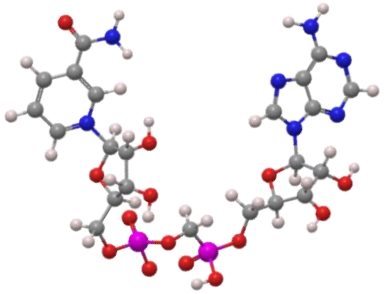
‘NAD biosynthesis: behind the need of a redox coenzyme’

by

Prof. Nadia Raffaelli at Polytechnic University of Marche, Via Brecce Bianche, 60131- Ancona, Italy on the 28th Oct. 2020 (14:00 CET via zoom https://uio.zoom.us/j/8863743687)



Nadia

Michele

Federica

Massimiliano

Lucia

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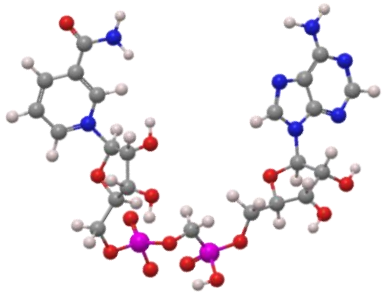

Photo: Nadia RAFFAELLI

The NO-Age and NO-AD Seminar Series 010

‘NAD biosynthesis: behind the need of a redox coenzyme’

by

Prof. Nadia Raffaelli, Ph.D.

Polytechnic University of Marche,

Via Brecce Bianche, 60131- Ancona, Italy

at

14:00-15:00 (CET), Wednesday on the 28th Oct. 2020

Join Zoom Meeting

https://uio.zoom.us/j/8863743687

Meeting ID: 886 374 3687

Organizers:

Evandro F. Fang (UiO), Jon Storm-Mathisen (UiO), Lene Juel Rasmussen (KU), W.Y. Chan (CUHK)

Queries: e.f.fang@medisin.uio.no

Previous recorded talks are available here: https://noad100.com/videos-previous-events/

Name: Nadia Raffaelli
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Speaker: Prof. Nadia Raffaelli

Title: "NAD biosynthesis: behind the need of a redox coenzyme"

Abstract:
NAD has emerged as a rate-limiting substrate of enzymes regulating metabolism and longevity. The finding that NAD levels decline during aging and in age-related diseases is driving efforts to develop strategies aimed at increasing the availability of the coenzyme to promote health- and lifespan benefits. In this view, NAD biosynthesis represents a promising target for preventing and treating age-associated diseases. Here I will give an overview of the NAD biosynthetic pathways that are active in mammals, with focus on the major properties of the key regulatory enzymes. I will also present the contribution of my group to the study of these enzymes.

Biography:
Prof. Nadia Raffaelli is Full Professor of Biochemistry at the Department of Agricultural, Food and Environmental Sciences, Polytechnic University of Marche, Ancona, Italy. She obtained a Doctoral Degree in Biological Sciences in 1984, and a Specialization in Microbiology in 1988, both at the University of Camerino, Italy. After postdoctoral studies in the laboratory of Prof. Daniel L. Purich, at the University of Gainesville, Florida, and a few years as Researcher at the University of Marche, she obtained positions as Associate Professor in 2001 and Full Professor in 2009. She is currently in charge of the teaching courses "Biochemistry" and "Food Biochemistry". She is member of the PhD program in Food Science at the University of Marche, and member of the Scientific Advisory Board of the Institute of Food Sciences, National Research Council of Italy, Avellino. Since 2011 she serves as an academic collaborator for TES Pharma, a company focusing on drug discovery against key targets in metabolic diseases and oncology, by providing expertise in Biochemistry and Enzymology.

She is Vice Director of the Department of Agricultural, Food and Environmental Sciences, President of the Ethics Committee and Pro-Rector for Research (Polytechnic University of Marche).

Since 1986, Prof. Raffaelli' s research has been mostly focused on the study of enzymes involved in the metabolism of NAD, both in bacteria and in eukaryotes, including humans. By combining bioinformatic analyses and biochemical techniques, she identified and characterized for the first time genes coding for key regulatory enzymes of NAD metabolism, and, in collaboration with other groups, she contributed to the resolution of the three-dimensional structure of most of them. More recently, her research has been mainly focused on the understanding of how in mammals the various metabolic routes that lead to NAD biosynthesis starting from the different forms of vitamin B3 are affected depending on the cell-type and metabolic status, and how alteration of the intracellular NAD pool impacts on energy metabolism and cell growth.

Prof. Raffaelli' s research is currently supported by European, national, and private foundation's grants. Her scientific production is reported in 90 publications, and she has been invited as lecturer at several international and national Meetings.