C-COMEND Competency profile for Translational Scientists

C-COMEND is a two-year European training project supported by the Erasmus plus programme, which started on November 1st 2015.

The overall objective of C-COMEND is to bring together stakeholders from different sectors and disciplines in order to develop curricula and provide a course aimed at PhD students and early Post-Docs, teaching the skills and competencies required to successfully contribute to translational research and medicines development. During this project, a competency profile has been developed to identify competencies that are of special importance in translational research and medicine development. This profile aims to describe the overarching knowledge of the medicine development process as well as personal qualities, and does not focus on certain professions such as toxicology or pharmacy.

To help visualize your growth over time, you can grade your skills using a 5 point-scale from 0-5 (5 = excellent) and plot them into the spider plot provided below. This spider plot can also be used by your supervisor and/or peers to provide 360^0 feedback to you. So go ahead and ask them to help you identify your strengths and gaps by filling in the table below.
During the face-to-face course, you will further learn how to document competencies in the field of translational research and medicine development in a competency portfolio, and how this will help you in your career.

Translational scientist competency profile

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Rate your skills using the following 5-point scale:

1	**Poor skills/ experience**
2	**Moderate skills/ experience**
3	**Acceptable skills/ experience**
4	**Good skills/ experience**
5	**Excellent skills/ experience**

Research skills		Year 1	Year 2	Year 3	Year 4	Year 5
A translational scientist is able to formulate clear research questions and hypotheses, design solid research protocols and demonstrates in-depth knowledge of his/ her field and the challenges that lie ahead.						
Domain expertise	Possesses deep knowledge and expertise within a particular domain of the translational science spectrum. Indicate your expertise/specialization area (e.g. Immunology; Pharmacology; Medicine): _____					
Research skills	Demonstrates ability to design solid research experiments using appropriate data collection and analysis methods					

Interdisciplinary knowledge		Year 1	Year 2	Year 3	Year 4	Year 5
A translational scientist has an overview of the whole drug discovery and development process including the roles of the different disciplines and professionals. This overview enables efficient collaboration with others across professions to collectively advance the development of a medical or health intervention.						
Pre-clinical research	Understands the full spectrum of pre-clinical research including target identification and validation, compound screening, in vitro and in vivo models of disease, lead molecule identification and optimization, and the studies required prior to initial clinical testing					

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Clinical research	Understands the overall design and elements of clinical trials for medical and health interventions, the phases and associated requirements of individual clinical trials, and overall parameters for clinical proof of mechanism and proof of concept.					
Clinical implementation & public health	Understands the factors that affect the delivery, quality and costs of health care for individuals and populations and knows the environmental factors, including biological, physical and chemical factors that affect the health of a community					
Regulatory environment	Has awareness of the dossier content and requirements of main regulators/ regulatory authorities (European, US, Japan/ local authorities) and differences in approach/procedures between FDA/EMA					
Marketing	Is aware of the critical components for the development of a commercialization strategy and marketing plan to launch a new medical or health intervention					

Scientific rigor & reproducibility		Year 1	Year 2	Year 3	Year 4	Year 5
A translational scientist demonstrates the ability to make sound ethical and legal choices based on knowledge of accepted professional research practices, relevant policies and guidelines.						
Research discipline	Conducts research conforming to the accepted (safety) policy and procedures of the organization e.g. Good Clinical Practice; Good Laboratory Practice; Health & (laboratory) safety.					
Research integrity	Conducts research according to accepted professional values e.g. scientific integrity and code of (mis)conduct; ethics and legal requirements					
Reproducibility	Has a solid understanding of the relevant statistical measures in translational science and has awareness of the special importance of reproducibility of data, data management, data ownership and data sharing					

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Innovation & tools		Year 1	Year 2	Year 3	Year 4	Year 5
A translational scientist knows techniques and tools to support and speed up decision making and appraises the role of go-no go decisions						
Innovation	Questions standards or accepted practices. Generates novel and valuable ideas and uses these ideas to develop new or improved processes, methods, systems or solutions					
Technical tools in pre-clinical and early clinical development	Knows how to use tools such as biomarkers, imaging, predictive models, target validation, how to work with Target Product Profile (TPP), how to use reverse planning					

Communication		Year 1	Year 2	Year 3	Year 4	Year 5
A translational scientist is able to effectively and appropriately communicate facts, ideas or opinions to colleagues, students, members of public and media and practices a team science approach that values the contributions of and engages all players on the translational research team, including patients and community members.						
Team science	Understands the principles of team science, including the specific roles within a multidisciplinary network of individuals within and across organizations and is able to effectively contribute to or lead a multidisciplinary and multifunctional research team.					
Patient engagement	Understands and appreciates the principles and practices of community and patient engagement, and is aware of the ethical complexities associated with research participant involvement.					
Communication and dissemination	Communicates with understanding with individuals and communities across diverse social, cultural, economic and scientific backgrounds and is able to convey the implications of translational research findings to clinicians, patients and disease advocates, and policy-makers.					
Teaching	Is able to define the intended learning outcomes for the target group as well as adequately and suitably convey knowledge and skills to students in a motivational manner					

