

INTERNAL EVALUATION REPORT.
UNIVERSITY FIELD OF DOCTORAL STUDIES -
DENTAL MEDICINE

Contacts

"Victor Babeș" University of Medicine and Pharmacy in Timișoara
Eftimie Murgu Square, No. 2, code 300041, Timisoara, Romania
Tel: +40256293389; Fax: +40256490626
Email: rectorat@umft.ro

Responsible for IOSUD 2021 evaluation
Director of the Council of Doctoral Studies
Prof. Univ. Dr. Dehelean Cristina Adriana
E-mail: cadehelean@umft.ro

Director of the Doctoral School of Medicine-Pharmacy,
Prof. Univ. Dr. Tomescu Mirela Cleopatra
E-mail: tomescu.mirela@umft.ro

Director of the Doctoral School of Dentistry,
Prof. Univ. Dr. Sinescu Cosmin
E-mail: minosinescu@gmail.com

Doctoral School Secretariat
Magheț Ramona Emanuela
E-mail: doctorat@umft.ro

Holda Cristina
E-mail: doctorat@umft.ro

Tel: (40) 256204250, int 14

Content

Preamble	7
I. General information	8
I.1. Doctoral School - Dentistry	9
I.1.1. Establishment, structure, evolution	9
I.1.2. Research mission	11
I.1.3. Quality certification level	11
I.1.4. Presentation of specific measures for quality management and promotion of ethics and deontology implemented at the level of the doctoral school	12
I.2. The field of doctoral university studies - The field of Dentistry	14
I.2.1. Objectives, mission:	15
I.2.2. Education plans:	15
I.2.3. Number of doctoral supervisors:	23
I.2.4. Evolution of the number of doctoral students and the number of doctors in the last 5 years:	24
I.2.5. Research centers / laboratories:	30
I.2.6. Main scientific achievements	30
I.3. The functioning of the internal quality assurance system at the level of the doctoral studies field - Dentistry	43
I.3.1. Objectives and general structure of the internal quality assurance system	43
I.3.2. Quality assurance policies and definition of procedures, beneficiaries and their responsibilities	44
I.3.3. Participation of staff, PhD students and external stakeholders in the quality assurance process	45
I.3.4. The interaction between the quality assurance system and the university management	45
I.3.5. Transparency and access to information specific to the internal quality assurance system for internal and external beneficiaries	45
I.3.6. Efficiency of procedures and structures for internal quality assurance and their impact on activities in doctoral studies	46
I.3.7. Use of information produced by the internal quality assurance system as a tool for quality management and for the improvement of education and other activities	47
I.3.8. Monitoring, evaluation and continuous development of the internal quality assurance system	47
2. The information necessary for the assessment of the degree of fulfillment of the criteria, standards and performance indicators, provided in annex no. 4 to the guide, accompanied by supporting documents accessible in electronic format	47
A.1.	52
A.1.1.1.	52
A.1.1.2.	54
A.1.2.1.	55
A.1.2.2.	55
A.1.3.1.	55

* A.1.3.2.	60
* A.1.3.3.	61
A.2.	62
A.2.1.1.	62
A.3.	64
A.3.1.1.	64
* A.3.1.2.	65
A.3.1.3.	66
* A.3.1.4.	66
A.3.2.1.	67
* A.3.2.2.	68
B.1.	68
* B.1.1.1.	68
* B.1.2.1.	70
B.1.2.2.	71
B.2.	72
B.2.1.1.	72
B.2.1.2.	73
B.2.1.3.	73
B.2.1.4.	80
B.2.1.5.	81
B.3.	81
B.3.1.1.	81
* B.3.1.2.	82
* B.3.2.1.	82
* B.3.2.2.	82
C.1.	86
C.1.1.1.	86
a) the scientific activity of the doctoral supervisors;	86
b) the infrastructure and logistics necessary for carrying out the research activity;	86
c) the regulations and procedures on the basis of which the doctoral studies are organized;	86
d) the scientific activity of doctoral students;	87
e) the training program based on advanced university studies of doctoral students;	88
f) social and academic support services (including participation in various events, publication of articles, etc.) and counseling provided to doctoral students.	88
* C.1.1.2.	90
C.2.	92
C.2.1.1.	92
a) the regulations of the doctoral school;	92
b) the admission regulation;	92
c) the doctoral studies contract;	92

