

## H2020-ITN THERACAT (765497)

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<b>Deliverable Title</b>	Progress Report						
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<b>Actual Delivery Date</b>	17/05/2019	<b>Contributors</b>	IBEC and All Beneficiaries				

### Overview/Abstract

Progress Report (M13).

### Explanation for large delay in submitting deliverable

We have been waiting to have all ESRs recruited to submit this deliverable. However, and in order not to further delay its submission, we currently (May 17<sup>th</sup>, 2019) submit it without having ESR3 recruited. The corresponding explanations are given along the document.

On July 18<sup>th</sup>, 2019 we submit this updated version including all Project Officer recommendations received after the Mid-Term Check Meeting.

### Led by

<b>Name</b>	Rosa Miralles	<b>Partner</b>	IBEC	<b>Date</b>	09/05/2019
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### Reviewed by

<b>Name</b>	Lorenzo Albertazzi	<b>Partner</b>	IBEC	<b>Date</b>	16/05/2019
<b>Name</b>	Rosa Miralles	<b>Partner</b>	IBEC	<b>Date</b>	18/07/2019

### Document Control

Issue #	Date	Changed Pages	Cause of Change	Implemented by
1	18/07/19	3	Information on MS4 and MS5 has been included as requested by the Project Officer (PO)	Rosa Miralles
2	18/07/19	5	Information on recruitment process for ESR3 (applications received & candidates interviewed) has been updated	Rosa Miralles

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3	18/07/19	6, 7	Information on readjustment of the schedule of secondments has been included as requested by the PO	Rosa Miralles
4	18/07/19	11	Names of the fellows forming the Fellows Committee has been included as requested by the PO	Rosa Miralles
5	18/07/19	13, 14	Information regarding the submission of results obtained to international journals and presentations at conferences has been updated	Rosa Miralles

# 1. Progress Report (M13)

## 1.1. General progress of the action

The **THERACAT** Training Network has overall progressed according to plan in its first year and is fully set to conduct the training and research activities as described in the Description of the Action (DoA), with the exception of the incorporation of one Early Stage Researcher, ESR3, who is already selected and expected to be incorporated within the next few weeks (*more details below*). The project started on 01/03/2018 and has recruited 12 ESRs. Recruitment was performed individually by each beneficiary following common guidelines established at the kick-off meeting (call for applicants, evaluation phase, interview and contract). Of the final 12 contracted ESRs, 7 are women and 5 men. All ESRs started their contracts and research project before month 12, with the exception of ESR3 and ESR8 (delay of 10 days), and have a good basis of work so far. In May 2018, the kick-off meeting was held at IBEC (Barcelona, SPAIN), mainly addressing the following issues: scope of the project, presentation of beneficiaries, project management information, recruitment, training, dissemination and communication, milestones alignment and deliverables, financial and reporting information, among others. Moreover, the Supervisory Board and the members of the Assessment Commissions (ACs) were set up. Management tools were implemented, such as the **THERACAT website** (<https://theracat.eu/>), which is used as the main tool for communication, both external (project, partners and ESRs' descriptions, events coverage and news feed) and internal (document repository with all network documents and templates, deliverables and milestones, schedule, training activities, etc.). Finally, Network Meeting 1 (1 day) and Training Event 1 (4 days, "Introducing the THERACAT Network & How to plan and start a PhD"), were held in March 2019 at TUE (Eindhoven, THE NETHERLANDS) with the attendance of all ESRs and supervisors.

### **DELIVERABLES AND MILESTONES ACHIEVED DURING THE FIRST YEAR**

**DELIVERABLES:** D2.1. Network meeting minutes (kick-off); D2.2. Consortium Agreement; D2.3. Supervisory Board of the Network; D8.1. Website completion; D7.1. Personal Career Development Plans\*; D1.1. A - Requirement No. 1; D1.2. NEC - Requirement No. 2; D1.3. HCT - Requirement No. 3; D2.4. Network Meetings minutes (Meeting 1); D2.5. Recruitment completion\*; D7.2. Training events minutes; D7.3. ESRs periodic short reports and AC recommendations\*; D8.2. Periodic report on dissemination and participation in outreach activities. *\*Please note that these deliverables have been submitted despite lacking ESR3 information to avoid further delaying the submission.*

