

7th



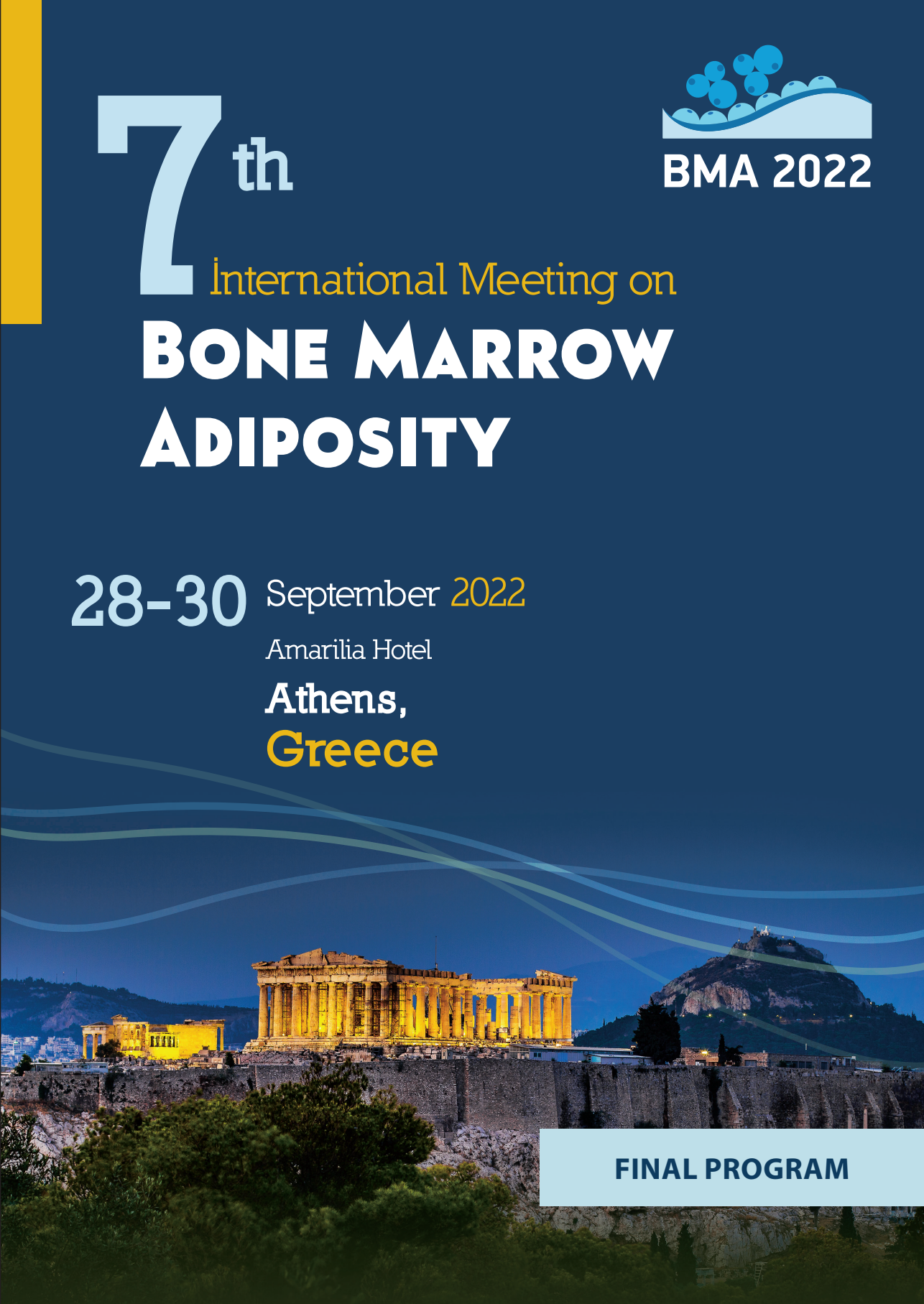
BMA 2022

International Meeting on
**BONE MARROW
ADIPOSIITY**

28-30 September 2022

Amarilia Hotel

**Athens,
Greece**



FINAL PROGRAM

Contents

Welcome Address	3
Committees	4
Scientific Program	5
Sponsored Talks	16
Keynote & Invited Speakers	19
General Information	20
Sponsors	22



Welcome Address

Dear all,

We are pleased to welcome you to the **7th International Meeting on Bone Marrow Adiposity (BMA 2022)**, which will be held in **Athens, Greece on September 28th-30th, 2022**. The objective of this meeting is to provide an environment that allows the exchange of knowledge and recent advances in clinical and basic research in the emerging field of bone marrow adiposity.

