



D4.2 Report on study visits

WP4 Knowledge transfer and IPR

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Abbreviations

FINS - Institute for Food Technology, Serbia

UNIBO - University of Bologna, Italy

TEAGASC - Agriculture and Food Development Authority, Ireland

DoA - Description of Action

KTO - Knowledge Transfer Office

ARIC - Research and Third Mission Division of UNIBO

TTO - Technology Transfer Office

IP - Intellectual property

IPR - Intellectual property rights

R&D - Research and development

EIP-AGRI - European Innovation Partnership "Agricultural Productivity and Sustainability"

BBI -Bio-based industries

FACCE-JPI - Joint Programming Initiative on Agriculture, Food Security and Climate Change

JPI - HDHL - A Healthy Diet for a Healthy Life - Joint Programming Initiative

ETP - European Technology Platform

PDAI - Programma di accensione

HK - Horticultural knowledge srl

LMM - Last minute market srl

EPO - European patent office

WIPO - World intellectual property organization

SME - small and medium enterprise

MTI - Meat Technology Ireland

DIT - Dublin Institute of Technology



DCU - Dublin City University

UCC - University College Cork

ICBF - Irish Cattle Breeders Federation

CRM - Customer Relationship Management



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1 Executive summary

The purpose of this document is to present the report on two study visits to Knowledge Transfer Office (KTO) of the UNIBO and Technology Transfer Office of TEAGASC integrated under the name *Report on study visits* realized within WP4 (T4.2) of FOODstars project in compliance with the list of all deliverables as stated in FOODstars DoA.

The specific objective of this deliverable is to give an overview of the study visits to knowledge/technology transfer offices of the FOODstars project partners (UNIBO and TEAGASC) comprising of thematic content of the visits, lecturers and visitors. This deliverable also aims to underscore the most significant outputs emerging from such study visits and to demonstrate how they have contributed to the management of IP within FINS, as a prerequisite for innovation and creativity in R&D activities.



***I STUDY VISIST TO KNOWLEDGE TRANSFER OFFICE OF
UNIBO***



2 Study visit description

2.1 Details of the study visit implementation

Study visit to Knowledge Transfer Office of UNIBO (WP4, T4.2) within FOODstars project was organized by one of administrative divisions of UNIBO, Italy - Research and Third Mission Division (ARIC) for two FINS researchers and supervised by Dr. Jacopo Fanti, knowledge transfer manager. The study visit was organized during M29 (in the period 16 -20th April, 2018).

As a part of the study visit, visitors from FINS had an opportunity to visit the Interdepartmental Centre of Industrial Agrifood Research (CIRI) located at the UNIBO's Campus of Cesena organized to provide the industry not only with services, but supporting all the production and innovation phases.

2.2 Lecturers

The study visit to UNIBO KTO was thematically designed, coordinated and supervised by Dr. Jacopo Fanti, from ARIC, UNIBO (Bologna, Italy) and featured the participation of other experts from ARIC. The list of lecturers is given in Appendix 1.

2.3 Appointed FINS researchers

Referring to their scientific interests and previous knowledge, FINS researchers appointed to visit KTO of UNIBO were Dr. Anamarija Mandić and Dr. Milica Pojić. The training programme was tailor made to enable them to significantly increase their knowledge in the field of knowledge transfer and commercialization of research results.

3 Study visit programme

The study visit programme is given in the table in Appendix 2.

4 Detailed study visit sessions description

4.1 Overview of Knowledge Transfer Office

Alessandra Baccigotti and Andrea Ravaioli gave the overview of UNIBO's Knowledge Transfer Office (KTO): the main activities, organizational structure, resources and expertise, and evolution path. The differences between traditional and contemporary KTO missions were highlighted. While the traditional KTO mission encompasses IP protection and IP exploitation (e.g. finding and negotiate licenses), the contemporary KTO mission is broader and encompasses: protection of IPR, licensing, due diligence, assessment, contracting, entrepreneurship, corporate partnership and career development services. The shift from pure technology transfer concept to "third mission" concept of KTO at UNIBO caused the reorganisation of the KTO and formation of new units, such as the unit for corporate relations, unit for product/service placement, unit for brand management, unit for spin-offs/start-ups and unit for entrepreneurship. Moreover, the previous horizontal organizational structure of KTO involving experts in IP protection, experts in legal issues and experts in technology exploitation has been evolved into matrix organizational structure involving deep expertise in specific domains (e.g. IP, legal) and KTO professionals dedicated to specific scientific/technical domains. To ensure the accomplishment of modern KTO vision, the skills needed from KT staff are outlined:

- People with scientific background who can understand research results and interact with researchers as *peers*



- Business developers with market oriented approach and preferably industry experience
- Legal advisors/people with legal and IP matters experience
- People with pronounced skills to negotiate, facilitate and interact with different types of stakeholders (researchers, industry, investors) (soft skills).