**MILESTONES:** MS1. Guidelines for recruitment and assessment of ESRs, PCDPs, strategy for dealing with scientific misconduct; MS2. Assessment Commissions; MS3. Intranet and extranet website. *Please note that MS4 and MS5 (MS4. ESRs Recruitment and PCDPs; MS5. ESR local doctoral studies), scheduled to be finished during the first year, are pending their delivery at the "Funding & Tenders" Portal due to the delay in the incorporation of ESR3 but have been reached for all ESRs (except ESR9 who is finally not pursuing a PhD due to BiogelX internal regulations). Such milestones will be submitted as soon as ESR3 is incorporated.*

### **DEVIATIONS FROM THE ORIGINAL PLAN**

The main deviation within the first year of the ITN was the delay in the recruitment of ESR3, to be incorporated at TEVA, due to the complex bureaucratic procedures of such a

big pharma company, especially considering that it is the first time that an ESR working in an industrial beneficiary (TEVA) enrolled in a PhD program at TAU. The supervisor from TEVA, Dr. Avramovitch, with the support from TAU (Dr. Amir), is working laboriously to accelerate the incorporation of ESR3, which is expected to be concluded within the next few weeks.

The other two main modifications that were performed after the approval of the corresponding amendment by the EC were: (1) relocation of ESR6 from IBEC to TUE due to the new and double appointment of the supervisor and coordinator of the network, Dr. Albertazzi, between IBEC and TUE (that was already a project beneficiary); (2) modification of TEVA's Principal Investigator (PI) to be Dr. Avramovitch, since the PI initially appointed to the THERACAT project (Dr. Hila Barash) was no longer working for the company due to a substantial internal restructuring process underwent at TEVA.

## 1.2. Recruitment strategy

### **ORGANIZATION OF THE RECRUITMENT PROCESS**

Good practices and guidelines for an open, transparent, international and competitive recruitment were discussed and approved at the kick-off meeting by the Supervisory Board and Recruitment Committee, being available to all partners in the THERACAT intranet. Here we indicate the main points included in the written recruitment plan defining the step by step process of employment:

- Eligibility criteria
- Job description
- Measures to ensure gender balance within the recruitment procedure
- Advertising the positions
- Good practices for candidate selection
- Steps to be performed for the successful candidates

In addition, it was agreed that the recruitment would be performed individually by each beneficiary and that the person responsible for organising and implementing the recruitment at each institution would liaise closely with his/her respective Human Resources teams, so that internal rules and regulations are adhered to, whilst ensuring that the rules of this specific project are met as well.

As a minimal provision agreed between all beneficiaries at the kick-off meeting, all positions were advertised on [Euraxess](https://euraxess.eu), on the project's website (<https://theracat.eu/jobs/>), and on each beneficiary's own website. In addition, some beneficiaries advertised their vacancies on specialised, national-specific or broader job search websites such as [Biocat](#), [Academic Transfer](#) and LinkedIn, among others. The consortium received 467 applications in total for the 13 positions that have been filled.

Position	Institution	Applications received		Candidates interviewed		ESR selected
		Female	Male	Female	Male	Gender
ESR1	GRO <sup>1</sup>	9	15	1	1	Female
ESR2	TAU	2	6	2	4	Male
ESR3	TEVA	0	12	0	3	Male <sup>2</sup>
ESR4	TUE <sup>3</sup>	17	28	2	3	Female
ESR5	EDI	10	8	1	2	Male
ESR6	TUE	33	50	1	1	Male
ESR7	IBEC	17	20	3	0	Female
ESR8	TUE <sup>3</sup>	17	28	2	3	Female
ESR9	BGX	27	34	3	4	Female
ESR10	BAS	6	34	1	1	Male
ESR11	EDI	7	5	2	0	Female
ESR12	TAG	26	34	7	4	Female
ESR13	TAU	7	15	6	7	Male

(1) 4 candidates were invited for interview, but 2 declined because they had already accepted positions elsewhere. (2) ESR3 is already selected and only pending the signature of his contract with TEVA. (3) Two descriptions were made for Euraxess but for the selection TUE made no distinction between the two, given the high similarity in the requirements for the candidates for both positions. So the numbers refer to the total for the 2 positions (ESR4 and ESR8).

We would like to highlight that gender balance has been clearly achieved in the recruitment, having 58% of female and 42% of male ESRs (ESR3 not included in this calculation as he is still pending his contract).

