

## MSCA-ITN-2017 - Innovative Training Networks



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Actions



Bio-orthogonal catalysis for cancer therapy

***ESRs Meeting***

**TITLE:** *Bio-orthogonal catalysis for cancer therapy*

**ACRONYM:** *THERACAT*

**DURATION:** *01/03/2018 – 28/02/2022 (4 years project)*

**PROJECT ID:** *765497*

**FUNDED UNDER:** *H2020-EU.1.3.1. - Fostering new skills by means of excellent initial training of researchers*

**TOPIC:** *MSCA-ITN-2017 - Innovative Training Networks*

**FUNDING SCHEME:** *MSCA-ITN-ETN - European Training Networks*

## **USEFUL WEBSITES:**

- *CORDIS Web:* <https://cordis.europa.eu/project/rcn/215989/factsheet/en>
- *THERCAT Web:* [www.theracat.eu/](http://www.theracat.eu/)
- *THERACAT Intranet:* <https://theracat.eu/wp-login.php>

## **CONFIDENTIAL FILES**

## **RELEVANT DOCUMENTS (Available on the intranet):**

- *GRANT AGREEMENT (GA, Declaration of Honour, Data sheet)*
- *CONSORTIUM AGREEMENT*

**FELLOWS COMMITTEE:**

- Will represent all the research fellows and will be led by 3 ESRs each year, selected yearly by all ESRs by majority vote. **Volunteers? DISCUSS**
  - Within this board ESRs will:
    - discuss the network strategies and transfer to other relevant Committees when needed;
    - launch fellow-related initiatives;
    - supply inputs for the improvement of the programme (e.g. new training activities);
    - among others.
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- Election of the ESR representative for the Supervisory Board. **Volunteers? DISCUSS**

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## *Meetings & Events*

Month	Date	Place	Duration	Meeting	Attendees
M01	May 31 <sup>st</sup> , 2018	IBEC	1 day	Kick-off Meeting	PIs
M12	March 25 – 29 <sup>th</sup> , 2019	TUE	1 day	Meeting 1	ESRs & PIs
			4 days	Training Event 1	ESRs & PIs involved
M16	June 5 <sup>th</sup> , 2019	EDI	1 day	Mid-Term Check Meeting with PO from EC	ESRs & PIs
M18	Sept. 23 – 27 <sup>th</sup> , 2019	BAS	5 days	Training Event 2	ESRs & PIs involved
M24	February 2020	EDI	1 ½ day	Meeting 2	ESRs & PIs
			5 days	Training Event 3	ESRs & PIs involved
M30	August 2020	TAU	5 days	Training Event 4	ESRs & PIs involved
M36	February 2021	IBEC	1 ½ day	Meeting 3	ESRs & PIs
			7 days	Training Event 5	ESRs & PIs involved
M42	August 2021	IBEC	1-2 days	THERACAT conference	ESRs & PIs
M48	February 2022	IBEC	1 ½ day	Final Meeting	ESRs & PIs

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**MID-TERM CHECK MEETING:**

- Constructive dialogue between network participants and **REA Project Officer**.
- Must be attended by: Coordinator, PIs, Representatives of Partner Organisations, ESRs.
- Agenda:
  - 1) **Introduction:** REA Project Officer and Project Coordinator (*~5 min*).
  - 2) **Tour de table:** presentation of research team and role (all PIs) (*~30 min*).
  - 3) **REA PO presentation:** monitoring of project implementation & reporting (*~20 min*).
  - 4) **Coordinator's report:** presentation of the Network and progress (*~45-60 min*).
  - 5) **Fellows' individual presentation:** presentation of every ESR, his/her background and individual research project (foreseen research, training, secondments, etc.).  
Scientific results are not expected in the presentations at this stage of the project.  
Template will be provided
  - 6) **Restricted session with the fellows** (*~1 to 3 hours*).
  - 7) **Restricted session coordinator – Project Officer** (*~15 min*).
  - 8) **Feedback from PO and open discussion** (*~15-30 min*).
  - 9) **Site visit (optional):** Review how the host institution is operating to meeting the project objectives.

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**MEETING BETWEEN PROJECT OFFICER AND FELLOWS:**

- Duration: **DISCUSS**
  - One meeting with all researchers together: 60min/90min
  - Smaller groups (4-5 ESRs): 30 min/meeting
  - Individual meetings (upon request): 10-15 min/meeting (max. 2 hours)
- Focus:
  - 1) **Administration:** Researcher Declarations, Grant Agreement provisions awareness, working conditions (employment contracts, eligible allowances, visa issues, administrative support), tuition fees (covered by the project).
  - 2) **Supervision and integration:** quality of the supervision, integration within the research team/network/host institution/country.
  - 3) **Training:** effectiveness of the Career Development Plan, individual research projects, secondments, PhD courses, attendance of external courses/workshops/conferences, language courses and complementary skills training.

