

Online use of Neuropsychological Assessment Tools,

Social work

Social work Assessment with families at Ace;

Caregiver support group observation

Neuromodulation Unit

Neuromodulation techniques for neurodegenerative disease overview;

Ace Neuromodulation approach and treatment observations;

Week 2: Daily Care, Therapeutic Apheresis Unit, Research Experience

Ace Day Hospital and Day Center visit and experience;
Ace therapeutic apheresis center visit and treatment observation;
Introduction to Research at Ace Alzheimer Center;
Clinical Trials screenings and follow-up at Ace;
Laboratory visit, biomarkers and other CSF-blood tests;
Pharmacy visit, clinical trials drugs preparations and controls

4-WEEK PROGRAMME OPTION:

Week 1: Diagnostic Unit - Neurology

Welcome and Introduction to Ace Alzheimer Center;
Clinical Department Tour and Introduction to Multidisciplinary Team;
Clinical Observations: Patient Consultations and Evaluations;
Overview of Cognitive Disorders and Alzheimer's disease;
Diagnostic Techniques in Cognitive Assessment Tools;
Pharmacological and Non-Pharmacological Interventions;
Case Discussions: Treatment Planning and Patient-Centric Approach

Week 2: Diagnostic and Neuromodulation Unit - Neuropsychology

Neuropsychological Assessment Techniques and Cognitive Assessment Tools;
Clinical application of NBACE diagnostic battery;
Online use of Neuropsychological Assessment Tools,
Addressing Challenging Cases in Cognitive Care;
Neuromodulation techniques for neurodegenerative disease overview;
Ace Neuromodulation approach and treatment observations;
Case Discussions: Neuropsychological diagnose

Week 3: Daily Care and Therapeutic Apheresis Unit -

Social work Assessment with families at Ace;
Caregiver support group observation;
Ace Day Hospital and Day Center visit and experience;
Therapeutic Apheresis in neurodegenerative disease overview;
Ace therapeutic apheresis center visit and treatment observation;
Case Discussions: Social approach

Week 4: Research Experience and Engagement

Introduction to Research at Ace Alzheimer Center;
Clinical Trials screenings and follow-up at Ace;

Laboratory biomarkers tests and Pharmacy drugs preparations;
Ace Basic research center visit;
Current research projects at Ace overview;
Addressing Challenging in Cognitive decline Clinical Trials designs.

Programme Daily Activities

- 8:00 AM - 9:00 AM: Clinical Grand Rounds and Case Presentations

Analyze diagnostic approaches, treatment strategies, and holistic patient care plans with a multidisciplinary team of Neurologists, Neuropsychologists and Social workers
- 9:00 AM - 3:00 PM: Clinical Consultations and Evaluations

Under the guidance of professionals, actively observation and interaction will be encourage with patients at consultations. The aim is to gain insights into the diagnostic, treatment discussions, and an integral care approach.
- 4:00 PM - 5:30 PM (Every Tuesday): Clinical Session

Every Tuesday, this session offers a space to get theoretical knowledge and actual debates in the dementia field from internationals experts.

To conclude

The Ace Alzheimer Center Barcelona can offer a comprehensive approach to diagnosing and treating patients with dementia and cognitive impairments, encompassing not only a medical perspective but also a social point of view. Additionally, can offer participation in various clinical research projects, encompassing commercial drug trials, noninvasive neuromodulation or plasmapheresis treatment, and biomarker research activities. We believe that the residents and fellows we may receive will benefit from this experience.

Resident and Research Fellow Evaluation

Participation in Case Presentations

As part of the evaluation of the Neurology Internship Programme at Ace Alzheimer Center, interns will have to present a Case of interest at the daily Case Presentation meeting. These presentations are useful to evaluate the critical thinking, organization, time management and expression of the presenter, as a critical component of the neurology-learning journey. The Fellow's case presentation will have the support of the mentor neurologists, enabling interns to comprehensively assess, diagnose, and strategize treatments for cases encountered within the Diagnosis Unit.

Participation in Daily Activities

The evaluation process will likely consider how well each intern demonstrates these qualities in their day-to-day interactions and tasks. The goal is to ensure that interns not only gain clinical knowledge but also develop the professional skills and attitudes necessary for a successful career in neurology. This topic will be taken in consideration: initiative and attitude toward work, judgment in decision-making, reliability, ability to learn, participation and compromise.