4.1.1 Process unit for life sciences and bioeconomy

Alessia Di Sandro presented R&D within the unit of life sciences and bioeconomy and its main activities, such as:

- Monitoring of initiatives for the definition of research policies at local, national and European level; analysis of the evolution of policies, organization of technical and scientific contributions, expressions of interest and thematic priorities to programme documents;
- Identification of strategic initiatives for the development of research activities;
- Mapping of internal and external skills and research infrastructures to favour multidisciplinary and influence the related roadmaps and research agendas;
- Promotion of strategic partnerships and support the networking activities with key players;
- Mobilization of strategic actions to intercept the competitive funds;
- Support of strategic projects of UNIBO;
- Support of the project proposals and projects in the specific field, with reference to the thematic contents and the construction of partnerships.

Moreover, the PRIMA initiative was presented established to help coordination and provide support for the partnership for research and innovation in the Mediterranean area

(<http://www.4prima.org/content/prima-initiative>). In addition FOOD 2030, the EU research and innovation policy was presented developed on the basis of the Sustainable Development Goals (DGs) and COP21 commitments.

Academic and non-academic networks UNIBO takes part into were presented, through which UNIBO participates in initiatives connected with Horizon 2020 and the EU Framework Programme for Research and Innovation:

- EIP-AGRI
- BBI
- FACCE-JPI
- JPI-HDHL
- SPIRE
- ETP Food for Life
- Foodforce
- FoodNexus
- HEALTHGRAIN Forum

4.2 Overview of entrepreneurship initiative at UNIBO

Different ways of the promotion and implementation of entrepreneurship initiatives at UNIBO were presented by Francesca Farnararo encompassing the proactive new business creation and development policy from students' research and skills.

The main activities of the unit dedicated to the promotion and development of entrepreneurial spirits were outlined such as:

- Management of strategies and models for the creation and development of new spin-offs and start-ups;



- Development of internal procedures for the accreditation of the spin-off and start-up companies
- Coordination of initiatives and actors related to the creation and development of new businesses (i.e, training initiatives such as PDAI, Launch Pad, networking such as AlmaEclub, incubation and acceleration such as FabLab, E-Lab, alma cube etc.);
- Planning and management of events, calls and funded projects related to the creation of a new company.

Proactive entrepreneurial initiative at UNIBO was seen through:

- PDAI (engl. StartUp Day), UNIBO's event which help students and graduates of UNIBO to successfully kick-start their entrepreneurial ideas.
- UNIBO's Launch Pad, the accelerator program for innovative projects created by PhD students and young researchers from UNIBO, which supports the development of entrepreneurial ideas through trainings of practical and experiential orientation.
- AlmaEClub, an open community of UNIBO faculty members and scholars for spreading and fostering the entrepreneurial culture within the university.
- FabLab, a fabrication laboratory, set up for turning entrepreneurial ideas into new products and prototypes
- E-Lab, a network of laboratories which facilitate the identification of ideas that could be transformed into businesses opportunities.
- AlmaCube, the business incubator of UNIBO and Confindustria Emilia-Area Centro, set up to accelerate the incubation processes of highly innovative start-up company born on the basis of academic research.

4.2.1 University bussines incubator. AlmaCube

Giampaolo Pagliuca presented the activities of AlmaCube in details, which apart from integrating activities already implemented by UNIBO (e.g. StartUp Day), supports the business projects of students and graduates. AlmaCube provides the development of an initial co-working period aimed at preparing the teams for the Innovation Day, an event that helps in obtaining investors for the realization of the proof of concept. This preparation encompasses the pitch presentation for the fund raising that involves the main Italian venture capitalists and business angels.

