Reviews based on 1st Mediterranean Experts Meeting on the topic “Vitamin D in the prevention of health disparities during adult life”

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Vitamin D has traditionally been considered a key player in skeletal health preservation [1]. During the past few decades, there has been increasing interest in vitamin D biology, as it has also been associated with the pathogenesis of several human diseases. Research in the vitamin D field, which is intense and booming, has established that this vitamin is actually a molecule that resembles a hormone more than a vitamin, with actions that extend well beyond its established musculoskeletal role. Its biological functions are thought to be exerted by interaction of the activated form 1,25(OH)₂D (either D₂ or D₃) mainly with an intracellular receptor [2]. Most studies have focused on the association between 25-hydroxyvitamin D (as it is considered to best reflect vitamin D stores and availability), or the activated 1,25(OH)₂D, and disease processes. However, vitamin D biology is complex and, on the way to the formation of the final and prevailing metabolites, several intermediate molecules are generated that are no longer considered by-products or inactive [3]. Moreover, the “Mediterranean paradox” of vitamin D deficiency found to be prevalent in large parts of the population of countries with, nevertheless, abundant sunshine renders collaboration among scientists of these countries a necessity.

The need to join forces to understand the magnitude of the above phenomenon and the magnitude of the disorders

that may relate to this problem inspired us to set up a scientific workshop, named the Mediterranean Experts Meeting on Vitamin D, to date held two years running in Thessaloniki, Greece, to which we invited a large number of experts in the field who wished to contribute to vitamin D research by sharing knowledge, ideas, and proposals. Thus, two extremely successful Mediterranean Experts Meetings on “Vitamin D in the prevention of health disparities during adult life” were held in this Northern Greek city in 2017 and 2018. What started as an inspirational proposal among friends and colleagues became a friendly and highly professional exchange of scientific ideas and experience and has, meanwhile, evolved into a world-class scientific event (it will be hosted in Abu-Dhabi in 2019) thanks to the generous scientific input of all the distinguished participants.

This issue of *Hormones* gives its readers a brief overview of the scientific work presented mostly during the 2017 meeting. Professor Salvatore Minisola and colleagues deal with the issue of vitamin D supplementation [4], while Professors Erdinc Dursun and Duygu Gezen-Ak present their original work on vitamin D and neurodegeneration, with an emphasis on preclinical and clinical data on Alzheimer’s disease [5, 6]. Professor William Grant scrutinizes the Mediterranean region, with particular focus on the potential association of vitamin D with disease status [7]. Finally, Maria Grammatiki, Spiros Karras, and Kalliopi Kotsa summarize preclinical and clinical data on vitamin D action on the pathogenesis of diabetes mellitus and complications [8].

By the end of both symposia, several important conclusions had been drawn on where we stand as regards the epidemiology and pathogenesis of vitamin D-related conditions as this pertains mostly to the Mediterranean region.

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Compliance with ethical standards

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