
Professor Teresa M. D. V. Pinho e Melo

A tribute



This commemorative issue is being published in honor of Professor Teresa M. D. V. Pinho e Melo in recognition of her exceptional contributions to the fields of synthetic and mechanistic organic chemistry, as well as medicinal chemistry

Published on line 01-10-2026

It is with the greatest respect and esteem that we pay tribute to the prestigious career and accomplishments of Professor Teresa Margarida Vasconcelos Dias de Pinho e Melo. Professor Pinho e Melo has built an exceptional scientific and academic career, which serves as a paradigm for her colleagues, researchers, and students who have had the privilege of working with her.

Following the completion of her BSc, MSc and PhD in Chemistry at the University of Coimbra in 1995, where a thesis entitled "The Diels-Alder Reaction in the Development of New Methods for the Synthesis of Heterocyclic Compounds", she pursued a distinguished academic path, attaining the position of Associate Professor with habilitation in 2008. Thirty years after completing her PhD, she currently occupies the position of leadership within the Organic Chemistry Group at the Coimbra Chemistry Centre, in addition to coordinating the Master's programme in Medicinal Chemistry. Beyond her home institution, Professor Pinho e Melo has demonstrated exemplary leadership at both national and international levels. She has held several distinguished positions, including President of the Division of Organic Chemistry of the Portuguese Chemical Society, Director of the Department of Chemistry at the University of Coimbra, and Co-President and subsequently Past-President of the International Society of Heterocyclic Chemistry.

Her doctoral research, which focused on heterocyclic chemistry and the development of new synthetic methodologies, laid the foundations for a research trajectory characterised by originality, rigour and vision, leaving a lasting mark on the fields of organic and medicinal chemistry. She has published extensively, with over 200 peer-reviewed publications and 10 patents or patent applications to her name. These publications and applications demonstrate not only intellectual creativity but also the ability to translate fundamental discoveries into translational applications.

Professor Teresa Pinho e Melo's research career has been focused on several interconnected areas of organic synthesis and reaction mechanisms. She has developed novel methodologies for the construction of heterocycles, including azirines, azadienes, β -carboline, pyrrolothiazoles and spirocyclic scaffolds. In many cases, nitrosoalkenes and azoalkenes are employed as versatile building blocks. In addition, her research has encompassed detailed studies of reaction mechanisms, including Diels–Alder reactions, cycloaddition and electrocyclization reactions such as sigmatropic [1,8]H shifts and $[8\pi+2\pi]$ cycloadditions, and ring fusions. She has applied this knowledge to the design and synthesis of new heteroaromatic and fused systems.

She has also made significant contributions to the synthesis of tetrapyrrolic macrocycles, including porphyrins, corroles, and chlorins. In doing so, she has developed innovative synthetic strategies and mechanistic insights that have enabled the creation of new molecular architectures. These compounds have demonstrated considerable potential as photosensitisers for photodynamic therapy (PDT) and as theranostic agents, integrating diagnostic and therapeutic functions in the fight against cancer. Her research on spiro- β -lactams has resulted in the development of compounds that exhibit dual anti-HIV and antimalarial activity, thereby addressing critical global health concerns. She has also been at the forefront of the discovery of novel selective p53 activators, such as MANIO, a molecule with impressive preclinical activity and strong potential as a targeted therapy in precision oncology.

Professor Pinho e Melo has overseen a considerable number of Master's and doctoral theses, in addition to the supervision of postdoctoral fellows and researchers. This commitment is further demonstrated by her dedication to nurturing the next generation of scientists, thereby ensuring the perpetuation of Portuguese chemistry at the highest international standards. Moreover, her influence extends beyond her own research, profoundly impacting the broader scientific community.

Her work has garnered significant acclaim. She is consistently included in the Stanford University ranking of the World's Top 2% Scientists and has received several awards, including the FCTUC 2019 Award for the Impact of International Publications. In addition to these individual honours, she and her team has been

recognised with prestigious awards including the Born from Knowledge Ideas Award (2020) and the Gilead GÉNESE Award (2022).

Professor Teresa Pinho e Melo's distinguished career is characterised by scientific excellence, complemented by contributions to service, mentorship, and leadership. She has established a crucial link between fundamental chemistry and biomedical applications, thereby advancing knowledge in this field and shaping the next generation of chemists. Her contributions exemplify the values of scholarship, innovation, and dedication to the scientific community.

It is therefore with the utmost respect and admiration that we celebrate Professor Teresa Pinho e Melo's remarkable achievements and her enduring impact on the advancement of science.

Further information about its achievement could be found in the review paper in this issue.

Marta Piñeiro
Department of Chemistry
University of Coimbra
Portugal

This paper is an open access article distributed under the terms of the Creative Commons Attribution (CC BY) license (<http://creativecommons.org/licenses/by/4.0/>)