The profile of the participants will include CLINICIANS IN THE FIELDS OF endocrinologists, rheumatologists, orthopedic surgeons, general practitioners, rehabilitation practitioners, internal medicine practitioners, oncologists, hematologists, as well as BIOMEDICAL SCIENTISTS in the field of: molecular and cell biology, musculoskeletal research, experimental hematology, genetics, imaging, physiology, physiopathology and pharmacology.

The congress will offer numerous networking opportunities so that you will be able to meet and interact with leading scientists and researchers, friends and colleagues as well as sponsors and exhibitors.

We are looking forward to seeing you in Athens!

Sincerely,

Eleni Douni

President BMA Meeting 2022



Committees

LOCAL ORGANIZING COMMITTEE

Eleni Douni, Greece

Polyzois Markas, Greece

Vangelis Rinotas, Greece

SCIENTIFIC COMMITTEE

Alessandro Corsi, Italy

Eleni Douni, Greece

Gustavo Duque, Australia

William Ferris, South Africa

Greet Kerckhofs, Belgium

Beata Lecka-Czernik, USA

Qin Ling, USA

Stéphanie Lucas, France

Polyzois Makras, Greece

Michaela Reagan, USA

Vagelis Rinotas, Greece

Labella Rossella, USA

Michaela Tencerova, Czechia

Annegreet Vlug, The Netherlands



Scientific Program

Wednesday 28th September 2022

13.30-14.15	Registrations
14.15-14.30	Welcome - Introduction Eleni Douni <i>Department of Biotechnology, Agricultural University of Athens/Institute for Bioinnovation, Biomedical Sciences Research Center "Alexander Fleming" Athens, Greece</i>
14.30-16.15	SESSION 1: ORIGIN OF BONE MARROW ADIPOCYTES Chairs: Geert Carmeliet, Ormond MacDougald
14.30 -15.00	INVITED LECTURE I
	Bone marrow adipogenic lineage precursors Ling Qin , <i>Perelman School of Medicine, University of Pennsylvania, USA</i>
15.00-15.30	INVITED LECTURE II
	The adipogenic lineage within the bone marrow niche Tim Schulz , <i>German Institute of Human Nutrition (DIfE), Nuthetal, Germany</i>
15.30 -16.15	Short Talks
15.30-15.45	O01 Different osteogenic potential of Adiponectin-Cre-targeted stromal cells in the skeleton Biagio Palmisano
15.45- 16.00	O02 Capturing bone marrow adiposity at the single cell level Dalia Ali
16.00-16.05	P01 Extra-cellular matrix and the formation of bone marrow adipocyte and osteocyte progenitor cells George Soultoukis
16.05-16.10	P02 Deciphering the effects of aging and diet on bone-resident adipocyte progenitors Marina Leer



Scientific Program

Wednesday 28th September 2022

16.15-17.00

Coffee break

17.00-18.30

Keynote Lectures

Chairs: **Erica Scheller, William Cawthorn**

17.00-17.45

KEYNOTE LECTURE I

Pathophysiology of bone marrow adiposity

Clifford Rosen, *Maine Medical Research Center Institute, Scarborough, Maine, USA*