Importantly, during the recruitment and the implementation of the project, THERACAT beneficiaries took and will continue taking all measures to implement the principles set out in the [“European Charter for Researchers”](#) and the [“Code of Conduct for Recruitment”](#) of researchers and ensure that the THERACAT researchers are aware of them.

### **SELECTED CANDIDATES**

The consortium already recruited 12 ESRs among the applying candidates, of which 7 are women (58%) and 5 men (42%).

<b>Position</b>	<b>Institution</b>	<b>Name</b>	<b>Gender</b>	<b>Country</b>
ESR1	GRO	Michela Vargiu	Female	IT
ESR2	TAU	Shreyas Wagle	Male	IN
ESR3	TEVA	<i>Pending</i>	<i>Pending</i>	<i>Pending</i>
ESR4	TUE	Anjana Sathyan	Female	IN
ESR5	EDI	Stephen Croke	Male	IE
ESR6	TUE	Emmanouil Archontakis	Male	EL
ESR7	IBEC	Rodica Alis Olea	Female	RO
ESR8	TUE	Linlin Deng	Female	CN
ESR9	BGX	Africa Galvez Flores	Female	ES
ESR10	BAS	Boris Lozhkin	Male	RU
ESR11	EDI	Melissa van de l’Isle	Female	NL
ESR12	TAG	Maria Vlastara	Female	EL
ESR13	TAU	Daniel Rodriguez	Male	ES

All selected candidates met the eligibility criteria. They were, at the time of recruitment, in the first four years of their research careers and had not been awarded a doctoral degree. They had not resided or carried out their main activity (work, studies, etc.) in the country of their host organisation for more than 12 months in the 3 years immediately before the recruitment date.

Family allowance costs were only claimed for ESR8 since she fulfils the corresponding eligibility requirement. All candidates already obtained the corresponding visas and Researcher Declarations (RD) have been filled in by all beneficiaries at the Funding & Tenders Portal.

### **DELAYS AND DEVIATIONS**

Some of the recruited ESRs were incorporated later than expected according to the original DoA due to lengthy procedures to obtain their visas, but all of them were recruited before month 12 (except ESR8 who was incorporated with a 10-days delay). The corresponding workplan has been slightly readjusted considering the actual starting date of each ESR, including re-scheduling of the secondments planned according to the new starting dates (e.g. for a fellow that has been recruited with a 2-months delay, his/her

secondments are proposed to be postponed 2 months – details in D2.4). Such modification is intended at aligning secondments with the progress of the ESRs' research projects, thus contributing to maximise their scientific productivity and to take full advantage of the research to be performed during the secondment.

The only fellow that has not been incorporated yet is ESR3, to be recruited by TEVA. Notably, the selection process was already finished on time and the selected candidate has been notified his admission into the THERACAT Network, only pending to sign the contract with the corresponding beneficiary, TEVA. In an effort to ensure that ESR3 would be enrolled in a Doctoral Programme at Tel Aviv University – TAU, TEVA supervisor (Dr. Avramovitch) coordinated with TAU supervisor (Dr. Amir) to prepare and present the required paperwork. However, this process took longer than expected due to the complexity of having an ESR from an industrial beneficiary (TEVA) enrolling in a PhD program with another academic beneficiary (TAU). This unique situation demanded special arrangements and understandings between and within the beneficiaries. Currently the beneficiaries are finalizing and formalizing all relevant aspects. The ESR3, who already obtained the required visa, is expected therefore to be incorporated to the project within the next few weeks.

Finally, and as previously mentioned, there was a change in the beneficiary hosting ESR6 (from IBEC to TUE), after officially requesting it to the EC via an Amendment. Such change was prompted by the new affiliation of the supervisor, Dr. Albertazzi, with TUE holding a double appointment position between IBEC and TUE. In practical terms, part of Dr. Albertazzi's research activities remain at IBEC while part of them are being performed at TUE, to maximize the scientific performance of the research group, in the framework of a collaborative agreement between the two institutions. In this collaborative framework and thanks to the new appointment of Dr. Albertazzi, TUE invested a substantial budget in microscopy that is at Dr. Albertazzi's disposal. For this reason, Dr. Albertazzi considered beneficial for the project that one of the ESRs initially appointed at IBEC, ESR6, would be recruited and trained at TUE under his supervision. This has been undoubtedly beneficial for the ESR in light of the activities and investments in Dr. Albertazzi's group at TUE in the field of single molecule microscopy, the main focus of the project.

