

*Barcelona, Spain*

Annual Congress of the  
European Association of Nuclear Medicine

October 12 – 16, 2019  
Barcelona, Spain

## **Joint Symposium 6**

Translational Molecular Imaging & Therapy + Cardiovascular + Inflammation & Infection Committee /  
American Heart Association (AHA)

**Sunday, October 13, 14:30-16:00**

## **Session Title**

**Imaging Inflammation as Major Determinant of Cardiovascular Diseases - New Tracers and Clinical Applications**

## **Chairpersons**

Frank M. Bengel (Hannover, Germany)

Viviany R. Taqueti (Boston, United States of America / AHA)

## **Programme**

14:30 - 14:50 James T. Thackeray (Hannover, Germany): New Concepts, New Targets

14:50 - 15:10 Chiara Lauri (Rome, Italy): SPECT and PET in Cardiac Infection and Inflammation

15:10 - 15:30 Federico Caobelli (Basel, Switzerland): PET Imaging of Inflammatory Alterations in Ischaemic and Non-Ischaemic Disease

15:30 - 15:50 Viviany R. Taqueti (Boston, United States of America / AHA): A Clinical Perspective

15:50 - 16:00 Round Table, Final Discussion

## **Educational Objectives**

1. To learn new advances in imaging inflammation in cardiovascular diseases
2. To provide a multidisciplinary approach from bench to bedside in the imaging of cardiac inflammation
3. To allow for an exchange of information between preclinical scientists, imaging experts and clinical cardiologist to lead future research projects

## **Summary**

There is increasing evidence in the literature of the causal role of immune-inflammatory response in the occurrence of highly diverse cardiac diseases, not limited to infection related ones, such as atherosclerosis and after ischaemic events. While needed for appropriate repair, suppressed or excessive inflammation also contributes to the risk of plaque rupture, further myocardial damage, infarct instability or subsequent left ventricular remodelling. As such, manipulating the inflammatory response may be a crucial therapy strategy in the future, able to prevent cardiovascular events. The pathophysiological mechanisms of inflammation recognize many different potential molecular targets,

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also with theranostic potential, which can be effectively traced by molecular imaging. Development of novel and specific therapies to modulate inflammation may be aided by targeted imaging agents, which provide not only a surrogate indicator of therapeutic efficacy, but also identify the appropriate targeting and timing of optimal treatment. Common targets for imaging and therapies may also introduce a new paradigm in clinical evaluation, where imaging endpoints may serve as ancillary indicators of therapeutic success or failure in clinical trials. This approach may also assist in the selection of appropriate patient populations for a specific intervention, working toward personalized precision medicine. This session will address evolving approaches for molecular imaging in imaging inflammation from a multidisciplinary point of view, wherein different professionals (i.e. clinical cardiologists, clinical imaging experts and preclinical scientists) will discuss the state-of-the-art and provide perspective on the design and execution of molecular imaging research in cardiovascular disease.

#### **Key Words**

Molecular targets in myocardial inflammation; Cardiovascular research; Culprit coronary plaques; Endocarditis; Post-infarction alterations