Moreover, AlmaCube is responsible for providing equipped logistics facilities (office spaces, wiring, telephone connection) that give a first physical identity to start-ups and managerial support services, specialized training on business planning, and business development initiatives.

4.2.2 Spin-off experiences

Two former university researchers introduced the spin-off companies arose from UNIBO. Marco Zibordi introduced company HK- Horticultural Knowledge which develop innovative systems for precise fruit growing, whilst Matteo Guidi presented company Last Minute Market, which manages surplus food and hence reduces food waste.

HK- Horticultural Knowledge offers prediction model-platform (Perfrutto) for the optimization and increase the yield of apples, pears and kiwifruit. Perfrutto is based on a predictive algorithm developed during 30 years of university research.

Last Minute Market collects surplus food from different types of companies, retail sector and organisation and distributes it in favour of non-profit organizations and charities. In this way, they contribute to waste prevention and waste recovery.



4.3 Agrifood thematic board

Prof. Davide Viaggi presented UNIBO's Agrifood Thematic Board, the thematic areas in focus, the members of the board, its main objectives, activities and insights from the first year experience.

The main objectives of the Agrifood thematic board are:

- Monitoring and participation in EU and international initiatives
- Involvement of UNIBO research staff in EU projects
- Scouting of excellence profiles in UNIBO
- Promotion of interdisciplinarity
- Facilitation of the collaboration between ARIC and research staff, and reduction of fragmentation.

The activities that are being implemented include:

- Diagnostics of UNIBO performance in EU calls
- Representation of UNIBO in networks, events and initiatives
- Analysis of monitoring of expression of interest for topics
- Identification of suitable participants for calls
- Support to composition of UNIBO teams and strategy (coordination, partners)
- Entry point (together with ARIC) for requests for partnership and collaboration

Apart from Agrifood Thematic Board, National Technology Agrifood Cluster - CL.A.N - was presented as a multi-stakeholder network of the key Italian players in the whole agrifood chain. It gathers companies, research centers and institutions to promote sustainable economic growth, based on research and innovation in the industry.

4.4 Industrial strategic partnership

Paola Motetti presented *Industrial Partnerships Office* established at UNIBO to support the UNIBO strategy on businesses, ensure the promotion and implementation of a proactive policy, enhance the collaboration with companies and create a contact point for companies. Relations with the industry partners are fostered by expanding and diversifying opportunities for collaboration with companies (e.g. training, collaborative research, technology transfer, placement, etc.), facilitating the creation of structured and continuous relationships, promoting more inclusive relationships and increasing the involvement of researchers and increasing the interactions with companies.

4.5 Interdepartmental Centre for Industrial Agro-Food Research

Prof. Marco Dalla Rosa presented the CIRI (Interdepartmental Center for Industrial Agro-Food Research), which was established as a tool of UNIBO to carry out and coordinate research activities and strengthening relations with industry, promoting research results and making technological transfer. The history of CIRI, its activities and staff was presented. The CIRI was created as part of the Tecnopoli project, with main aim to create a network of research and innovation infrastructures dedicated to industrial research and technology transfer. This project was a component of the Regional Operational Plan of the Emilia Romagna Region, funded by the European Regional Development Fund 2007-2013, as a consolidation of the regional network of high technology.



The research activities performed within CIRI are integrated to allow obtaining ready to use solutions to the food industry and encompass:

- the selection of raw materials and ingredients
- new product formulation
- development and optimisation of fermentation or technological process,
- packaging,
- choice of appropriate storage conditions or maturation
- shelf-life studies.

Staff present within CIRI is of the technological, microbiological, analytical and nutritional background, integrated so that to provide industry not only a service but a support for all stages of production and innovation through the application of an integrated approach based on the needs of the industry.