### 1.3. Career development plan for each recruited researcher

A template for the “Personal Career Development Plan” (PCDP), agreed during the kick-off meeting, was provided to all supervisors and ESRs by the Coordinator in order to guide them (available through the THERACAT website intranet). The template also included some instructions on how to fill it in, despite freedom was left to the ESRs and supervisors regarding the final format of the document, thus ensuring that plans could be adapted to each ESR and host institution’s vision and common practices. The template was to be filled in and signed by both the ESR and the supervisor, and included the following sections:

- 1. ESR personal data:** Name of fellow, Department and Host Institution, Name of Supervisor, Date.
- 2. Brief overview of research project, methodology and major accomplishments expected.**
- 3. Individual secondment plan(s):** institution and sector (academic/non-academic), duration, main research objectives, new knowledge and competences expected to be acquired during the secondment.
- 4. Long-term career objectives (over 5 years):**
  - Goals.
  - What further research activity or other training is needed to attain these goals?
- 5. Short-term objectives (1-2 years):**
  - Research results: (i) Anticipated publications, (ii) Anticipated conference, workshop attendance, courses, and /or seminar presentations.
  - Research skills and techniques: (i) Local training, (ii) THERACAT training.
  - Research management: Fellowship or other funding applications planned.
  - Communication skills.
  - Other professional training (course work, teaching activity).
  - Anticipated networking opportunities.
  - Other activities (community, etc.) with professional relevance.

PCDPs were collected by the Coordinator and the Training Committee after the recruitment of the ESRs and were further discussed between the ESRs and their Assessment Commission at the Network Meeting 1 (held at TUE on March 26<sup>th</sup>, 2019). The final content of each PCDP can be found in Deliverable 7.1 already submitted.



## **1.4. Management of the action**

### **PROJECT MANAGEMENT**

The Coordinator (IBEC), supported by the Projects Office from IBEC, is responsible for supervising the day-to-day management, the overall financial administration and the distribution of funds and liaison with the EC.

Main management actions conducted up to date have been:

#### **1. Kick-off Meeting**

The project Kick-off Meeting took place at the Parc Científic de Barcelona (PCB) in Barcelona (SPAIN), where the Institute for Bioengineering of Catalonia (IBEC) is located. The kick-off meeting lasted 1 day: May 31<sup>st</sup>, 2018 (D2.1), being focused in the main management aspects for the network at this stage of the project (i.e. recruitment, rules, budget allocation, first training activities, etc.). All 9 beneficiaries attended the kick-off meeting. The Supervisory Board members were appointed during the kick-off meeting (D2.3), and the Assessment Commissions were also set.

#### **2. Guidelines for partners & support in the recruitment**

The following guidelines to support all beneficiaries in the recruitment and subsequent actions were prepared, approved and made available to all partners through e-mail and through the THERACAT Intranet (MS1):

- Recruitment plan (Section 1.2)
- Personal Career Development Plan (Section 1.3)
- Strategy for dealing with scientific misconduct:

All Network members are strongly committed to prevent any potential misuse of research and research misconduct, and whilst the ultimate responsibility for good research practice lies within the individual researcher, the THERACAT members understand that safeguarding research integrity is a shared task in the research community. For this reason, a guide on how to deal and prevent scientific misconduct that may occur in the framework of the project was prepared.

The main goal of the strategy is to establish an environment conducive to high-quality research and ensure that research is conducted according to international ethical standards. The guide is intended to complement policies and procedures already available in the individual institutions participating in the project, not replacing them, and its content being complementary to the laws in force.

The guide applies to and should be known by all researchers involved in the THERACAT project (including supervisors and ESRs). They should all be familiar with its content, and all of them should:

- a) recognize their responsibility to conduct research of high ethical standards;
- b) be aware and agree with the THERACAT strategy for dealing with scientific misconduct;
- c) make sure that their research complies with the present guide and seek guidance from IBEC (as the coordinator) when necessary.

And, as a proof of this, all THERACAT supervisors and ESRs have already signed and sent to the Coordinator their Agreement on the strategy for dealing with scientific misconduct.

### 3. Consortium Agreement

The Consortium Agreement was set and signed by all beneficiaries, specifying the management structure and the relationship among partners concerning the decision-making procedures and the rights and obligations of the partners concerning liability, access rights, dispute resolution and intellectual property (D2.2).