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ESR representative(s) should summarize ESRs' feedback (2-3 slides) to present their experience in the network and project (positive experience & suggestions for improvement), and collect questions to be discussed with PO.

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***Training activities***

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## TRAINING PROGRAMME:

### 1. **Local Scientific Training activities**, provided by host institutions:

- **By whom:** ESR's Supervisor/s & PhD program, and by post-doctoral staff belonging to the host research group.
- **What:** All scientific, methodological and technical aspects relevant for the individual research project of the ESR and in which the host group is expert. Participation of ESRs in local training activities should be also promoted (e.g. seminars, complementary skills sessions, etc.).

### 2. **THERACAT Conference:** Barcelona, August-September 2021

- Lectures by the different PIs, ESRs and invited external experts.
- Open also to non-member students (c.a. 50 students including THERACAT ESRs).
- Satellite of the NanoBio&Med conference in Barcelona (**to be confirmed**).

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## TRAINING PROGRAMME:

### 3. **Secondments** to other partner's laboratories:

- Takes place in an institution different from the host institution.
- Between members of the network with complementary expertise and nature.
- Fellows will be exposed to different disciplines and sectors (academic/industrial).
- **Secondments are MANDATORY**: Exceptions could be considered due to *force majeure* issues but PO must be informed in advance (contact IBEC as coordinator).
- Secondment details must be uploaded at the “Funding & Tenders” Portal by each beneficiary.
- Define the work to be performed and specific dates with the host institution in advance (**include IBEC in CC**).

### 4. **Network-wide** scientific/complementary skills **courses (Training Events, TE)**:

- Multidisciplinary content adapted to the different backgrounds of ESRs.
- The course organizer will be responsible to define the detailed content of the course, the schedule and the lecturers participating in it.
- Five **Training Events** (duration 4-5 days) hosted by a beneficiary.
- TE may be open to PhD students from outside the network.

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**SECONDMENT based individual scientific training:**

- **ESR1 (GRO):** EDI – Prodrug uncaging in vitro (M12, 3 months); TEVA – Formulation (M24, 3 months).
- **ESR2 (TAU):** GRO – Metal catalyst synthesis (M12, 3 months); TAG – in vivo micelle imaging (M32, 4 months).
- **ESR3 (TEVA):** IBEC – NP imaging (M18, 4 months); TUE – SAXS characterization of NP (M30, 3 months).
- **ESR4 (TUE):** BAS – synthesis of Ru catalysts (M22, 3 months); TEVA – industrial formulation of SCPN (M30, 3 months).
- **ESR5 (EDI):** TAG – Pro-imaging PET agents (M24, 4 months); TAU – Test micelles catalysts (M34, 3 months).
- **ESR6 (TUE):** GRO – synthesis of SCPN for imaging (M24, 3 months); CRUK – training in outreach (M38, 3 months).
- **ESR7 (IBEC):** BGX – imaging of gel models (M21, 3 months); TAU – in vivo and ex vivo imaging of catalysis (M30, 4 months).
- **ESR8 (TUE):** IBEC – STORM imaging of SCPN delivery (M21, 4 months); BGX – test activity in gel cancer models (M36, 3 months).
- **ESR9 (BGX):** TUE – synthesis of gel-based catalysts (M27, 3 months); IBEC – imaging gels with STORM (M36, 4 months).
- **ESR10 (BAS):** EDI – synthesis of caged prodrugs (M27, 3 months); TEVA – encapsulate catalyst in lipid NP (M36, 3 months).
- **ESR11 (EDI):** BGX – gel-based implants (M21, 3 months); TAU – in vivo imaging (M36, 3 months).
- **ESR12 (TAG):** EDI – pro-PET agents synthesis (M18, 3 months); BAS – activable PET probe (M28, 3 months).
- **ESR13 (TAU):** IBEC – imaging of ex-vivo samples (M21, 4 months); TEVA – oral formulations (M36, 3 months).