17.45-18.30

KEYNOTE LECTURE II

Metabolic regulation of skeletal cell fate and function

Geert Carmeliet, *Clinical and Experimental Endocrinology, KU Leuven, Belgium*

18.30-19.00

Meet the Keynote Speakers

19.00-20.00

Welcome Reception



Scientific Program

Thursday 29th September 2022

08.00-09.00	Working Group Meetings WG1, WP2, WP4
09.00-10.45	SESSION 2: BONE MARROW ADIPOSITY, OSTEOPOROSIS AND METABOLISM Chairs: Andre Van Wijnen, Stéphanie Lucas
09.00- 09.30	INVITED LECTURE III Endogenous glucocorticoid signaling in the regulation of BMAT and bone during aging Meghan McGee Lawrence , <i>Medical College of Georgia, Augusta University, USA</i>
09.30-10.00	INVITED LECTURE IV Role of bone marrow adipocytes within the marrow niche Ormond MacDougald , <i>Department of Molecular & Integrative Physiology, University of Michigan, USA</i>
10.00-10.45	Short Talks
10.00-10.15	003 Comparative analysis of fat composition in marrow, serum, and muscle from aging C57BL6 mice Ahmed Al Saedi
10.15-10.30	004 Loss of adipogenic DICKKOPF-1 prevents the expansion of bone marrow adipose tissue and tends to ameliorate bone loss under high-fat diet in male mice Daamouch Souad
10.30-10.45	005 Lipid droplet organization and mitochondrial proteins of human bone marrow adipose tissue cells can be regulated by tissue non-specific alkaline phosphatase activity Drenka Trivanovic
10.45-11.15	Coffee break



Scientific Program

Thursday 29th September 2022

11.15-13.35	SESSION 2: BONE MARROW ADIPOSITY, OSTEOPOROSIS AND METABOLISM Chairs: Michaela Tencerova, Drenka Trivanovic
11.15-11.45	INVITED LECTURE V Bone marrow adiposity and lipid metabolism: impact on surrounding cells Catherine Muller , <i>Institute of Pharmacology and Structural Biology, University of Toulouse, CNRS, France</i>
11.45-13.35	Short Talks
11.45-12.00	O06 Regulation of hyaluronan in bone marrow adipose tissue during type 2 diabetes mellitus Maria Grandoch
12.00-12.15	O07 MSDC-0602K as novel thiazolidinedione analog differently affects cellular metabolism of mesenchymal stem cells in comparison to classical thiazolidinediones Andrea Benova
12.15-12.30	O08 The extracellular matrix of human bone marrow adipocytes and glucose concentration differently alter the mineralization quality without impairing osteoblastogenesis Stéphanie Lucas
12.30-12.45	O09 Identification of small molecules as novel anti-adipogenic compounds based on connectivity map Bram van der Eerden
12.45-13.00	O10 Progression of bone marrow adiposity in RANKL-expressing transgenic mice upon anti-resorptive and osteoanabolic treatments Vagelis Rintotas



Scientific Program

Thursday 29th September 2022

13.00-13.05	P03	Denosumab discontinuation leads to rapid bone loss and partial restoration of bone marrow adiposity in transgenic mice expressing human RANKL Eleni Douni
13.05-13.10	P04	Deletion of short chain fatty acid receptors GPR41/GPR43 has a positive impact on bone mass Friederike Behler-Janbeck
13.10-13.15	P05	P62 ^{-/-} mice as an alternative experimental model of bone and bone marrow failure Dimitrios Agas
13.15-13.20	P06	<i>Ex vivo</i> human cellular models to study adipocyte-induced transdifferentiation of osteoblasts Federica Quacquarelli
13.20-13.25	P07	The effects of caloric restriction on aging-related decline of bone health Charlotte Rinne
13.25-13.30	P08	Exploring potential regulators of sirtuin type 1 (SIRT1) in mouse bone marrow stromal cells (BMSC) from energy deficit models Viktorija Avilkina
13.30-13.35	P09	Bone marrow adipocytes differentiated <i>in vitro</i> express the mRNA of the human cathelicidin antimicrobial peptide (hCAMP) - Potential regulation by metabolic alterations Amélie Paquet
13.35-14.30		Lunch break - Poster Session



Scientific Program

Thursday 29th September 2022

14.30-16.25

SESSION 3: BONE MARROW ADIPOSY, HEMATOPOIESIS, CANCER AND METASTASIS

Chairs: **Olaia Naveiras, Biagio Palmisano**

14.30-15.00

INVITED LECTURE VI

Acute lymphoblastic leukaemia and bone marrow adiposity

Bela Wrench, Centre for Haemato-Oncology, Barts Cancer Institute, Queen Mary University of London, London, UK

15.00-15.30

INVITED LECTURE VII

Multiple myeloma and bone marrow adiposity

Claire Edwards, Nuffield Department of Orthopaedics, Rheumatology and Musculoskeletal Diseases (NDORMS), University of Oxford, UK

15.30-16.30

Short talks

15.30-15.45

- O11** Bioengineering the human bone niche with high adipose content to study advanced prostate cancer *in vitro* and *in vivo*
Agathe Bessot

15.45-16.00

- O12** A metabolic crosstalk occurs between human bone marrow adipocytes and prostate cancer cells
Marine Hernandez

