

## Einladung zum Physiologischen Seminar

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<https://cvscience.aviesan.fr/cv/1595/albano-c-meli>



## Patient-derived cells and organ-on-chip to model neuro-cardiopathies

*Abstract.* Cardiovascular diseases are the leading cause of mortality and morbidity worldwide, with approximately 18.6 million deaths annually. These diseases require advanced research to improve diagnostics and therapies. My previous work has helped elucidate early pathological mechanisms related to intracellular calcium dysfunction in rare familial arrhythmic syndromes, which sometimes also have a neurobehavioral impact. In Duchenne cardiomyopathy (DMD), we highlighted the crucial role of intracellular calcium dysfunction as an early molecular marker contributing to fibrosis, senescence, and hypertrophy of cardiomyocytes in patient-derived cardiomyocytes. We demonstrated that preventing calcium leak prevents the development of cardiomyopathy in several in vitro DMD patient-derived models. This work led to the technological creation of a patient-derived neurocardiac organ-on-chip, with the patient's molecular and cellular fingerprint. It offers an innovative platform to study the interaction between neurons and cardiomyocytes in healthy and pathological states.

Datum: **05. November 2024**

Ort: **Hörsaal G**

Gebäude: **I01-H0-1130**

Zeit: **16 Uhr c.t.**

*Gäste sind herzlich willkommen!*

**Ansprechpartnerin:**

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