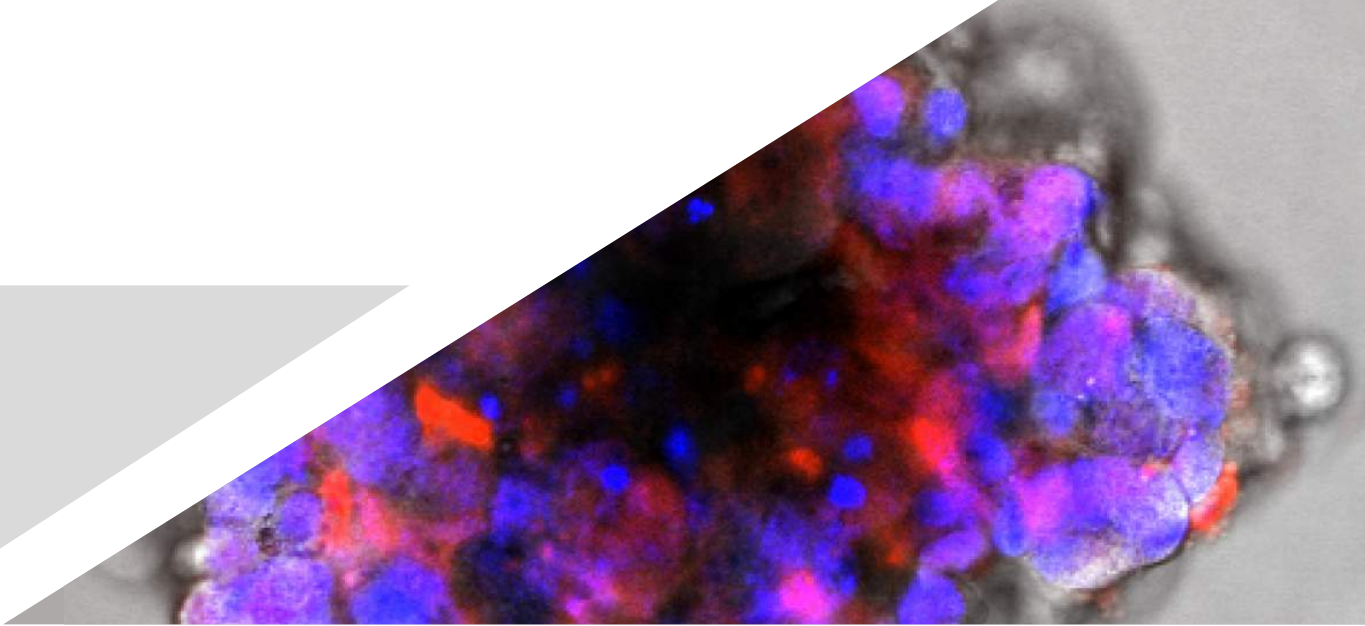


# EuSARC 2018



The Biology of Sarcoma  
A Residential Workshop



**31 MAY - 2 JUNE**

BERTINORO (FC)  
ITALY

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CENTRO INTERDIPARTIMENTALE  
DI RICERCHE SUL CANCRO "GIORGIO PRODI"



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Welcome to Bertinoro!

The next two days will be full of science, knowledge exchange, and human interaction, with the purpose to shape a network of scientists and clinicians that strongly wish to further commit to solve one of the most terrible problems for human health. Sarcomas differ in many ways from other, more common, types of cancer. They are relatively rare, their natural history is rapid but elusive, their aggressiveness is extreme. In the past decades we have added molecular signature to morphologic diagnosis, and targeted therapies to conventional treatments.

Unfortunately, such achievements have not translated into significant prognostic improvements. More recently, immunotherapy has been rediscovered, and metabolic pathways and tumor microenvironment are now being actively investigated and combined with existing knowledge. To improve the outcome of sarcoma patients, a joint effort is desirable, and I hope that this residential workshop will contribute.