16.00-16.15

- O13** Inflammatory signals from fatty bone marrow supports the early stages of DNMT3A driven clonal hematopoiesis
Nathali Kaushansky

16.15-16.20

- P10** Identification of human bone marrow multipotent stromal cells
Liu Wangjie

16.20-16.25

- P11** *In vitro* interrogation of the human bone marrow adipogenic axis in the context of hematopoiesis
Charles Bataclan



Scientific Program

Thursday 29th September 2022

16.25-17.00	Coffee break
17.00-17.45	BMAs General Assembly
17.45-18.45	Trainee Session
19.00-23.00	Gala dinner



Scientific Program

Friday 30th September 2022

08.00-09.00

Working Group Meetings
WG3, WP5, NextGen

09.00-11.00

**SESSION 4: IMAGING AND CLINICAL PERSPECTIVE OF BONE
MARROW ADIPOSY**
Chairs: **Julien Paccou, Annegreet Vlug**

09.00-09.30

INVITED LECTURE VIII

Clinical imaging

Dimitrios Karampinos, *Department of Diagnostic and Interventional
Radiology, Technical University of Munich, Germany*

09.30-09.50

Special Talk

A global approach to advancing musculoskeletal research
Federico Mosconi, *CEO of IFMRS, UK*



Scientific Program

Friday 30th September 2022

09.50-11.00	Short Talks
09.50-10.05	O14 Exploring contrast-enhancing staining agents for studying adipose tissue by means of contrast-enhanced computed tomography Tim Balcaen
10.05-10.20	O15 Regular exercise training improves femoral bone marrow metabolism in monozygotic twin pairs discordant for body weight Ronja Ojala
10.20-10.35	O16 How does bone marrow adiposity impact human health? Insights from population-scale analysis in the UK biobank William Cawthorn
10.35-10.50	O17 Marrowquant 2.0: clinical application of a user-friendly digital hematopathology tool for human bone marrow trephine biopsies Rita Sarkis
10.50-10.55	P12 Bone marrow adiposity and fragility fractures in postmenopausal women: the case-control ADIMOS study Julien Paccou
10.55-11.00	P13 Bone marrow adipocytes: previously unrecognized mediators of osteoarthritis? Léa Loisay
11.00-11.30	Coffee Break - Poster Session



Scientific Program

Friday 30th September 2022

11.30-12.30 **SESSION 4: IMAGING AND CLINICAL PERSPECTIVE OF BONE MARROW ADIPOSITY**

Chairs: **William Ferris, Kaisa Ivaska**

11.30-12.00 **INVITED LECTURE IX**

Clinical implications of bone marrow adiposity

Annegreet Vlug, *Jan van Goyen Medical Center and Onze Lieve Vrouwe Gasthuis Hospital, Amsterdam, Netherlands*

12.00-12.30 **INVITED LECTURE X**

BMA and treatments

Julien Paccou, *Centre Hospitalier Régional Universitaire de Lille, France*

Sponsored Satellite Symposium

12.30-13.00 **Sponsored Talk 1**
(details on page 16)

13.00-13.30 **Sponsored Talk 2**
(details on page 16)

13.30-14.30 **Poster Session**



Scientific Program

Friday 30th September 2022

14.30-16.00

SESSION 5: FURTHER BONE MARROW ADIPOSY REGULATION

Chairs: **Bram van der Eerden, Dalia Ali**

Virtual Talks

14.30-14.45

O18 Diet-expanded BMAT gives rise to metabolically activated and pro-tumorigenic PPAR γ - dependent macrophages
Aline Bozec

14.45-15.00

O19 Development and characterization of three cell culture systems to investigate the relationship between primary bone marrow adipocytes and myeloma cells
Heather Fairfield Campbell

15.00-15.15

O20 Neural contributions to leptin-mediated bone marrow adipocyte catabolism and its implications for bone health
Xiao Zhang

15.15-15.30

O21 MIR-422A promotes adipogenesis via MECP2 down regulation in human bone marrow mesenchymal stem cells
Angelica Giuliani

15.30-15.45

O22 Orchiectomy sensitizes the skeleton of male mice to the deleterious effects of Kynurenine
Husam Bensreti

15.45-16.00

O23 FSH, BMAT composition, and longitudinal changes in BMAT in older adults
Tiffany Kim