During visit to CIRI four examples of collaboration with industry were presented:

- Dr. Maria Rodriguez-Estrada presented the project dealing with valorisation of tomato by-products (skin and seeds) to produce naturally lycopene-enriched olive oil
- Dr. Maria Rodriguez-Estrada presented the project dealing with valorisation of durum wheat bran by-products to produce oil (bran and germ oil) for industrial use (pharmaceutical, cosmetic, etc.) or human consumption.
- Dr. Francesca Patrignani presented the project dealing with the development of active packaging to improve shelf-life and safety of minimally processed fruits on the basis of the use of natural aroma compounds
- Dr. Chiara Montanari presented the project dealing with the development of innovative cheese-like products for vegan and vegetarian consumers, already commercialized as CIONI (<http://www.weloveciconi.com/>)

4.5.1 Industrial Cluster Food Industry

Prof. Marco Dalla Rosa presented the industrial cluster of food industry of Emilia-Romagna region, which represents a reference point for the innovation needs expressed by SMEs in agri-food sector. The cluster offers support for the development of new products and processes, the characterization and selection of new raw materials, the design and validation of equipment and plants for food processing and packaging. The cluster members apart from CIRI are:

- SITEIA.PARMA - Interdepartmental research centre for food safety, technology and innovation, University of Parma;
- CIPACK - Interdepartmental research centre for packaging, University of Parma;
- CIM - Interdepartmental research centre for measurements University of Parma;
- C.R.P.A. LAB - Animal production research centre, Reggio Emilia;
- BIOGEST-SITEIA - Interdepartmental research centre for agri-food biological resources improvement and valorization, University of Modena and Reggio Emilia.

4.6 Knowledge transfer office toolbox

The last day of study visit to KTO of UNIBO was used to sum up the visit and the lessons learnt, as well as to present the tools commonly used by the KTO in perceiving the innovation potential which was given by Dr. Jacopo Fanti and Andrea Ravaioli. Espacenet patent search of EPO and



PATENTSCOPE database of WIPO was presented as a practical tool in providing access to international patent applications. Moreover, the commercial web-based patent database was presented and demonstrated such as Orbit (Questel).



II STUDY VISIT TO TECHNOLOGY TRANSFER OFFICE OF TEAGASC



5 Study visit description

5.1 Details of the study visit implementation

Study visit to Technology Transfer Office of TEAGASC (WP4, T4.2) within FOODstars project was organized for two FINS researchers and supervised by Dr. Declan Troy, Assistant director of Research and Head of Technology Transfer. The study visit was organized during M30 (in the period 6-12th May, 2018).

The study visit was not solely focused on innovation management but also included insight into a comprehensive technical support service TEAGASC provides to the agri-food industry with a particular focus on SMEs and start-up food businesses.

As a part of the study visit, visitors from FINS had an opportunity to visit University College Dublin and TEAGASC Food Research Centre in Dublin and Technology Transfer Office in Carlow.

5.2 Lecturers

The study visit to TEAGASC TTO was thematically designed, coordinated and supervised by Dr. Declan Troy, TEAGASC (Dublin, Ireland) and featured the participation of other experts from TEAGASC. The list of lecturers is given in Appendix 1.

5.3 Appointed FINS researchers

Referring to their professional interests, FINS researchers appointed to attend the visit were Dr. Radmilo Čolović, Associate Director of Transfer in FINS and Dr. Aleksandra Mišan, Principal Research Fellow.

6 Study visit programme

The study visit programme is given in the table in Appendix 2.

7 Detailed study visit sessions description

7.1 Overview of Technology Transfer in TEAGASC

The overview of technology transfer in TEAGASC was given by Dr. Declan Troy, who pointed out that the mission of TTO is to support, facilitate and enhance the transfer of research outputs including intellectual property, capabilities and related information between TEAGASC and the business community and other stakeholders, in order to promote the exploitation of their research and develop benefits of economic and social importance. TEAGASC acts as the focal point at which industry and other potential partners can engage with their research, and TEAGASC provides guidance, support and assistance in facilitating all kinds of interactions with industry and academic collaborators. There are many different ways in which industry can engage with TEAGASC, from services and contract research to collaborations and commercialisation of intellectual property.

Specific capabilities, know-how and specialised infrastructure are critical in professional and quality engagement with industry and other partners. TEAGASC offers expertise/capabilities and services available for industry to access through various means as well as available technologies developed by TEAGASC and partners, whereby industrial partners are being actively sought for commercialisation.



The portfolio of Technology Updates which summarise transferable outputs from completed research projects is available on line at <https://www.TEAGASC.ie/publications/> and off line in printed version.