Nicola Baldini  
EuSARC 2018  
*Chair*



## **VENUE**

CEUB Centro Residenziale Universitario  
di Bertinoro  
Via Frangipane 6, 47032 Bertinoro (FC)  
tel. +39 0543.446500 – fax +39 0543.446599  
Organizing Secretariat:  
Monica Michelacci: mmichelacci@ceub.it

## **REGISTRATION**

Registration, including transfer from/to Bologna, coffee-breaks, lunches, social dinner and welcome cocktail: 90 €. A maximum of 80 attendees will be hosted. Attendees will register upon arrival in Bertinoro.

## **TRANSFER**

A bus will be organized from/to Bologna International Airport and Railway Station for all attendees on May 31 and June 2, respectively (free service, mandatory advance registration)

## **ACCOMMODATION**

Board and lodging will be available to all attendees at Ce.U.B. in Bertinoro.

Single room, per night: 45 €  
(including breakfast).

Double room, per night: 35 €  
(including breakfast).

## **SOCIAL PROGRAM**

Coffee breaks and lunches are included in the accommodation fee.

A welcome cocktail will be offered to all registered attendees on May 31 at 19.30.

Social dinner: on June 1 at the Ca' de Be' restaurant.

## **CHAIR**

Nicola Baldini  
University of Bologna and Istituto Ortopedico Rizzoli

## **SCIENTIFIC COMMITTEE**

Sofia Avnet  
Istituto Ortopedico Rizzoli

Silvia Cammelli  
University of Bologna and S. Orsola-Malpighi University Hospital

Davide Maria Donati  
University of Bologna and Istituto Ortopedico Rizzoli

Costantino Errani  
Istituto Ortopedico Rizzoli

Stefano Fanti  
University of Bologna and S. Orsola-Malpighi University Hospital

Pier Luigi Lollini  
University of Bologna

Alessandra Longhi  
Istituto Ortopedico Rizzoli

Enrico Lucarelli  
Istituto Ortopedico Rizzoli

Cristina Nanni  
University of Bologna and S. Orsola-Malpighi University Hospital

Maria Abbondanza Pantaleo  
University of Bologna and S. Orsola-Malpighi University Hospital

Andrea Pession  
University of Bologna and S. Orsola-Malpighi University Hospital

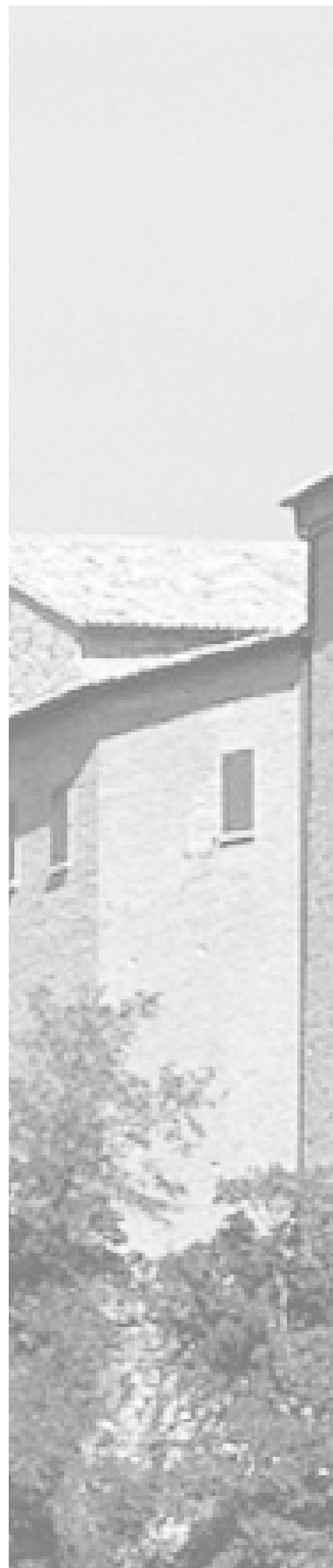
Piero Picci  
Istituto Ortopedico Rizzoli