16.00-16.30

Awards and Closing Remarks



Sponsored Talks

Friday 30th September 2022

12.30-13.00

Sponsored talk 1

Chair: **Athanasios D. Anastasilakis**, *Endocrinologist, Department of Endocrinology, 424 General Military Hospital, Thessaloniki, Greece*

Denosumab discontinuation: from bedside to bench and vice versa

Polyzois Makras, MD, PhD, *Endocrinologist, Head of Department of Medical Research, 251 Hellenic Airforce & VA General Hospital, Athens, Greece*



13.00-13.30

Sponsored talk 2

Chair: **Polyzois Makras**, MD, PhD, *Endocrinologist, Head of Department of Medical Research, 251 Hellenic Airforce & VA General Hospital, Athens, Greece*

Sclerostin: A novel target for the treatment of postmenopausal osteoporosis

Symeon Tournis, MD, PhD, *Endocrinologist, Senior Research Fellow, Laboratory for Research of the Musculoskeletal System «Th. Garofalidis», Medical School, National and Kapodistrian University of Athens, KAT Hospital, Athens, Greece*



Ο ΕΞΕΛΙΓΜΕΝΟΣ ΤΡΟΠΟΣ ΜΕΙΩΣΗΣ ΤΟΥ ΚΙΝΔΥΝΟΥ ΚΑΤΑΓΜΑΤΟΣ

EVENITY®
(romosozumab) προγεμισμένη πένα



**Το EVENITY® ενδείκνυται για τη θεραπεία της σοβαρής οστεοπόρωσης
σε μετεμμηνοπαυσιακές γυναίκες με υψηλό κίνδυνο κατάγματος¹**



**Υψηλότερη μείωση του κινδύνου
κατάγματος** όταν χρησιμοποιείται για
12 μήνες ακολουθούμενο από αλδεδρονάτη
έναντι της αλδεδρονάτης σε νέα σπονδυλικά,
κλινικά και μη σπονδυλικά κατάγματα,
συμπεριλαμβανομένου του ισχίου^{1,2}



**Ταχεία και υψηλότερη
βελτίωση της BMD**
έναντι της αλδεδρονάτης^{1,2} και της
τεριπαταλίδης³ σε μόλις 12 μήνες



Ένας νέος παράγοντας σχηματισμού
οστών με **διπλή δράση
στον σκελετό**, ο οποίος
αυξάνει την οστική παραγωγή
και μειώνει την οστική
απορρόφηση¹

Οι πιο συχνές ανεπιθύμητες ενέργειες είναι η ρινοφαρυγγίτιδα και η αρθραλγία.¹

Το EVENITY® αντενδείκνυται σε ασθενείς με υπερευαίσθησία, υπασθεσαιμία και ιστορικό εμφράγματος του μυοκαρδίου ή αγγειακού εγκεφαλικού επεισοδίου.¹

▽ Το φάρμακο αυτό τελεί υπό συμπληρωματική παρακολούθηση. Αυτό θα επιτρέψει τον γρήγορο προσδιορισμό νέων πληροφοριών ασφαλείας. Ζητείται από τους επαγγελματίες υγείας να αναφέρουν οποιεσδήποτε πιθανολογούμενες ανεπιθύμητες ενέργειες.

UCBCares®
Υποστήριξη & Ενμέριση Ασθενών

Επικοινωνήστε με την υπηρεσία UCBCares®

☎ Κλήση με χρέωση: 210 99 74 200
Κλήση χωρίς χρέωση: 0800 129910

✉ Email: UCBCares.GR@ucb.com

🌐 <https://www.ucbpharma.gr/>
Για πρόσθετες πληροφορίες ή για αναφορά ανεπιθύμητων ενεργειών
επισκεφθείτε την ιστοσελίδα μας.



AMGEN

Για πρόσβαση στην ΠΧΠ, σκάνετε τον κωδικό QR.