### 4. THERACAT Website

The THERACAT project website (D8.1, <https://theracat.eu/>) was designed following two complementary objectives. First, an extranet dedicated area was devoted to the communication and dissemination of the project and its results to the general public. Second, an intranet area was developed to support the network management and contribute to have an effective internal communication (access to the intranet is restricted to Supervisory Board members and ESRs). In this area, a detailed schedule of activities and of the Network Plan are included, which are continuously updated. Moreover, a repository of documents is available and continuously updated including deliverables, dissemination, meeting minutes and presentations, progress reports, guidelines and templates.



### 5. Amendment

As previously mentioned (section 1.2), an amendment was prepared and submitted to request a relocation of ESR6 from IBEC to TUE. After the approval of the amendment by the EC, supervisor Dr. Albertazzi with the support from Human Resources Department at TUE recruited the fellow following the recruitment plan guidelines. ESR6 was duly incorporated at TUE before month 12 and is currently benefiting of the microscopy facilities available at TUE to conduct his research project.

## 6. Network Meeting 1 and Training Event 1

Network Meeting 1 and Training Event 1 were held at the Institute for Complex Molecular Systems, Technische Universiteit Eindhoven (TUE) in Eindhoven (THE NETHERLANDS). The Network Meeting lasted 1 day (March 26<sup>th</sup>, 2019) and the Training Event lasted 4 days (March 25<sup>th</sup>, and March 27-29<sup>th</sup>, 2019). The Training Event was split so that the first session (General introduction) could be given on Monday, when all PIs and ESRs arrived. On Tuesday we had the Network Meeting, also attended by all PIs and ESRs, and from Wednesday on we continued with the Training Event sessions (only attended by the ESRs).

In the Network Meeting 1 (D2.4), there was an introduction by each PI and ESR, followed by a Project Management session for all Supervisory Board members given by the Coordinator. Finally, all ESRs met with their Assessment Commissions.

Training Event 1 (D7.2) was intended at giving the ESRs a general introduction to the THERACAT project as well as providing them some tools to start a PhD. Four different sessions were conducted: (1) General introduction; (2) Skills to start a successful PhD; (3) Scientific communication; (4) ESRs Meeting and teambuilding activities. During the ESRs Meeting, the Fellows Committee representatives were elected. As indicated in D7.2, final composition of the Fellows Committee is as follows: (1) Shreyas Wagle (ESR2); (2) Maria Vlastara (ESR12); (3) Stephen Croke (ESR5). The ESR Representative for the Supervisory Board is Shreyas Wagle (ESR2).

## 7. Organisation of Training Event 2

Training Event 2 (D7.4) has been already organised by the beneficiary Universität Basel (BAS) in collaboration with IBEC, to be held on September 23<sup>rd</sup> – 27<sup>th</sup> 2019 at Universität Basel (Basel, SWITZERLAND). The Event will last one full week (5 days) and will be focused on “Chemical synthesis & catalysis”, including lectures about catalysis and catalysis (BAS), prodrugs (EDI), safety in chemical laboratories (TUE), transfer of molecules to the market (TEVA) and entrepreneurship and translation (BAS Tech Transfer Office). It will be attended by all ESRs and the PIs involved in the training.

Finally, in addition to the abovementioned face-to-face meetings and events, there has been close cooperation within the consortium by electronic means, contributing to an efficient and successful start and implementation of the project (i.e. more than 200 e-mail interactions and several phone calls).

In summary, IBEC as Coordinator has been working intensively to provide a good support on all general and individual management actions towards the project and the ESRs during the first period of the project.

### **RISK MANAGEMENT**

See the following table about the status of the THERACAT management risks:

RISK	DESCRIPTION & PROPOSED RISK-MITIGATION ACTIONS	STATUS
R1 WP2	<b>One participant is not able to fulfil the plan of recruitment.</b> Extension of the recruitment period and intensive advertising of the available position among members' colleagues.	ESR3 is the only student not incorporated yet despite being already selected and having his visa issued. Some measures had been taken to accelerate his incorporation such as involving Dr. Amir (TAU)