Katia Scotlandi  
Istituto Ortopedico Rizzoli

Massimo Serra  
Istituto Ortopedico Rizzoli

## **SCIENTIFIC SECRETARIAT**

Francesca Schirru  
University of Bologna and Istituto Ortopedico Rizzoli



# EuSARC 2018

## The Biology of Sarcoma

### AIMS

- **INCREASE KNOWLEDGE** - To provide a forum to increase knowledge in sarcoma biology and pathophysiology in order to offer a more effective patient care.
- **FILL THE GAP** - To fill the gap between biological and clinical research.
- **NETWORK** - To establish and consolidate a network of scientists who are keen to collaborate in the field of sarcoma.
- **PROMOTE ACTIONS** - To promote actions to encourage and support in-training scientists in sarcoma research.
- **RAISE PUBLIC AWARENESS** - To raise public awareness on the clinical relevance of sarcomas and the importance of promoting sarcoma research.

# **SCIENTIFIC PROGRAM**

# THURSDAY, 31 MAY

■ 18.00

**Opening**  
Nicola Baldini

■ 18.15

**Lecture: "The role of nerves in cancer initiation and progression"**

Hubert Hondermarck, *University of Newcastle, Callaghan, (AU)*

□ 19.30  
–  
20.30

Welcome Cocktail

# FRIDAY, 1 JUNE

## SESSION 1

■ 8.30

### **TUMOR HETEROGENEITY**

(Valentina Indio, Hubert Hondermarck)

**Invited lecture: "Analytical methods to assess tumor heterogeneity"**

Dominique Heymann, *INSERM Université de Nantes, Nantes FR*

■ 9.00

**Round cell sarcomas other than Ewing sarcoma: a single institution experience**

Gambarotti M, Palmerini E, Benini S, Picci P, Longhi A, Donati D, Sbaraglia M, Righi A, Dei Tos AP (*Bologna, Italy*)

■ 9.15

**Clonal and sub-clonal heterogeneity of a murine model of osteosarcoma**

Gambera S, Álvaro MM, Teresa CG, Arantzazu AG, Javier GC, (*Madrid, Spain*)

■ 9.30

**Osteosarcoma: the emerging role of microenvironment and metabolism**

Avnet S, Perut F, Di Pompo G, Lemma S, Cortini M, Baldini N (*Bologna, Italy*)

■ 9.45

**Role of autophagy in the crosstalk between osteosarcoma and the bone microenvironment**

Pierrefite-Carle V, Santucci-Darmanin S, Camuzard O, Gritsaenko T, Pagnotta S, Cros C, Burel-Vandenbos F, Saya H, Heymann D, Carle Georges F (*Nice, France*)



10.00  
-  
10.30

Coffee Break

## SESSION 2

10.30

### **Invited lecture: "Vascular niches in bone: heterogeneity and therapeutic potential"**

Anjali Kusumbe, *University of Oxford, Oxford UK*

11.00

### **Mesenchymal stromal cells enhance metastasis formation in osteosarcoma**

Lemma S, Avnet S, Grisendi G, Dominici M, Heymann D, Baldini N (*Bologna, Italy*)

11.15

### **Toward rhabdomyosarcoma microenvironment dissection: cancer associated fibroblast investigation**

D'Agostino S, Frasson C, Tombolan L, Rampazzo, Persano L, Bisogno G, Gamba PG, Pozzobon M (*Padova, Italy*)

11.30

### **Osteosarcoma derived extracellular vesicles mediated epigenetic alterations in mesenchymal stem cells**

Mannerström B, Kornilov R, Chowdhury I M, Seppänen-Kajjansinkko R, Kaur S. (*Helsinki, Finland*)