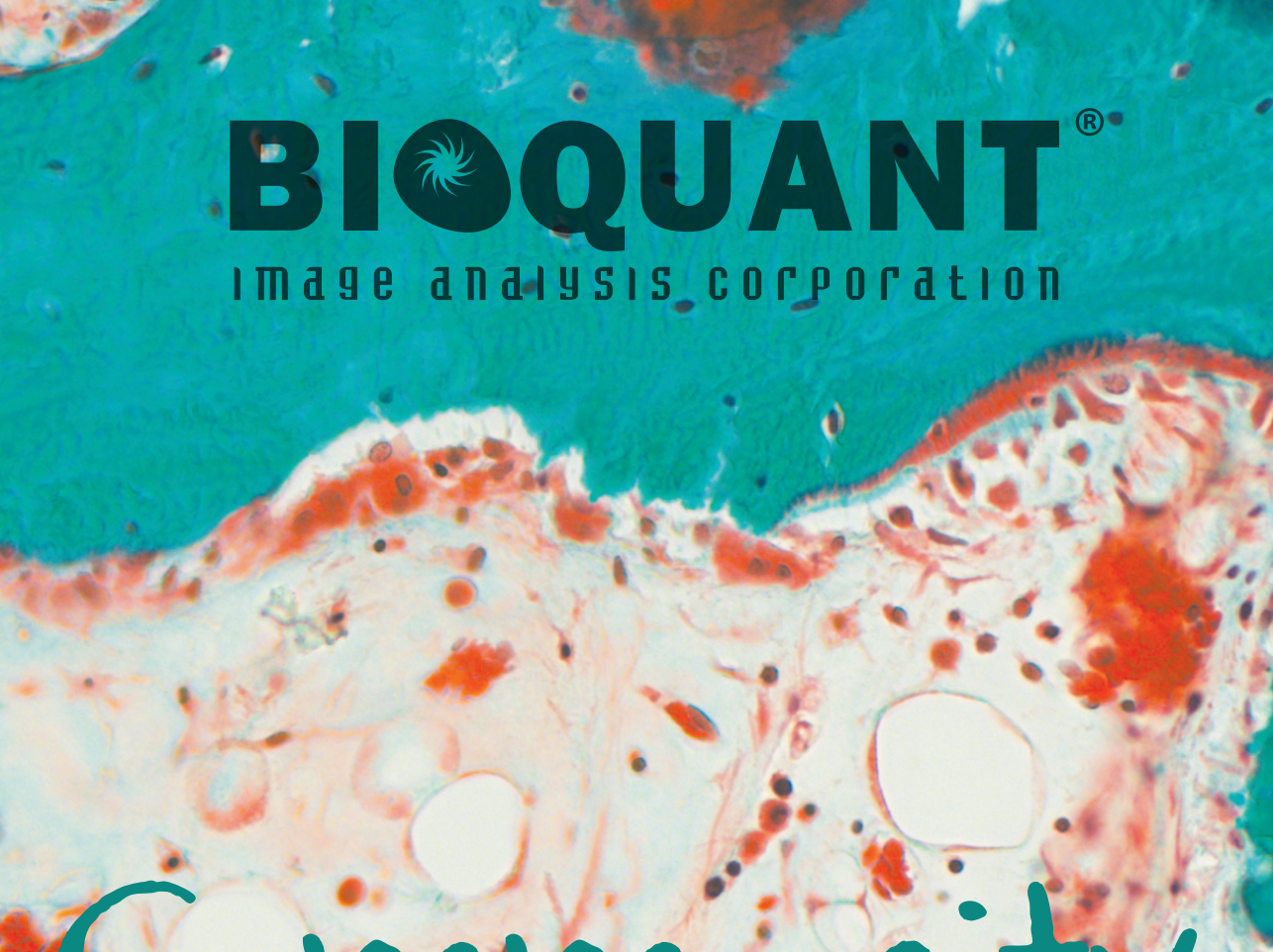
Βιβλιογραφικές παραπομπές:

1. EVENITY® Περίληψη Χαρακτηριστικών του Προϊόντος, Οκτώβριος 2021.
https://www.ema.europa.eu/en/documents/product-information/evenity-epar-product-information_el.pdf.
2. Saag KG, et al. N Engl J Med 2017;377:1417-1427.
3. Langdahl BL, et al. Lancet; 2017;390:1585-1594.

©2020 Όμιλος εταιρειών UCB. Με την επιφύλαξη παντός δικαιώματος.
© 2020 Amgen Inc. Με την επιφύλαξη παντός δικαιώματος.

GR-P-RM-OP-2000001 Ημερομηνία σύνταξης: Ιανουάριος 2020

Βοηθήστε να γίνουν τα φάρμακα πιο ασφαλή και
Αναφέρετε
ΟΛΕΣ τις ανεπιθύμητες ενέργειες για
ΟΛΑ τα φάρμακα
Συμπληρώνοντας την «ΚΙΤΡΙΝΗ ΚΑΡΤΑ»



BIOQUANT[®]

image analysis corporation

Community

Congratulations to all the attendees at the 2022 meeting of the Bone Marrow Adiposity Society. How wonderful to be in community again!