7.2 MTI - Meat Technology Ireland

An overview of an industry-led initiative, Meat Technology Ireland (MTI) was given by Dr John Colreavy, MTI director. MTI is hosted by TEAGASC at its Ashtown Food Research Facility in Dublin and involves Dublin Institute of Technology (DIT), Dublin City University (DCU), University College Cork (UCC) and the Irish Cattle Breeders Federation (ICBF) as research providers. The companies behind the initiative are ABP Food Group Ireland, Ashbourne Meat Processors, Dawn Meats Group, Dunbia (Ireland), Hilton Foods Ireland, Irish Country Meats, Kepak Group, Liffey Meats, and Slaney Foods International.

The mission of MTI is to build a strategic research and innovation base in beef and sheep meat processing in Ireland. The Centre is a 'one-stop shop' for meat processing research and technology, serving as a hub to co-ordinate all beef and sheep meat processing research needs.

The programme is delivered through 6 strategic research pillars which have been defined by the commercial requirements of the MTI member companies: genomic predictions; meat tenderness management; meat safety and shelf life extension; meat characterisation technologies; meat and health; future market opportunities. The MTI research project management group (RPMG) is made up of the lead researches from each research pillar as well as industry advisors representing each MTI member company.

7.3 Technology transfer office in TEAGASC

The role of TTO, how it functions and the way it supports TEAGASC researchers was presented by Dr. Miriam Walsh, Head of Intellectual Property and Sarah Cahalane, MSc. Technology Transfer Officer. TEAGASC uses various models in order to engage with industry at varying levels of complexity, ranging from basic consultancy services to large scale collaborations. Policies, procedures and various template agreements which are used as guidelines to facilitate formalisation of such interactions were presented. It was pointed out that TEAGASC is very active in collaborating with industry through state supported and industry sponsored initiatives. Opportunities for industry to work collaboratively with TEAGASC through state support include innovation partnerships and SFI research clusters while a company can also contact TEAGASC directly to discuss fully sponsoring a project. TEAGASC exploits its research capabilities and available technologies as a key to providing valuable input to collaborations, both with industry and with academic partners.

7.3.1 Collaborations

Ownership of resulting IP depends on the terms of any funding body involved, the relative financial and intellectual inputs of each party, and who is in the best position to commercialise the results. For this reason, the management of IP is discussed on a case-by-case basis prior to commencement of a project. In most cases the industrial partner(s) gets the opportunity for a later commercial license of the IP generated in a defined field of use, based upon negotiable terms, while TEAGASC continues to have freedom to carry out research in the area. The collaborations are formalized by drafting research agreements upon agreement with the parties involved, both academic and industry. Such an agreement needs to outline the responsibilities of all parties and clarifies how resulting IP will be owned, managed and commercialised. TEAGASC provides a template as a starting point, following



initial discussions to determine the relative rights of each party. A finalised project plan (with deliverables, timelines) and budget (with payment schedule) are essential parts of such an agreement.

7.3.2 Contract research

Contract research involves the company specifying the work to be undertaken and is usually based on company materials or know-how. While novel intellectual property is unlikely to be generated, all results including intellectual property are assigned over to the company. TEAGASC usually exploits the range of expertise/capabilities and services which allow them to carry out contract research for a broad range of companies especially in agri-food, veterinary and pharma/medical sectors.

TEAGASC is happy to carry out confidential contract research for a company, whereby significant intellectual input and proprietary information is being provided by the company, examples being screening and characterisation type work. TEAGASC offers a template contract research agreement suitable for negotiation, and the finalised work plan and budget is a form part of this agreement.

7.3.3 Technical/consultancy service provision

TEAGASC offers technical service, including product development, consultancy, analysis and other specialised services. To obtain that, clients are asked to sign a standard service specification, which sets out the terms and conditions under which TEAGASC undertake such work. Confidentiality is a key component of this specification. For companies (Small to Medium Enterprises) wishing to explore an opportunity to work with TEAGASC researchers, on a small scale, to explore a business opportunity or a problem, an Enterprise Ireland Innovation Voucher worth €5,000 is available.

7.3.4 Other issues including confidentiality and material transfer

TEAGASC TTO also deals with review of incoming and drafting of outgoing material transfer agreements and non-disclosure agreements, in order to facilitate supply and receipt of biological materials and sharing of confidential information with outside parties.