11.45

### **Extracellular nanovesicles secreted by human osteosarcoma cells promote angiogenesis**

Perut F, Roncuzzi L, Massa A, Torreggiani E, Zini N, Baldini N (*Bologna, Italy*)

12.00

### **Can osteoclasts degrade cartilage in sarcoma?**

Larrouture QL, Gibbons M, Athanasou NA, Snelling SJB, Knowles HJ (*Oxford, UK*)

12.15

### **Why does a 12-year-old get osteosarcoma and then show evidence of coronary artery disease by age 32?**

Baker L, D.O. Antalis E P, (*Ann Arbor, USA*)

12.30  
-  
13.30

Lunch

# FRIDAY, 1 JUNE

## SESSION 3

### NEW THERAPIES

(Julia Visgauss, Alessandra Longhi)

#### **INVITED LECTURE: "NEW THERAPIES WITH ANTI-TUMOR ACTIVITY IN SARCOMA STEM CELLS"**

René Rodriguez, *Instituto Universitario de Oncología de Asturias, ES*

#### **NF-κB pathway as a therapeutic target to inhibit mesenchymal stromal reaction to tumor acidosis and impair osteosarcoma progression**

Di Pompo G, Avnet S, Errani C, Donati DM, Palomba R, Decuzzi P, Nanni C, Fanti S, Baldini N (*Bologna, Italy*)

#### **In vitro efficacy of keratin based bimodal nanoparticles: chemotherapy and photodynamic therapy to address drug toxicity and chemoresistance**

Martella E, Ferroni C, Guerrini A, Lucarelli E, Columbaro M, Varchi G, Tavanti E, Duchi S (*Bologna, Italy*)

#### **Targeting Ewing sarcoma by empowered killer mesenchymal progenitors**

Golinelli G, Grisendi G, Spano C, Rossignoli F, d'Esposito A, Prapa M, Dominici M (*Reggio Emilia, Italy*)

#### **Oncolytic adenoviruses weaponized with immunostimulatory molecules for the treatment of osteosarcoma**

García-Moure M, Zalacaín M, Laspidea V, Alemany R, Martínez-Vélez N, Lecanda F, Hernandez R, Cascalló M, Marrodán L1, Gonzalez-Huarriz M, Patiño-García A, Buñales M, Alonso M M (*Pamplona, Spain*)

#### **Combined immunotherapy using G-CSF and oncolytic virotherapy reduces tumor growth in a murine model of osteosarcoma**

Álvaro M-M, Stefano G, Ana Judith P-B, Elena C, Alicia G, Javier G-C (*Madrid, Spain*)

Coffee Break and Poster Session

14.00

14.30

14.45

15.00

15.15

15.30

15.45

17.00

## SESSION 4

■ 17.00

### RNA/DNA PROFILING AND SEQUENCING

(Milena Urbini, Massimo Serra)

#### INVITED LECTURE: "GUT MICROBIOTA PROFILING AND RESPONSE TO CHEMOTHERAPY"

Silvia Turrone, *Università di Bologna, Bologna IT*

■ 17.30

#### Sarcoma primary cell lines as a platform to screen anticancer compounds able to target cancer stem cells

Rey V, Fernández-Nevado L, Menendez S T, Estupiñan O, Rodriguez R (*Oviedo, Spain*)

■ 17.45

#### Detection of an actionable mutation of c-kit in extraskeletal myxoid chondrosarcoma

Urbini M, Indio V, Astolfi A, Tarantino G, Renne SL, Pilotti S, Dei Tos AP, Maestro R, Gronchi A, Dagrada G, Brenca M, Pession A, Casali PG, Stacchiotti S, Pantaleo MA (*Bologna, Italy*)

■ 18.00

#### Immune microenvironment profiling of gastrointestinal stromal tumors

Tarantino G, Astolfi A, Indio V, Agostinelli C, Urbini M, Nannini M, Saponara M, Castelli C, Stacchiotti S, Gatto L, Santini D, De Leo A, Pession A, Pantaleo MA (*Bologna, Italy*)