		supervisor) in the process to mediate between TEVA and TAU, facilitating all paperwork and requirements from both beneficiaries.
R2 WP2	<b>ESR not integrated in the host institution.</b> Mediation of the conflict between the ESR and the supervisor by the Recruitment Committee and the Advisory Board. The Supervisory Board (SB) may offer the ESR the transfer to another beneficiary.	No risks have been identified yet. Feedback received from all supervisors and ESRs suggests that a high-quality integration has been achieved for all ESRs.
R3 WP2	<b>Partner leaving the project.</b> The SB will re-allocate its pending research and training tasks and associated funding between other beneficiaries, and will offer the possibility to the hosted ESR to transfer to another beneficiary.	No signs of this risk yet. As previously indicated in the “Deviations from the original plan” section, TEVA nominated a new Scientist in Charge, Dr. Bianca Avramovitch, who replaced Dr. Hila Barash that was no longer working for the company due to the substantial internal restructuring process underwent at TEVA. This change was approved by the Project Officer through an amendment before being implemented.
R4 WP2	<b>Cancellation of a planned secondment due to force majeure reasons</b> Preferably, postpone the planned secondment; if not possible, definition of a new secondment agreed between supervisor, ESR, AC, the new secondment co-supervisor and coordinator.	No risks have been identified yet. At the Network Meeting 1, the schedule of the secondments was readjusted taking into account the actual starting date of each ESR.
R5 WP2	<b>Conflicts among partners, including IPR conflicts.</b> The Coordinator will mediate between the parties. Should agreement not be reached, the conflict will be resolved by the SB, in line with the recommendations of the EC and the Consortium Agreement.	No risks have been identified yet, with mitigation in part taking the form of a Consortium Agreement to set expectations of each partner. It will continue to be a key topic for the Coordinator along the project.

### **ETHICS ISSUES**

The high benefit pursued in the THERACAT project, which is the development of new anticancer therapies based on bio-orthogonal catalysis, requires the use of human cells and animal testing, as well as involves beneficiaries located outside EU Member States (Universität Basel – Switzerland, Tel Aviv University and TEVA Pharmaceutical Industries Ltd. – Israel). All beneficiaries are aware that the THERACAT project has these ethical issues associated and are committed to ensure that all activities and experiments are in conformance with national and EU legislation, regulations and ethical standards.

All beneficiaries are currently complying (and will continue to comply all along the project) with the requirements for these ethical issues, as indicated in the corresponding deliverables already submitted to the EC: Animals (D1.1), Non-European Countries (D1.2) and Human Cells and Tissues (D1.3).

## 1.5. Communication Activities

The focus of the dissemination and communication activities during the first year has been on designing a project logo, setting up the project website and publishing some news on institution's beneficiary websites while ESRs were being recruited. In addition, IBEC as Coordinator has been in close contact with Partner Organisation Cancer Research UK (CRUK) in order to design the best strategy on dissemination and communication activities to reach all audiences (both specialised and general public) to be implemented all along the project. CRUK is the world's leading cancer charity dedicated to saving lives through research, and its Research Information & Engagement team has an outstanding experience in communicating science to the general public. Thus, a plan for future communication activities to be conducted was discussed during Network Meeting 1, including: THERACAT social media accounts creation and management; publication in divulgation blogs by the ESRs (e.g. <http://divulga.ibecbarcelona.eu/>); preparation of videos explaining main goals of the project and societal implications for a general audience (D8.4); participation of ESRs to science festivals, such as the European Researchers' Night (September 2019); publication of at least two general press articles in EU magazines (D8.5 and D8.9); communication of the main project results via local media (university newsletters, local press, radio/TV programmes).

Concerning dissemination, BAS beneficiary is currently preparing a manuscript containing the results obtained so far to be published in an international peer-reviewed journal, and the project will be presented at the [Bioorthogonal & Bioresponsive 2019 Conference](#) that will be held at the Institute of Genetics & Molecular Medicine (Edinburgh, UK) on June 6<sup>th</sup> and 7<sup>th</sup> 2019. Therein, the Coordinator of the Network, Dr. Albertazzi, will give a talk entitled "A super-resolved look at nanomaterials" and the conference will be attended by several of the ESRs working on the project. The project will also be presented at the [RSEQ Biennial Meeting](#) (San Sebastian, SPAIN; May 29<sup>th</sup>, 2019) and at the [Unconventional Catalysis, Reactors and Applications](#) (Zaragoza, SPAIN; October 16<sup>th</sup>-18<sup>th</sup>, 2019).