Whether you're working on osteoblasts or osteoclast, adipocytes or osteocytes, myocytes or chondrocytes, BIOQUANT is here to help.

This year, we are proud to announce BIOQUANT version 22.5, our 17th consecutive annual release of analytical software for bone histology.

We invite you to join our community of hundreds of labs across the globe that rely on BIOQUANT every day to do great work.

<https://osteo.bioquant.com>

BIOQUANT[®]
image analysis corporation

See you at ASBMR 2022!



Keynote & Invited Speakers

Carmeliet Geert

Clinical and Experimental Endocrinology,
KU Leuven, Belgium

Edwards Claire

Nuffield Department of Orthopaedics,
Rheumatology and Musculoskeletal
Diseases (NDORMS), University of Oxford,
UK

Karampinos Dimitrios

Department of Diagnostic and
Interventional Radiology, Technical
University of Munich, Germany

Makras Polyzois

MD, PhD, Endocrinologist, Head of
Department of Medical Research,
251 Hellenic Airforce & VA General
Hospital, Athens, Greece

McGee Lawrence Meghan

Medical College of Georgia, Augusta
University, USA

MacDougald Ormond

Department of Molecular & Integrative
Physiology, University of Michigan, USA

Moscogiuri Federico

CEO of IFMRS, UK

Muller Catherine

Institute of Pharmacology and Structural
Biology, University of Toulouse, France

Paccou Julien

Centre Hospitalier Régional Universitaire
de Lille, Lille, France

Qin Ling

Perelman School of Medicine, University
of Pennsylvania, USA

Rosen Clifford

Maine Medical Research Center Institute,
Scarborough, Maine, USA

Schulz Tim

German Institute of Human Nutrition
(DIfE), Nuthetal, Germany

Tournis Symeon

MD, PhD, Endocrinologist, Senior
Research Fellow, Laboratory for Research
of the Musculoskeletal System
«Th. Garofalidis», Medical School,
National and Kapodistrian University of
Athens, KAT Hospital, Athens, Greece

Vlug Annegreet

Jan van Goyen Medical Center and
Onze Lieve Vrouwe Gasthuis Hospital,
Amsterdam, Netherlands

Wrench Bela

Centre for Haemato-Oncology, Barts
Cancer Institute, Queen Mary University
of London, UK



General Information

Date & Venue

September 28th - 30th, 2022 Amarilia Hotel, Athens, Greece
(13 Agiou Nikolaou st. 16671 Vouliagmeni Athens, Greece, Tel.: +30 210 8990391,
website: www.amarilia.gr)

Website

<https://bma-society.org/bmas-2022/>

Official language

English will be the official language of the meeting.

Certificate of attendance

Each participant will be provided with a Certificate of Attendance. Certificates will be provided after the completion of the electronic evaluation form which will be sent to all the participants after the end of the Meeting.

Congress badge

It is mandatory for the delegates to show their meeting's badge at the entrance of the Meeting's hall

Presentations

Available audiovisual equipment for all presentations will be through power point presentation. Presentations must be delivered to the technical secretariat at least 30 minutes before the beginning of the session. The use of personal computers will not be feasible.

Exhibition

Within the Symposium area there will be an exhibition of pharmaceutical products.



General Information

Registration Fees

Registration type	Early 2022 - Until June 15 th	Late 2022
Members	360€ ☐	500€ ☐
Non Members	400€ ☐	550€ ☐
Students	250€ ☐	360€ ☐
Friday only (Clinicians)	120€ ☐	150€ ☐
On-line	200€ ☐	270€ ☐

The above rates include VAT 24%

Meeting Secretariat



Thessaloniki: 50A Stadiou Str. 55534 Pilea, Thessaloniki, Greece,
Tel.: +30 2310 247743, +30 2310 247734, Fax: +30 2310 247746,
e-mail: info@globalevents.gr

Athens: 2 Valestra str. & 168 A. Syngrou Av., 17671 Kallithea, Athens, Greece,
Tel.: +30 210 3250260, e-mail: athens@globalevents.gr
www.globalevents.gr



Sponsors

The Organizing Committee would like to acknowledge the success of the Meeting to the following companies.

Platinum Sponsor



Silver Sponsor



Sponsors