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***Communication activities***

The screenshot shows the THERACAT website homepage. At the top left is the THERACAT logo, a stylized blue and grey circular emblem. To its right is the text 'European Training Network THERACAT'. Below the logo and title is a navigation menu with the following items: HOME, CONSORTIUM, PROJECT SUMMARY, TRAINING EVENTS, JOBS, FELLOWS (highlighted with a red box), and DISSEMINATION. Below this menu are several sub-links: DELIVERABLES (RTD)[L], DELIVERABLES (MGT)[L], MILESTONES[L], TRAINING[L], TEMPLATES AND FILES[L], and MEETINGS[L]. The main content area features a post titled 'Bio-orthogonal catalysis for cancer therapy (THERACAT)'. The post text reads: 'THERACAT is a Marie Skłodowska-Curie European Training Network (MSCA-ITN-ETN) aiming to train a new generation of researchers on the innovative topic of bio-orthogonal catalysis for cancer therapy'. Below this is a paragraph: 'The development of novel cancer therapies is a major challenge for academic research and pharmaceutical industries. Although the recent progress in traditional treatments such as surgery and chemotherapy improved the clinical outcome of cancer patients, there is a strong need for new and effective approaches as well as for a new generation of young scientists trained to tackle these challenges from a multidisciplinary perspective. THERACAT establishes an international training programme focused on the development of catalysis-based'. To the right of the main content is a sidebar with two sections: 'PRIVATE ACCESS' containing 'Site Admin' and 'Log out' links, and 'EVENTS' containing a link for 'Bioorthogonal & Bioresponsive 2019' with the dates 'June 6 @ 2:00 pm - June 7 @ 6:00 pm'.

- Access to Intranet section has been given to all ESRs.
- Section Fellows: picture & information about background / profile / ETN Topic. **Template will be provided**

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### Activities aimed at general public (not scientists)

**BLOGS:** Several THERACAT institutions such as IBEC and CRUK publish divulgation blogs. These platforms will be used to disseminate the results in a simple and comprehensible way to the general public. **If interested, contact your supervisor to check if your institution has a divulgation blog**

**SCIENCE FESTIVALS:** Members of the consortium will participate to public events such as: the Edinburgh International Science Festival, the European Researchers' Night, and Night of art and Science in Groningen. **Sept 2019 European Researchers' Night (volunteers?)**

**VIDEOS:** ESRs in collaboration with TUE will prepare videos explaining for a general audience the main goals of the project, its societal implications as well as promoting the value of mobility on a personal example. **Deliverable 8.4 (month 24, Feb 2020)**

**GENERAL PRESS ARTICLES:** about the research being conducted and its implications will be submitted to media such as CORDIS website and related webs (News, research\*eu results magazine, Horizon Magazine). **D8.5 (M30, Aug 2020) & 8.9 (M48, Feb 2022)**

**LOCAL MEDIA:** The students will also promote their works in university newsletters, local press or radio/TV programmes to inform the general public of the discoveries and benefits related to the project proposed herein.

**WE ENCOURAGE YOU TO PARTICIPATE AND/OR PROPOSE NEW ACTIVITIES IN COLLABORATION WITH YOUR INSTITUTION**

**ACKNOWLEDGEMENT OF EU FUNDING:**

Use EU emblem:

- High-resolution emblems are available here

<http://europa.eu/about-eu/basic-information/symbols/flag/>



Use text as indicated in GA:

***This project has received funding from the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No. 765497 (THERACAT).***

Or equivalent paragraph

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***Summary – to do list***

- Section “Fellows” THERACAT webpage
- Training Event 2:
  - Hosted by BAS (Prof. Ward).
  - **September 23<sup>rd</sup> – 27<sup>th</sup>, 2019**

2 – Chemical synthesis & catalysis	M18, 5 days	2 ECTS	BAS
<b>Content:</b> This event will introduce the ESRs to the fundamental principles of designing the structure and synthesis of the prodrugs and the catalysts that will be studied throughout the project. It will also include an important chemical safety session.			
Catalysts and catalysis: from the synthetic utilization to artificial enzymes	BAS (T.Ward)	SCI	1 day
Prodrugs: design principles, synthesis and preliminary evaluation	EDI (A.Unciti-Broceta)	SCI	1½ day
Safety in chemical laboratories and research in industry and academia	TUE (A.Palmans)	LAB	1 day
How can we do better in bringing new molecules to the market: scaling up, formulations, regulations, procedures and economical aspects	TEVA (B.Avramovitch)	SCI COMP	1 day
Entrepreneurship and translation: IP and commercial exploitation	IBEC Tech Transfer	COMP	1 day

- **Periodic Reports to the Assessment Commissions:**
  - ESRs will send a short report to both the AC members and the Coordinator describing the training received and research performed, main obstacles and future plans every 6 months. **Template will be provided**
  - The AC will oversee the progress of the ESR, especially in comparison with the PCDPs, and provide recommendations (e.g. specific training events interesting for the ESR, best practices that could be implemented in the following period).

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***Team building***



- **THERACAT quiz:** download Kahoot! app
- **Discussion**
  - Entire life
    - 3 things you are most proud about (3 achievements)
    - 3 situations in which you failed (learning)
  - PhD
    - 3 goals for the next 12 months
    - 3 goals for the entire PhD