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Complementary skills		Year 1	Year 2	Year 3	Year 4	Year 5
A translational scientist needs to develop complementary and entrepreneurship skills to successfully navigate the complex field of translational medicine						
Personal development	Is able to adapt his/her personal qualities and behaviors to achieve improved results. Key elements are creativity, problem solving, agility, self reflection and self motivation					
Time management	Determines priorities and allocates time and resources effectively. Maintains an acceptable work-life balance and manages pressure. Reacts to changing circumstances					
Project management	Has awareness of project management (PM) including the PM life cycle (initiation, planning, execution and controlling and closing). Plans a systematic course of action for self or others to ensure accomplishment of a specific objective.					
Entrepreneurship	Seeks opportunities and possibilities for the development of commercial ideas, acts accordingly and is willing to take well-considered risks. Is able to Identify target population and knows how to approach the market					
Financial management	Understands financing of the drug discovery and development process and has awareness of health economics and market consideration. Understands the processes of funding and evaluation of research in academic vs industry environment. Understands importance of IP protection and how to find an appropriate timing for patenting.					

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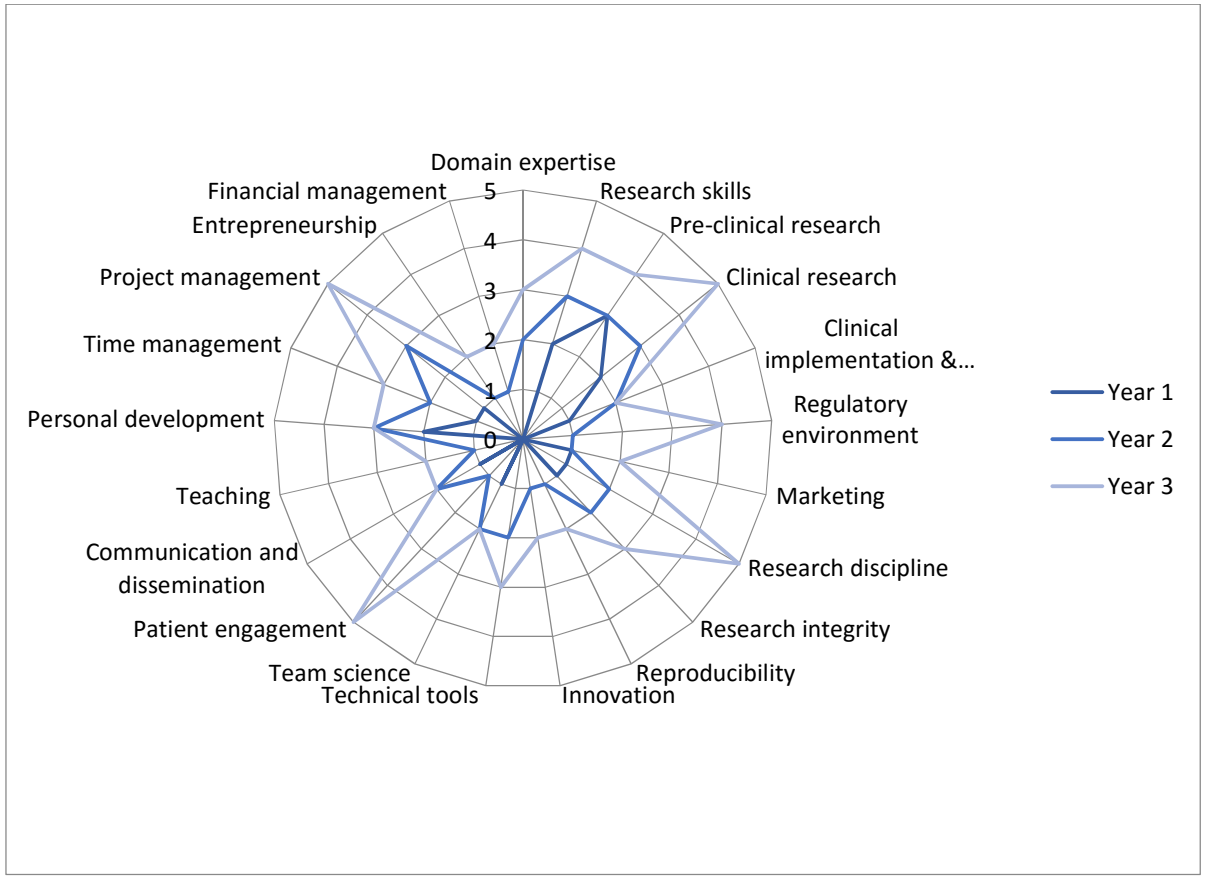

Find out more:
http://www.eatris.eu/c-comend.html
In case of questions please send an email to rosanvegter@eatris.eu

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