- d) the regulation for completing the studies, including the procedure for public defense of the thesis; 93
- e) the content of training programs based on advanced university studies; 93
- f) the academic and scientific profile, the thematic areas / research topics of the doctoral supervisors in the field, as well as their institutional contact data; 93
- g) the list of doctoral students in the field with the basic information (year of registration, leader); 93
- h) information about the standards for the elaboration of the doctoral thesis; 93
- i) links to the summaries of the doctoral theses to be defended publicly, as well as the date, time, place where they will be defended, at least 20 days before the defense. 93
- C.2.2.1. 94
- C.2.2.2. 94
- C.2.2.3. 94
- C.3.1 95
- * C.3.1.1. 95
- C.3.1.2. 96
- C.3.1.3. 99
- 3. Strategies and procedures implemented at the level of doctoral university studies, as measures for continuous improvement of the quality of doctoral study programs, other than those provided by the minimum standards, provided in [annex no. 4](#) to guide. 100
- 1. Context 100
- 1.1. Legislative framework 101
- 1.2. Current status: 101
- 2. Assumed principles 101
- 3. General objectives 102
- 4. Academic management - doctoral students 102
- 5. Human resources management 103
- 6. Management of research activities 104
- 7. Internationalization 105
- 8. Quality 105
- 9. Social responsibility 106
- 10. Strategic, financial, investment and administrative management 107
- Appendix attached: 108

Preamble

This self-assessment report in the field of dentistry within the doctoral school of the University of Medicine and Pharmacy "Victor Babes" in Timisoara was drafted based on the National Education Law no. 1/2011 and Government Decision no. 681/2011 regarding the approval of the Code of University Doctoral Studies, with the subsequent modifications. The methodology used for self-assessment was the one specified in Order no. 5403/2018 of November 1, 2018 of the Minister of National Education on establishing the Methodology for evaluating doctoral studies and the systems of criteria, standards and performance indicators used in evaluation, published in the Official Gazette no. 962 of November 14, 2018.

The report was prepared between March and May 2021 by a commission coordinated by the Director of the Doctoral School.

The report was presented at the meeting of the Doctoral School Council on _____ „ endorsed by the Council of Doctoral Studies by Decision of _____ and approved at the meeting of the UMF Senate Victor Babes from Timisoara on _____

General information

This self-assessment report refers to the activity of CSD-MD and implicitly of the Doctoral School of Dentistry (SDMD) in the last 5 years, respectively in the period 2016-2021. The statistical data regarding the number of doctoral supervisors, doctoral students, scientific production, are valid for 15.05.2018..

The self-assessment was made on the basis of information and documents provided by all university structures related to doctoral research. For each indicator the information sources are specified. This report evaluates the development of the Doctoral School - Dentistry (SDMD) within UMF "Victor Babes" Timisoara and contains objective and quantifiable data related to the main areas of activity of the institution, but also the interpretation of the dynamics of performance criteria and indicators. The criteria, standards and performance indicators used in self-assessment are those specified in [Annex 3](#) on "The system of criteria, standards and performance indicators used in the accreditation and periodic evaluation of doctoral schools and institutions organizing doctoral studies (IOSUD)" according to the Order no. 5403/2018 of November 1, 2018 of the Minister of National Education on establishing the Methodology for evaluating doctoral university studies and the systems of criteria, standards and performance indicators used in evaluation, published in the Official Gazette no. 962 of November 14, 2018.

Doctoral studies represent the third cycle of university studies and allow the acquisition of a level 8 qualification from the European Qualifications Framework (EQF) and from the National Qualifications Framework. In UMF "Victor Babes" from Timisoara, Faculty of Dentistry, doctoral studies are carried out only for scientific doctorate, focused on learning through research, whose purpose is to develop competent human resources in research, development and innovation. The doctorate is a condition for a professional career in higher education and research. UMF "Victor Babes" from Timisoara is authorized to function temporarily as an Organizing Institution for Doctoral University Studies (IOSUD). Within IOSUD, according to O.M. 5382 of 29.09.2016, there are two doctoral schools, the Doctoral School of Medicine-Pharmacy and the Doctoral School of Dentistry, which have the right to organize and carry out doctoral studies. The fields in which the doctorate is organized are medicine, dentistry and pharmacy, according to GD no. 158/2018 (regarding the approval of fields and specializations / university study programs and of the structure of higher education institutions for the academic year 2018-2019).

