



# TRANSLATIONAL SCIENCES I

<b>1. IMPRINT</b>	
<b>Academic Year</b>	2023_2024
<b>Department</b>	Doctoral School
<b>Field of study</b>	Doctoral School
<b>Main scientific discipline</b>	Medical sciences
<b>Study Profile</b>	General academic
<b>Level of studies</b>	3 <sup>rd</sup> level
<b>Form of studies</b>	Full time studies
<b>Type of module / course</b>	obligatory
<b>Form of verification of learning outcomes</b>	completion
<b>Educational Unit / Educational Units</b>	Department of Tumor Biology and Genetics Medical University of Warsaw Pawińskiego 7 02-106 Warsaw, Poland Email: <a href="mailto:onkogenetyka@wum.edu.pl">onkogenetyka@wum.edu.pl</a> Phone: (4822) 599-1670
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<b>Person responsible for syllabus</b>	Prof. Tomasz Stokłosa, MD, PhD <a href="mailto:tomasz.stoklosa@wum.edu.pl">tomasz.stoklosa@wum.edu.pl</a>
<b>Teachers</b>	Prof. Tomasz Stokłosa, MD, PhD <a href="mailto:tomasz.stoklosa@wum.edu.pl">tomasz.stoklosa@wum.edu.pl</a> , Dr Marcin Machnicki, PhD, <a href="mailto:mmachnicki@wum.edu.pl">mmachnicki@wum.edu.pl</a> Dr hab. Radosław Zagożdżon, MD, PhD <a href="mailto:radoslaw.zagozdzon@wum.edu.pl">radoslaw.zagozdzon@wum.edu.pl</a> Prof. Krzysztof Jamroziak, MD, PhD <a href="mailto:krzysztof.jamroziak@wum.edu.pl">krzysztof.jamroziak@wum.edu.pl</a> Dr hab. Katarzyna Piwocka, PhD, Nenci Institute

<b>2. BASIC INFORMATION</b>			
<b>Year and semester of studies</b>	1 <sup>st</sup> year, 1 <sup>st</sup> semester	<b>Number of ECTS credits</b>	0.00
<b>FORMS OF CLASSES</b>		<b>Number of hours</b>	<b>ECTS credits calculation</b>
<b>Contacting hours with academic teacher</b>			
Lecture (L)			
Seminar (S)		10	
Discussions (D)			
e-learning (e-L)			
Practical classes (PC)			
Work placement (WP)			
<b>Unassisted student's work</b>			
Preparation for classes and completions			

<b>3. COURSE OBJECTIVES</b>	
O1	The aim of this course is to present and discuss examples of translational research projects in medicine, with special focus on oncology and hemato-oncology and the concept of precision medicine.
O2	The course is designed to help early-stage Ph.D. candidates to design and/or to modify their future and existing research projects upon discussion with experienced scientists, who successfully implemented translational research projects as principal investigators

<b>4. STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING</b>	
<b>Code and number of the effect of learning in accordance with standards of learning</b> P8S_WG P8S_UW P8S_UO	<b>Effects in time</b> <i>(in accordance with appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019)</i>
<b>Knowledge – Graduate* knows and understands:</b>	
W1 P8S_WG	- world achievements, covering theoretical foundations as well as general issues and selected detailed issues specific to a given scientific discipline to the extent that allows for a revision of the existing paradigms, - main development trends of scientific disciplines in which education takes place,

	<ul style="list-style-type: none"> <li>- methodology of scientific research,</li> <li>- principles disseminating the results of scientific activity, also in the open access mode.</li> </ul>
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**Skills– Graduate\* is able to:**

U1 P8S_UW	<ul style="list-style-type: none"> <li>- use knowledge from various fields of science or art to creatively identify, formulate and innovatively solve complex problems or perform research tasks, in particular:               <ul style="list-style-type: none"> <li>- defining the purpose and subject of scientific research,</li> <li>- formulating a research hypothesis,</li> <li>- developing methods, techniques and tools research and their creative application, - inference based on the results of scientific research,</li> </ul> </li> <li>- make a critical analysis and evaluation of the results of scientific research, expert activity and other creative works and their contribution to the development of knowledge,</li> <li>- transfer the results of scientific activity to the economic and social sphere.</li> </ul>
U2 P8S_UO	<ul style="list-style-type: none"> <li>- plan and implement individual and team research or creative projects, also in an international environment</li> </ul>

\* In appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019 „graduate”, not student is mentioned.

## 5. ADDITIONAL EFFECTS OF LEARNING (non-compulsory)

Number of effect of learning	Effects of learning i time
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**Knowledge – Graduate knows and understands:**

K1	
K2	

**Skills– Graduate is able to:**

S1	
S2	

**Social Competencies – Graduate is ready for:**

SC1	
SC2	

## 6. CLASSES

Form of class	Class contents	Effects of Learning
Seminar 1	<p><u>The precision oncology paradigm as a model example for translational research studies</u></p> <p>Selected examples of research projects which integrate molecular data in diagnostics, tumors classification and targeted treatment. The current concept of molecular tumor board as real-life clinical application of translational research in oncology.</p>	P8S_WG P8S_UW P8S_UO
Seminar 2	<p><u>Translational development of chimeric antigen receptor-based</u></p>	P8S_WG

	<u>therapies</u> Chimeric antigen receptor-based immunotherapies (e.g., CAR-T cells) have become a major breakthrough in hemato-oncological diseases. There is an ongoing effort to develop safe and efficient CAR-based therapies for a range of malignant and non-malignant diseases. The seminar summarizes these translational studies.	P8S_UW P8S_UO
Seminar 3	<u>Understanding and shaping the leukemia microenvironment to propose novel therapeutic strategies</u> During this seminar, based on own research and scientific experience, we will discuss the steps which are crucial for translational science: proper questions, proper methods, proper models, proper data interpretation	P8S_WG P8S_UW P8S_UO

## 7. LITERATURE

### Obligatory

Selected publications will be available via *e-learning* tools such as Teams as an integral part of the course

### Supplementary

## 8. VERIFYING THE EFFECT OF LEARNING

Code of the course effect of learning	Ways of verifying the effect of learning	Completion criterion
W1, U1, U2	The grade from the 1 <sup>st</sup> part of the course will be based on individual activity assessment including:	
	1.Attendance requirements	Attendance will be checked
	2. Active participation in seminars	Positive evaluation by the teacher

## 9. ADDITIONAL INFORMATION

Procedure for compensating for missed seminar resulting from student absence from seminars should be Individually negotiated with the teacher.

Final grade and credit will be given after completion the second part of the course during 2<sup>nd</sup> year.

CONSULTATIONS are possible after making an appointment with the teacher via e-mail : [onkogenetyka@wum.edu.pl](mailto:onkogenetyka@wum.edu.pl)

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### ATTENTION

The final 10 minutes of the last class of the block/semester/year should be allotted for students to fill out the Survey of Evaluation of Classes and Academic Teachers