Project website	<a href="https://theracat.eu/">https://theracat.eu/</a>
General audience	Announcements on the institution's beneficiary websites <ul style="list-style-type: none"> <li>• <a href="http://www.ibecbarcelona.eu/training-the-next-generation-of-experts-in-bio-orthogonal-catalysis-for-cancer-therapy/">http://www.ibecbarcelona.eu/training-the-next-generation-of-experts-in-bio-orthogonal-catalysis-for-cancer-therapy/</a></li> <li>• <a href="https://www.biogelx.com/theracat-the-use-of-bio-orthogonal-catalysis-for-cancer-therapy/">https://www.biogelx.com/theracat-the-use-of-bio-orthogonal-catalysis-for-cancer-therapy/</a></li> <li>• <a href="https://www.biogelx.com/introducing-biogelxs-new-cell-biologist-africa-galvez-flores/">https://www.biogelx.com/introducing-biogelxs-new-cell-biologist-africa-galvez-flores/</a></li> <li>• <a href="https://www.biogelx.com/the-theracat-project-gets-off-to-a-flying-start/">https://www.biogelx.com/the-theracat-project-gets-off-to-a-flying-start/</a></li> <li>• <a href="https://www.ed.ac.uk/cancer-centre/news-and-events/news-2019/european-funding-success">https://www.ed.ac.uk/cancer-centre/news-and-events/news-2019/european-funding-success</a></li> </ul>

	<p>Mention in the description of beneficiaries' activities:</p> <ul style="list-style-type: none"> <li>• <a href="https://nanomedspain.net/institut-de-bioenginyeria-de-catalunya-ibec/">https://nanomedspain.net/institut-de-bioenginyeria-de-catalunya-ibec/</a></li> </ul> <p>Job offers:</p> <p>ESR1: <a href="https://euraxess.ec.europa.eu/jobs/322936">https://euraxess.ec.europa.eu/jobs/322936</a>  ESR2: <a href="https://euraxess.ec.europa.eu/jobs/322708">https://euraxess.ec.europa.eu/jobs/322708</a>  ESR3: <a href="https://euraxess.ec.europa.eu/jobs/325162">https://euraxess.ec.europa.eu/jobs/325162</a>  ESR4: <a href="https://euraxess.ec.europa.eu/jobs/321889">https://euraxess.ec.europa.eu/jobs/321889</a>  ESR5: <a href="https://euraxess.ec.europa.eu/jobs/333581">https://euraxess.ec.europa.eu/jobs/333581</a>  ESR6: <a href="https://euraxess.ec.europa.eu/jobs/321888">https://euraxess.ec.europa.eu/jobs/321888</a>  ESR7: <a href="https://euraxess.ec.europa.eu/jobs/318985">https://euraxess.ec.europa.eu/jobs/318985</a>  ESR8: <a href="https://euraxess.ec.europa.eu/jobs/355274">https://euraxess.ec.europa.eu/jobs/355274</a>  ESR9: <a href="https://euraxess.ec.europa.eu/jobs/334185">https://euraxess.ec.europa.eu/jobs/334185</a>  ESR10: <a href="https://euraxess.ec.europa.eu/jobs/313142">https://euraxess.ec.europa.eu/jobs/313142</a>  ESR11: <a href="https://euraxess.ec.europa.eu/jobs/332500">https://euraxess.ec.europa.eu/jobs/332500</a>  ESR12: <a href="https://euraxess.ec.europa.eu/jobs/327795">https://euraxess.ec.europa.eu/jobs/327795</a>  ESR13: <a href="https://euraxess.ec.europa.eu/jobs/323035">https://euraxess.ec.europa.eu/jobs/323035</a></p>
<p>Talks and presentations</p>	<p>“Bioorthogonal Catalysis: Overview, Applications and State-of-the-art” talk given by Prof. Unciti-Broceta at Baylor University (Texas, US; April 5<sup>th</sup>, 2019)</p> <p>“Palladium-mediated local chemotherapy: synthesis of cytotoxic agents by bioorthogonal catalysis in and outside cancer cells” talk given by Prof. Unciti-Broceta at the <a href="#">RSEQ Biennial Meeting</a> (San Sebastian, SPAIN; May 29<sup>th</sup>, 2019)</p> <p>“A super-resolved look at nanomaterials” talk to be given by Dr. Albertazzi at the <a href="#">Bioorthogonal &amp; Bioresponsive 2019 Conference</a> (Edinburgh, UK; June 6<sup>th</sup>, 2019)</p> <p>“Biocompatible catalytic devices and bioorthogonally-activated prodrugs to mediate local chemotherapy” plenary lecture by Prof. Unciti-Broceta at the <a href="#">Unconventional Catalysis, Reactors and Applications</a> (Zaragoza, SPAIN; October 16<sup>th</sup>-18<sup>th</sup>, 2019).</p>
<p>Events organised</p>	<p>THERACAT Kick-off Meeting (31/05/2018)  THERACAT Meeting 1 (26/03/2019)  THERACAT Training Event 1 (25, 27-29/03/2019)</p>