I.1. Doctoral School - Dentistry

1.1. The institutional capacity of IOSUD (establishment, structure, evolution, mission, vision, level of quality certification, etc.), with particular emphasis on existing common resources (managerial, administrative, logistical and financial);

I.1.1. Establishment, structure, evolution

According to the Decision of the UMF Senate "Victor Babeș" from Timișoara no. 18/8140 / 27.06.2018, ([annex 14](#)) it is approved the reactivation of the Doctoral School - Dentistry

Domain with the following composition:

Prof. Univ. Dr. Cosmin Sinescu - Director
Prof. Univ. Dr. Ștefan Ioan Stratul - member
Prof. Univ. Dr. Carmen Todea - member
A member chosen from the doctoral supervisors, MD field
An elected doctoral student, MD field.

On the occasion of the elections of the doctoral supervisors representing the Doctoral School Council, according to the official report of 25.09.2018 ([annex 15](#)), 25.09.2018 ([annex 16](#)) that had as subject the election of a representative from the doctoral students in the doctoral school council and according to the Decision of the UMF Senate "Victor Babeș" from Timișoara No. 10/13008 / 26.09.2018 ([annex 17](#)), the composition of the Doctoral School Council, Dental Medicine Domain is approved:

Prof. Univ. Dr. Cosmin Sinescu - Director
Prof. Univ. Dr. Ramona Amina Popovici - member
Prof. Univ. Dr. Ștefan Ioan Stratul - member
Prof. Univ. Dr. Carmen Todea - member
Dr. Adrian Tudor Stan - doctoral student - member

The University Senate approves the modification of the composition of the Interim School Council

Doctoral Dentistry through H.S. No. 208/18470 / 18.12.2020 ([annex 18](#)), according to the Methodology regarding the appointment and election of the council for doctoral studies and the council of the doctoral school in the University of Medicine and Pharmacy "Victor Babeș" from Timișoara and bringing in structures some personalities from abroad our institution, as follows:

Prof. Univ. Dr. Sinescu Cosmin - Director
Prof. Univ. Dr. Jumanca Daniela Elisabeta - member
Prof. Univ. Dr. Popovici Ramona Amina - member
Prof. Univ. Dr. Eng. Marşavina Liviu - Polytechnic University of Timișoara - member
Dr. Stan Adrian Tudor - PhD student - member

Following the election of two vacancies by the PhD supervisors from the Doctoral School of Dentistry and one vacancy, a member outside the Doctoral School of Dentistry (personality whose scientific activity has a significant international recognition), according to the official report dated of 25.03.2021 ([annex 19](#)), and as a result of the elections according to the official report of 29.03.2021 ([annex 20](#)), of two vacancies from doctoral students within the Doctoral School of Dentistry, the University Senate approves the composition of the Doctoral School Council Dentistry by HS No. _____ / _____ / 28.04.2021, ([Annex 21](#)), as follows:

Prof. Univ. Dr. Sinescu Cosmin - Director
Prof. Univ. Dr. Popovici Ramona Amina - member
Prof. Univ. Dr. Jumanca Daniela - member
Prof. Univ. Dr. Romînu Mihai - member
Prof. Univ. Dr. Marşavina Liviu, Polytechnic University of Timișoara - member
Balica Andreea Gabriela, doctoral student - member
Neagu Carina Sonia, doctoral student - member

At the level of Doctoral Schools Dental Medicine, the administrative activity is provided by the secretariat of the Doctoral School and CSUD, a structure that currently has two persons with individual responsibilities and tasks: secretarial activities, correspondence, updating the database with PhD students and PhD supervisors and other activities in accordance with the job description.