7.4 Customer Relationship Management System

The newly established Customer Relationship Management (CRM) programme within TEAGASC, which has been developed to support interactions with industry, streamline information exchange and ensure innovation needs are being met was presented by Dr. Declan Troy. The system consists of assigned Customer Relationship Managers (CRMs) whose role is to manage relationships with food industry more effectively. The TEAGASC CRM system incorporates a management information system that supports high level executive communication and exchange in addition to recording specific project collaborations.

7.5 Workshop: Innovative Strategies to Promote Food Safety in the Irish Food Industry

The workshop was organized and hosted by the UCD Institute of Food and Health as an industry dissemination event. The aim of the workshop was to gather researchers and industry representatives to discuss recent advances related to the food safety issues. The workshop served as a good example of activities academia conducts in order to attract and engage with the industry. Details about the workshop are given in Appendix 2.



8 Study visits outcomes

Within two study visits to UNIBO, Italy and TEAGASC, Ireland four researchers from FINS, Serbia, had an opportunity to learn the way knowledge and technology transfer and commercialization of research results operate in these institutions and to collect the best practices and experiences. Neither Italian nor Irish model are directly transferable to Serbian environment. However, gained knowledge will serve as a basis for the development of models, policies and structures at FINS which will improve its potential for commercialization of research results.

9 Conclusion

The general aim of the visits, to acquire the essential knowledge in the field of knowledge and technology transfer was achieved by appointing four FINS researchers to attend two study visits to Knowledge Transfer Office of UNIBO and Technology Transfer Office of TEAGASC, which were supervised by Dr. Jacopo Fanti and Dr. Declan Troy, respectively.

The programmes of study visits were tailor-made taking into consideration the previous knowledge and specific interests of visitors in relation to commercialization of research results. During the visits FINS researchers managed to gather the best practice about the knowledge and technology transfer, to perceive how the technical and human resources of hosting institution are engaged to efficiently transfer the knowledge and technology to industrial landscape, collaborate with industry and convert research into business opportunities. Study visits were great opportunity to meet with researchers from host institutions who are actively involved in knowledge and technology transfer, who presented good practice examples which can be transferred and implemented within home institution, which eventually can improve the commercialization of research results in general.



Appendix 1

List of participants

Name	Position	E-mail address
Visitors		
<i>Study visit to Knowledge Transfer Office of UNIBO</i>		
Dr. Anamarija Mandić	Principal Research Fellow	anamarija.mandic@fins.uns.ac.rs
Dr. Milica Pojić	Principal Research Fellow	milica.pojic@fins.uns.ac.rs
<i>Study visit to Technology Transfer office of TEAGASC</i>		
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Dr. Radmilo Čolović	Senior Research Associate	radmilo.colovic@fins.uns.ac.rs
Lecturers		
<i>Study visit to Knowledge Transfer Office of UNIBO</i>		
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Dr. Brijesh Tiwari	Principal Research Officer	brijesh.tiwari@TEAGASC.ie



Appendix 2

The training programmes

Study visit to Knowledge Transfer Office of UNIBO			
Date and location	Topic	Lecturer	Description of work
April 16 th , 2018 UNIBO Main Campus	Introducing UNIBO's Knowledge Transfer Office (KTO)	Alessandra Baccigotti Andrea Ravaioli	Introduction to Third Mission of UNIBO and KTO
April 17 th , 2018 UNIBO Main Campus	Entrepreneurial initiative	Francesca Farnararo Giampaolo Pagliuca Dr. Marco Zibordi Dr. Matteo Guidi	KTO support to spin-offs, UNIBO spin-off incubator: AlmaCube Spin-offs experiences: HK- Horticultural Knowledge and Last Minute Market
April 18 th , 2018 Department of Agricultural Sciences, UNIBO	University Thematic Boards Support in EU projects	Prof. Davide Viaggi Monica Russo Andrea Gamberini	Introduction to agri-food thematic board
April 19 th , 2018 UNIBO Main Campus	University-industries relationships	Paola Motetti	Introduction to Industrial Partnerships Office
April 19 th , 2018 UNIBO, Cesena Campus	Interdepartmental centre for industrial research	Prof. Marco Dalla Rosa Prof. Maria Rodriguez-Estrada Dr. Francesca Patrignani Dr. Chiara Montanari	Introduction to CIRI and its collaborative projects with food industry
April 20 th , 2018 UNIBO Main Campus	KTO toolbox	Andrea Ravaioli Dr. Jacopo Fanti	Introduction to patent databases