■ 18.15

#### Characterization of tumor microenvironment in extraskeletal myxoid chondrosarcoma (EMC)

Indio V, Astolfi A, Tarantino G, Urbini M, Castelli C, Renne SL, Collini P, Gronchi A, Frezza AM, Maestro R, Dei Tos AP, Picci P, Casali PG, Pession A, Pantaleo MA, Stacchiotti S (*Bologna, Italy*)

■ 18.30

#### Differential expression of VEGFA isoforms regulates metastasis and response to anti-VEGFA therapy in sarcoma

English WR, Lee YC, Agüero BL, Valluru M, Fisher M, Lefley DV, Wang D, Claeysens F, Kanthou C, Tozer GM (*Sheffield, UK*)

■ 20.00  
-  
23.00

Social Dinner, Ca' de Bè restaurant

# SATURDAY, 2 JUNE

## SESSION 5

### MOLECULAR PATHWAYS AND DRUG RESISTANCE (Margherita Cortini, Katia Scotlandi)

8.30

**Invited lecture: "Germline genetics of Ewing sarcoma susceptibility and progression"**  
Thomas Grünewald, *Ludwig Maximilian Universität, München, DE*

9.00

**Interleukin-34 as a potential therapeutic target for the treatment of osteosarcoma**  
Schiavone K, Brown H.K, v Heymann M F, Robin Y, Heymann D (*Sheffield, UK*)

9.15

**ATRX deficiency in osteosarcoma predicts enhanced sensitivity to human recombinant trail**  
Visgauss JD, Somarelli J, Bartholf-DeWitt S, Camp T, Altunel E, Kerr D, Eward W (*Toronto, Canada*)

9.30

**Pazopanib in osteosarcoma metastatic patients: report of 9 patients treated at the Rizzoli Institute**  
Longhi A, Paioli A, Cesari M, Abate M, Palmerini E, Setola E, Rocca M, Salone MC, Picci P, Donati D, S Ferrari (*Bologna, Italy*)

9.45

**The role of neuropilin-1 and VEGF isoforms and their potential as predictive biomarkers of response to vascular-targeted therapies**  
Thomas RHE, Fisher M, English WE, Tozer GM, Kanthou C (*Sheffield, UK*)

10.00  
-  
10.30

Coffee Break

## SESSION 6

### CANCER METABOLISM AND EPIGENETIC

(Sofia Avnet, Marc Garcia-Moure)

10.30

#### **Invited lecture: "Functional and molecular imaging in cancer"**

Dario Longo, *Università di Torino, Torino, IT*

11.00

#### **Targeting lipid metabolism as a novel osteosarcoma treatment**

Cortini M, Columbaro M, Avnet S, Armirotti A, Baldini N (*Bologna, Italy*)

11.15

#### **A Quinoline-Based DNA Methyltransferase Inhibitor as a Possible Adjuvant in the Therapy of bone sarcomas**

Manara MC, Valente S, Cristalli C, Lollini P, Picci P, Mai A, Scotlandi K (*Bologna, Italy*)

11.30

#### **Exploiting novel mitochondrial targets in cisplatin resistant osteosarcoma**

Vianello C, Cocetta V, Catanzaro D, Giacomello M, Montopoli M (*Padova, Italy*)

11.45

#### **Study of the molecular mechanisms of BCOR alterations in subsets of pediatric sarcomas through gene editing**

Astolfi A, Messelodi D, Bertuccio SN, Indio V, Fiore M, Taddia A, Serravalle S, Bandini J, Masetti R, Prete A, Melchionda F, Pession A (*Bologna, Italy*)

12.00

#### **EuSARC Round Table**

#### **"Sarcoma Research: present and future"**

(Nicola Baldini and Dominique Heymann)