I.1.2. Research mission

The mission and values of the Doctoral School - Dentistry are:

- creating and developing a friendly environment for doctoral research;
- setting up / supporting an organized research training framework for young PhD students;
- consistent increase in the value of doctoral research;
- the development of doctoral research in direct relation with the research development strategy in the university.

Through doctoral studies, our university ensures the development of additional skills in the field of scientific study, knowledge and application of research methodology and techniques, learning the exercise of communication or publishing at the highest level of exploration results, taking responsibility for developing a research program, as well as the ability to critically address the achievements of other researchers. Through the development of doctoral programs in inter-university partnership, the links in the European Higher Education Area and in the European Research Area are strengthened, the objective being to increase the quality of research products and the common recognition of degrees.

I.1.3. Level of quality certification

Previous evaluations that have been made on the Doctoral School certify the increased level of competence acquired through the vast experience gained over time.

a) ARACIS

UMF "Victor Babes" Timisoara has been evaluated three times by ARACIS (2009, 2014 and 2019). Following both visits, our university received the high degree of trust, according to the reports of the ARACIS council from 01.09.2009, 27.03.2014 and 2019. The reports mention the strengths of the doctoral research and make recommendations on the research priorities of the university, including the doctoral one.

a) Classification of universities

In 2011, based on data provided by universities, MEN through UEFISCDI conducted a classification of higher education institutions in Romania. As a result of this process, UMF "Victor Babes" Timisoara was located among the universities of advanced research and education, having the right to organize undergraduate, master's and doctoral studies. The hierarchy of study programs carried out within the same approach of MEN has positioned the study program of Dentistry of our university in A category. This top position

is also confirmed by the growing number of students who choose to study at our university.

b) IEP-USA

UMFVBT was evaluated in 2012-2013 through the IEP - Institutional Evaluation Program of EUA - European University Association which helped and supported the institution in strategic management and the ability to manage the inherent changes through a set of objective factors.

I.1.4. Presentation of specific measures for quality management and promotion of ethics and deontology implemented at the level of the doctoral school

The admission of doctoral students is regulated by the Methodology regarding the organization of admission to doctoral university studies within the “Victor Babeș” University of Medicine and Pharmacy in Timisoara. <https://www.umft.ro/admitere-doctorat-2021/>

PhD students are enrolled in doctoral programs based on a standard contract (Contract for doctoral studies), public on the university website, depending on the field of study and approved by the Board of Directors and the University Senate for each year. For study.

https://www.umft.ro/category/csud/informatii_doctoranzi/

All specific documents for conducting doctoral studies are public on the university website.

The quality of the university study programs within the Doctoral School - Dentistry is based on content, scientific level and topicality, being programs established coherently, compatible with similar programs in Romania and the European Union. In accordance with the Code of Doctoral Studies (GD 681 / 29.06.2011) the doctoral program is carried out only within the Doctoral School under the coordination of a doctoral supervisor and includes:

- a training program based on advanced university studies (year I);
- an individual scientific research program (years II, III and IV), according to LEN 1/2011.

Within the training program based on advanced university studies from the first year, academic year 2020 - 2021 of the doctoral cycle are included compulsory fundamental disciplines and optional complementary disciplines:

1. Compulsory fundamental disciplines
2. Optional complementary disciplines
3. The scientific research project

Mandatory subjects

- Scientific research methodology - 6 credits
- Ethics of scientific research, European legislation in research - 6 credits
- Communication and oral presentation, biostatistics - 6 credits
- Documented, edited and published scientific articles - 6 credits
- Design and management of grants - 6 credits
- Ethics and academic integrity - 6 credits

Optional subjects

- Experimental models in translational research - 4 credits
- Medical biotechnologies - 4 credits
- Modern techniques in medical and pharmaceutical research - 4 credits
- Bioinformatics and applied genomics in research - 4 credits
- Medicine and evidence-based research - 4 credits
- Nanomaterials and nanomedicine - 4 credits

Scientific research project - 20 credits

Each doctoral student has the opportunity to opt for the courses offered and can choose one of the optional subjects, thus individualizing the course of his doctoral studies with emphasis on the subject of his research topic. The courses are taught by teachers of the "Victor Babeș" University of Medicine and Pharmacy in Timișoara.