## 1.6. Impact of the Action

### **IMPACT ON THE INDIVIDUAL ESRs**

We envisage several areas where the THERACAT project will have long-term impact on the fellows' career prospects, considering that the project brings together a team of leading academic researchers and innovative industrial leaders conducting a high-quality collaborative training programme for ESRs participating in the network. The training programme was carefully elaborated following the principles for Innovative Doctoral Training (i.e. Research Excellence, Attractive Institutional Environment, Interdisciplinary Research Options, Exposure to Industry and other relevant employment sectors, International networking, Transferable skills training and Quality Assurance), and hence will contribute to prepare the ESRs to tackle the major European research and societal challenges.

In particular, THERACAT ESRs are receiving:

- Fully integrative and excellent academic-industrial experience that encompasses both basic- and applied research while providing high quality technical, transferable and employability skills. The presence in the consortium of institutions and research groups with the highest standards in research (five of the supervisors have been granted with the prestigious ERC grant; TEVA is a company world leader in manufacturing and marketing drugs; IBEC has been recognized as a Severo Ochoa Centre of Excellence in Spain; etc.) promotes Research Excellence and ensures that ESRs will be able to exploit their creativity and autonomy.
- Working as a multidisciplinary and integrated team, mimicking the collaborative research environment found in an industrial setting rather than working along the classical "one-student one-project" scheme and encouraging networking among ESRs and beneficiaries.
- Hands-on exposure with state-of-the-art techniques/instrumentation and expert training at the select research hubs within the academic and industrial research network to gain research skills in several scientific areas (e.g. advanced organic and polymer chemistry, in vitro characterization, imaging techniques, assessment of drug therapy efficacy, among others).
- Exposure to a whole variety of future employment sectors (Universities, Research Centres, SMEs, Large Industries, Charities) through intersectoral secondments and by means of the training sessions provided by all beneficiaries and partner organisations. All these sectors are duly represented within the consortium and actively participate in all the network activities.
- Specific training on both scientific and transferable skills. In particular, training is being delivered on the main scientific areas related to the project (chemical synthesis & catalysis, drug delivery & microscopy, in vivo and cancer biology) as well as on several complementary skills essential for the future professional career of the ESRs (scientific communication, ethics, diversity & inclusion, strategies towards the market, entrepreneurship & commercial exploitation, gender balance, searching for future positions, among others).

The successful implementation of the project during the first 13 months guarantees that the impact foreseen for the ESRs will be duly achieved during the execution of the THERACAT project, thus preparing a new generation of ESRs able to face current and future challenges and to convert knowledge and ideas into products and services for economic and social benefit.

### **IMPACT ON THE INVOLVED INSTITUTIONS**

At the current stage, the THERACAT network has impacted the involved institutions on the following aspects:

- A functional and interdisciplinary network of institutions developing training and research at the forefront of catalysis & materials, cancer biology, and cells & in vivo microscopy has been successfully set-up, widening the existing network of collaborations of the involved institutions, promoting synergies, increasing their visibility in the field, and allowing them to create a critical mass to successfully develop the present and future actions. As a first measure of this impact, we highlight the large number of applicants that have been attracted by the project, which has allowed attracting and recruiting ESRs of the highest calibre.
- The established network promoted that some beneficiaries applied together to further calls (e.g. IBEC and TAU applied for an Israel Science Foundation call for international collaboration).
- The interaction between beneficiaries (universities, research centres and private sector) is starting and being perceived as highly valuable since they have complementary backgrounds covering the various scientific training and research topics on bio-orthogonal catalysis (chemistry, biophysics, biology) and on diverse complementary skills training (communication, entrepreneurship, gender balance, etc.). Such an impressive complementary offer is unique in Europe and among other ITN networks, and the involved ESRs are expected to achieve scientific and technological results of high impact.
- The complementarity between partners participating in the project will allow them to achieve scientific results that will not be possible from a single discipline perspective.



## 2. References

N/A