12.45

12.45

Lunch and Departure

13.30

# POSTER COMMUNICATIONS

**P1 Discoidin, CUB and LCCL domain-containing protein 2 (DCBLD2) is a novel biomarker of myxobrosarcoma invasion identified by global protein expression profiling.**

Kikuta K, Kubota D, Yoshida A, Morioka H, Nakamura M (*Tokyo, Japan*)

**P2 Photoactivation in the near-infrared Spectrum applied to a 2D and 3D model containing nanoparticles-loaded Mesenchymal Stem Cells and osteosarcoma cells induces extensive cell death.**

S. Lenna, C. Bellotti, S. Duchi, M. Ballestri, B. Dozza, M. Columbaro, G. Sotgiu, A. Guerrini, E. Lucarelli, G. Varchi, D.M. Donati (*Bologna, Italy*).

**P3 High expression of SOX2 characterizes high-risk Ewing sarcoma tumors.**

Sannino G, Marchetto A, Zacherl C, Rubio R A, Kiran M M, Stein S, Wehweck F, Li J, Gerke J S., Cidre-Aranaz F, Hartmann W, Dirksen U, Hardiman G, Kirchner T, Ohmura S, Orth M F, Grünewald T G P (*Munich, Germany*)

**P4 CXCR4 : potential target in osteosarcoma?**

Bientinesi E, Pollino S, Pazzaglia L, Dozza B, Palmerini E, Enrico Lucarelli, Benassi MS. (*Bologna, Italy*)

**P5 Germline polymorphisms involved in drug response and treatment-related toxicity in osteosarcoma.**

Hattinger CM, Tavanti E, Patrizio MP, Luppi S, Magagnoli F, Magagnoli G, Gambarotti M, Longhi A, Picci P, Serra M (*Bologna, Italy*)

**P6 Acridine Orange combined photodynamic therapy and surgery as a novel approach to treat feline injection-site sarcoma.**

Costa F, Avnet S, Martano M, Morello E, Paolo Buracco, Katsuyuki Kusuzaki, Nicola Baldini (*Bologna, Italy*)

**P7 Salinomycin treatment affects chondrosarcoma cell viability in spheroid-based 3D model.**

Perut F, Sbrana FV, Avnet S, De Milito A, Baldini N (*Bologna, Italy*)

**P8 Expression of H3F3A mutation in the mixed cell population of Giant Cell Tumor of Bone.**

Okere B, Panza E, Lemma S, Errani C, Avnet S, Baldini N (*Bologna, Italy*)

**P9 Gut microbiota in osteosarcoma and chemotherapy: a pilot study.**

Falzetti L, Lemma S, Avnet S, Candela M, Turrone S, Baldini N  
(*Bologna, Italy*)

**P10 Novel c-KIT exon 9 mutations in GIST: is Imatinib good for bad?**

Laurini E, Aulic S, Marson D, Fermeglia M, Riboni R, Lucioni M, Delleria E, Alessiani M, Perfetti V, Pricl S (*Trieste, Italy*)

**P11 Specific packaging of microRNAs from osteosarcoma cell-derived exosomes affects tumor microenvironment: implications in tumor progression.**

Raimondi L, De Luca A, Gallo A, Costa V, Cuscino N, Biagini R, Conaldi PG, Giavaresi G (*Palermo, Italy*)

**P12 Clinical benefit on sarcomas after systemic cellular viroimmunotherapy.**

Cejalvo T, Perisé-Barrios A J, del Portillo I, Laborda E, Rodríguez-Milla M A, Cubillo I, Vázquez F, Sardón D, Ramírez M, Alemany R, del Castillo N, García-Castro J (*Majadahonda, Spain*)

**P13 Different decellularization methods to characterize the extracellular matrix of rhabdomyosarcoma and healthy muscle tissue.** D'Agostino S, Saggioro M, Muraca M, Gamba P, Pozzobon M (*Padova, Italy*)