At the end of the advanced training year, doctoral students support a scientific research project in which general information on the topic of doctoral research is presented, the current study of knowledge in the research field approached, based on existing information in the main flow of publications. The evaluation project evaluation commission is composed of 3 teachers from the doctoral supervisors and is validated by CSUD.

The way of organizing the doctoral research materialized by: the objectives, methods and working techniques pursued and used, the way of selection of the work lots,

inclusion / exclusion criteria, statistical processing methods. The detailing of the work stages followed in the development of the doctoral research includes: the definition of concrete activities in relation to the established objectives, in correspondence with a calendar that would make it possible to fit in the time allocated to the scientific research program. Measures provided for the observance of biotic norms in doctoral research. The way of capitalizing on the results includes estimating the accessible level for disseminating the results and identifying potential journals from the main flow of publications.

In order to ensure a coherent scientific path, the doctoral student gives presentations of the progress of his / her scientific research program to the guiding committee and the doctoral supervisor, who have the role of guiding, correcting and supporting the scientific path of the doctoral student. The minutes accompanied by the stage report / the presented report will be submitted to the personal file of the doctoral student. The scientific research program is considered to be concluded only after the submission of at least 2 or 3 reports on the progress of the doctoral student's scientific research.

The scientific research program is carried out under the guidance of the doctoral supervisor and the guidance team.

The intermediate results of the research program are presented by the doctoral student for evaluation by the doctoral supervisor and the guidance team in the form of reports / reports on the scientific research progress of the doctoral student.

I.2. The field of doctoral studies - The field of Dentistry

1.2. The doctoral school that manages the field of doctoral studies (establishment, structure, evolution, research mission, level of quality certification, a presentation of specific quality management measures and promotion of ethics and deontology implemented, a presentation of human resources, of the existing research infrastructure and of the educational effectiveness elements at the doctoral school level, etc.);

I.2.1.Objectives, mission:

- In correlation with the objectives of the university, the objectives and the mission of the Doctoral School - Dentistry Domain, are:
- to ensure the scientific, professional and deontological guidance of each doctoral student;
- to propose research topics;
- to ensure the conditions and to stimulate the progress of the doctoral students in the research they carry out;
- to carry out the objective and rigorous monitoring and evaluation of each doctoral student;
- to support the mobility of doctoral students;
- to avoid the occurrence of conflicts of interest in guiding doctoral students.
- to establish together with the doctoral student the individual plan
- organizing and developing a specific and quality training process, dedicated to the accumulation of knowledge and practical attitudes indispensable for carrying out scientifically performing research;
- the formation of the critical spirit that allows the objective evaluation of one's own research and that carried out by researchers;
- training and supporting doctoral students to carry out research undertaken in order to complete a doctoral thesis;
- advising doctoral students in the stage of finalizing the research and writing the doctoral thesis;
- training the skills necessary for the elaboration and management of scientific research projects;
- achieving and developing the training framework for the doctoral student in the direction of competitiveness and preparation for the competitive system;
- supporting and advising doctoral supervisors, as educational leaders in the field of scientific research.

I.2.2.Education plans:

The advanced university training program is carried out on the basis of the curriculum, with a duration of 2 semesters for the fields of Medicine, Dentistry and Pharmacy.

The curriculum is in accordance with national and European standards and ensures the acquisition of defining knowledge for the field of doctoral studies in Dentistry.

It is discussed and elaborated according to the procedure of elaboration of the doctoral study programs and of the curriculum within the “Victor Babeș” University of Medicine and Pharmacy from Timișoara <https://www.umft.ro/reglementari-interne-csud/> approved by H.S.

The curriculum for doctoral studies includes compulsory subjects, optional subjects and the advanced scientific research project.

The compulsory subjects ensure the accumulation, by the students, of the basic knowledge, indispensable for the field of study.

The optional subjects allow the deepening of some particular directions, in accordance with the specialization targeted by the student.

At the end of the year of advanced university training, doctoral students achieve the total number of credits provided in the curriculum.