Study visit to technology transfer office of TEAGASC			
Date and location	Topic	Lecturer	Description of work
May 6 th , 2018, TEAGASC, Ashtown, Dublin	Introduction to the study visit programme	Dr. Brijesh Tiwari, TEAGASC	Introduction to the study visit programme; Future plans
May 7 th , 2018 Ardmore House University College Dublin Belfield	Workshop "Innovative strategies to promote food safety in the Irish food industry"	Dr. Paula Bourke, DIT Dr. Brijesh Tiwari, TEAGASC Dr. Bosoon Park, USDA Dr. Anna Herrero-	Plasma based technologies for control of biofilms in food processing Using novel processing technologies to inactivate microorganisms Nanotechnology for food



		Langreo, UCD Dr. Dechamma Mundanda Muthappa, UCD Prof. Lawrence D. Goodridge, McGill University, Canada	pathogen and toxin detection Potential of hyperspectral imaging to identify food pathogens & food spoilers Next generation sequencing: Identifying the microbiome in food processing environments Microbial phenogenomics - delivering new tailored responses to address food safety challenges
May 8 th , 2018 TEAGASC, Ashtown, Dublin	Overview of technology transfer in TEAGASC MTI Meat Technology Ireland	Dr. Declan Troy, TEAGASC Dr. John Colreavy, TEAGASC	Introduction to TTO and discussion Overview of MTI and discussion
May 9 th , 2018 TEAGASC, Technology Transfer Office in Carlow	Visit to TTO in Carlow	Dr. Miriam Walsh, TEAGASC MSc. Sarah Cahalane, TEAGASC	Overview of TTO and discussions
May 10 th , 2018 TEAGASC, Ashtown, Dublin	Customer Relationship Management System Final meeting	Dr. Declan Troy, TEAGASC Dr. Brijesh Tiwari, TEAGASC	Overview and discussion Concluding remarks and plans for the future



Appendix 3

Photos from the study visits



Picture 1. Giampaolo Pagliuca (AlmaCube), Dr. Jacopo Fanti (UNIBO), Dr. Anamarija Mandić (FINS), Milica Pojić (FINS)



Picture 2. Paola Motteti (UNIBO) and Dr. Jacopo Fanti (UNIBO)



Picture 3. Dr. Francesca Patrignani (UNIBO), Dr. Milica Pojić (FINS), Prof. Marco Dalla Rossa (UNIBO), Dr. Anamarija Mandić (FINS)



Picture 4. Dr. Milica Pojić (FINS) in conversation with Dr. Jacopo Fanti (UNIBO) and Prof. Maria Rodriguez-Estrada



Picture 5. Dr. Aleksandra Mišan (FINS) and Dr. Radmilo Čolović (FINS) in front of TEAGASC TTO



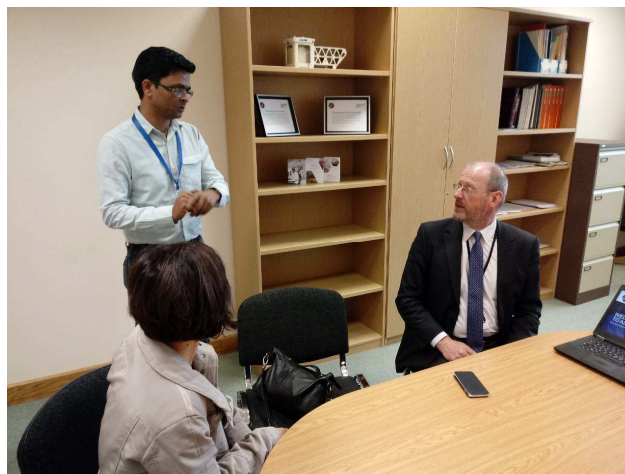
Picture 6. Dr. Aleksandra Mišan (FINS) and Dr. Miriam Walsh (TEAGASC) in front of TEAGASC TTO



Picture 7. Dr. Radmilo Čolović (FINS) and Sarah Cahalane (TEAGASC) in TEAGASC, Oak Park Head Office, Carlow



Picture 8. Promotional material of TEAGASC TTO



Picture 9. Dr Brijesh Tiwari (TEAGASC), Dr. John Colreavy (MTI, TEAGASC) and Dr. Aleksandra Mišan