Doctoral students are guaranteed the right to free choice of optional courses, in accordance with the legal norms in force and with the curriculum. The end of the activity in the educational disciplines is made by examination as provided in the curriculum. The examination may be conducted in written, oral or other form of verification of knowledge. A subject is promoted when it is obtained from the minimum (satisfactory) grade to the maximum (very good) according to the Regulations for the examination and grading of doctoral students from the "Victor Babeş" University of Medicine and Pharmacy in Timișoara.

<https://www.umft.ro/reglementari-interne-csud/>, approved by H.S.

The curricula for the field of Dentistry were approved by the UMFVBT University Senate for the period 2016-2020 are the following:

**CURRICULUM - YEAR I
DOCTORAL SCHOOL 2016-2017**

UNIVERSITY	"VICTOR BABEŞ" UNIVERSITY OF MEDICINE AND PHARMACY FROM TIMISOARA		
THE FUNDAMENTAL FIELD OF HIERARCHY	BIOLOGICAL AND BIOMEDICAL SCIENCES	LENGTH OF STUDIES	4 YEARS
BRANCH OF SCIENCE	MEDICINE / DENTAL MEDICINE	THE FIELD OF HIERARCHY	MEDICINE / DENTAL MEDICINE
FIELD OF UNIVERSITY DOCTORAL STUDIES	MEDICINE / DENTAL MEDICINE	TRANSFERABLE STUDY LOANS	60 (REQUIRED)

NO. crt.	Educational activities Disciplines	Type	Semester I				Semester II				Total university (28 weeks)			
	<i>F.D. Mandatory subjects</i>		Cs.	PW	TSC	Verif. form	Cs.	PW	TSC	Verif. form	Cs.	PW	Sem.	TS C
1.	Scientific research methodology	FD	14	14	5	E	-	-	-	-	14	14	-	5
2.	Ethics of scientific research	FD	14	14	5	E	-	-	-	-	14	14	-	5
3.	Biostatistics and medical informatics	FD	14	14	5	E	-	-	-	-	14	14	-	5
4.	Methodology for writing and publishing scientific articles	FD	-	-	-	-	14	14	5	E	14	14	-	5

5.	Grant design and management	FD	-	-	-	-	14	14	5	E	14	14	-	5
<i>CD Optional subjects (optional 1 of 5)</i>														
6.	Experimental models on laboratory animals	CD	-	-	-	-	14	14	5	E	14	14	-	5
7.	Writing the doctoral thesis. Intellectual property	CD	-	-	-	-	14	14	5	E	14	14	-	5
8.	Biomaterials and new technologies in medical research	CD	14	14	5	E	-	-	-	-	14	14	-	5
9.	Bioinformatics and genomics applied in medical research	CD	-	-	-	-	14	14	5	E	14	14	-	5
10	News in national and international medical research	CD	-	-	-	-	14	14	5	E	14	14	-	5
			42	42		3E	42	42		3E	84	84		
	Grand total		84				84				168			
	Total hours / credits required semester / year				15				15					30

SCIENTIFIC RESEARCH PROJECT (compulsory): 30 credits TOTAL COMPULSORY

APPROPRIATIONS / YEAR = 60 credits

Note: FD-fundamental discipline; CD-complementary discipline; E-exam; C-colloquium; Cs-course; PW-practical works; Sem-seminar; TSC-transferable study credits

http://old.umft.ro/data_files/documente-atasate-sectiuni/2554/plan_20de_20invatamant_202016-2017.pFD

CURRICULUM - YEAR I DOCTORAL SCHOOL 2017-2018

UNIVERSITY	"VICTOR BABES" UNIVERSITY OF MEDICINE AND PHARMACY FROM TIMISOARA		
THE FUNDAMENTAL FIELD OF HIERARCHY	BIOLOGICAL AND BIOMEDICAL SCIENCES	LENGTH OF STUDIES	4 YEARS
BRANCH OF SCIENCE	MEDICINE / DENTAL MEDICINE	THE FIELD OF HIERARCHY	MEDICINE / DENTAL MEDICINE
FIELD OF UNIVERSITY DOCTORAL STUDIES	MEDICINE / DENTAL MEDICINE	TRANSFERABLE STUDY LOANS	60 (REQUIRED)

Crt. No.	Educational activities disciplines	Type	Semester I				Semester II				Total university (28 weeks)			
	<i>F.D. Mandatory subjects</i>		Cs.	PW	TSC	Verif. form	Cs.	PW	TSC	Verif. form	Cs.	PW	Sem.	TSC
1.	Scientific research methodology	FD	1	1	5	E	-	-	-	-	14	14	-	5
2.	Ethics of scientific research	FD	1	1	5	E	-	-	-	-	14	14	-	5
3.	Biostatistics and medical informatics	FD	1	1	5	E	-	-	-	-	14	14	-	5
4.	Methodology for writing and publishing scientific articles	FD	-	-	-	-	1	1	5	E	14	14	-	5
5.	Grant design and management	FD	-	-	-	-	1	1	5	E	14	14	-	5
<i>CD Optional subjects (optional 1 of 5)</i>														
6.	Experimental models on animals in translational research	CD	-	-	-	-	1	1	5	E	14	14	-	5
7.	Writing the doctoral thesis. Intellectual property	CD	-	-	-	-	1	1	5	E	14	14	-	5
8.	Biomaterials and new technologies in medical research	CD	1	1	5	E	-	-	-	-	14	14	-	5
9.	Bioinformatica si genomica aplicata in cercetarea medicala	CD	-	-	-	-	1	1	5	E	14	14	-	5
10	Actualitati in cercetarea medicala nationala si internationala	CD	-	-	-	-	1	1	5	E	14	14	-	5
			3/4	3/4		3E/4E	2/3	2/3		2E/3E	84	84		
	Total General		6/8				4/6				168			
	Total ore/credite obligatorii semestru/an				15/20				10/15					30

SCIENTIFIC RESEARCH PROJECT (compulsory): 30 credits TOTAL COMPULSORY

APPROPRIATIONS / YEAR = 60 credits

Note: FD-fundamental discipline; CD-complementary discipline; E-exam; C-colloquium; Cs-course; PW-practical works; Sem-seminar; TSC-transferable study credits

http://old.umft.ro/data_files/documente-atasate-sectiuni/4333/plan_20de_20invatamant_202017-2018.pFD

CURRICULUM - YEAR I
DOCTORAL SCHOOL 2018-2019

UNIVERSITY	"VICTOR BABES" UNIVERSITY OF MEDICINE AND PHARMACY FROM TIMISOARA		
THE FUNDAMENTAL FIELD OF HIERARCHY	BIOLOGICAL AND BIOMEDICAL SCIENCES	LENGTH OF STUDIES	Year I
BRANCH OF SCIENCE	MEDICINE / DENTAL MEDICINE	THE FIELD OF HIERARCHY	MEDICINE / DENTAL MEDICINE / PHARMACY
FIELD OF UNIVERSITY DOCTORAL STUDIES	MEDICINE / DENTAL MEDICINE	TRANSFERABLE STUDY LOANS	60 (REQUIRED)

No. crt.	Educational activities	Tip	Semester I				Semester II				Total university (28 weeks)			
	disciplines		Cs.	PW	TSC	Verif. form	Cs.	PW	TSC	Verif. form	Cs.	PW	Sem.	TS C
1.	FD. Mandatory subjects	FD	1	1	5	E	-	-	-	-	14	14	-	5
2.	Scientific research methodology	FD	1	1	5	E	-	-	-	-	14	14	-	5
3.	Ethics of scientific research	FD	1	1	4	E	-	-	-	-	14	14	-	4
4.	Biostatistics	FD	-	-	-	-	1	1	5	E	14	14	-	5
5.	Methodology for writing and publishing scientific articles	FD	-	-	-	-	1	1	4	E	14	14	-	4
6.	Grant design and management	FD	-	-	-	-	1	1	4	E	14	14	-	4
CD Optional subjects (optional 1 of 5)														
7.	Experimental models in translational research	CD	-	-	-	-	1	1	3	E	14	14	-	3
8.	Writing the doctoral thesis. Intellectual property	CD	-	-	-	-	1	1	3	E	14	14	-	3
9.	Modern techniques in medical research	CD	-	-	-	-	1	1	3	E	14	14	-	3
10.	Bioinformatics and genomics applied in medical research	CD	-	-	-	-	1	1	3	E	14	14	-	3
11.	News in national and international medical research	CD	-	-	-	-	1	1	3	E	14	14	-	3
			3	3		3E	4	4		4E	98	98		
	Grand total		6				8				196			
	Total hours / credits required semester / year				14				16					30

SCIENTIFIC RESEARCH PROJECT (compulsory): 30 credits TOTAL COMPULSORY APPROPRIATIONS / YEAR = 60 credits

Note: FD-fundamental discipline; CD-complementary discipline; E-exam; C-colloquium; Cs-course; PW-practical works; Sem-seminar; TSC-transferable study credits

http://old.umft.ro/data_files/documente-atasate-sectiuni/4334/plan_20de_20invatamant_202018-2019.pFD

CURRICULUM - YEAR I
DOCTORAL SCHOOL 2019-2020

UNIVERSITY	UNIVERSITATEA DE MEDICINA ŞII FARMACIE "VICTOR BABES" DIN TIMISOARA		
THE FUNDAMENTAL FIELD OF HIERARCHY	BIOLOGICAL AND BIOMEDICAL SCIENCES	LENGTH OF STUDIES	Year I
BRANCH OF SCIENCE	MEDICINE / DENTAL MEDICINE / PHARMACY	THE FIELD OF HIERARCHY	MEDICINE / DENTAL MEDICINE / PHARMACY
FIELD OF UNIVERSITY DOCTORAL STUDIES	MEDICINE / DENTAL MEDICINE / PHARMACY	TRANSFERABLE STUDY LOANS	60 (REQUIRED)

No. crt.	Educational activities Disciplines	Tip	Semester I				Semester II				Total university (28 saptamani)			
	<i>FD. Mandatory subjects</i>		Cs.	PW	TSC	Verif. form	Cs.	PW	TSC	Verif. form	Cs.	PW	Sem	TSC
1.	I. Scientific research methodology	FD	1	1	5	E	-	-	-	-	14	14	-	5
2.	II. Ethics of scientific research	FD	1	1	5	E	-	-	-	-	14	14	-	5
3.	III. Biostatistics	FD	1	1	4	E	-	-	-	-	14	14	-	4
4.	IV. Methodology for writing and publishing scientific articles	FD	-	-	-	-	1	1	5	E	14	14	-	5
5.	V. Grant design and management	FD	-	-	-	-	1	1	4	E	14	14	-	4

6.	VII.Ethics and academic integrity	FD	-	-	-	-	1	1	4	E	14	14	-	4
<i>Optional Disciplines CD (optional 1 of 5)</i>														
7.	I. Experimental models in translational research	CD	-	-	-	-	1	1	3	E	14	14	-	3
8.	II. Writing the doctoral thesis. Intellectual property	CD	-	-	-	-	1	1	3	E	14	14	-	3
9.	III. Modern techniques in medical research	CD	-	-	-	-	1	1	3	E	14	14	-	3
10.	IV. Bioinformatics and genomics applied in medical research	CD	-	-	-	-	1	1	3	E	14	14	-	3
11	V. News in national and international medical research	CD	-	-	-	-	1	1	3	E	14	14	-	3
	VI.		3	3		3E	4	4		4E	98	98		
	VII. Grand total		6				8				196			
	VIII. Total hours / credits required semester / year				14				16					30

SCIENTIFIC RESEARCH PROJECT (compulsory): 30 credits TOTAL COMPULSORY APPROPRIATIONS / YEAR = 60 credits

Note: FD-fundamental discipline; CD-complementary discipline; E-exam; C-colloquium; Cs-course; PW-practical works; Sem-seminar; TSC-transferable study credits
http://old.umft.ro/data_files/documente-atasate-sectiuni/5824/plan_20de_20invatamant_202019-2020_20.pFD

CURRICULUM - YEAR I
DOCTORAL SCHOOL 2020-2021

UNIVERSITY	"VICTOR BABES" UNIVERSITY OF MEDICINE AND PHARMACY FROM TIMISOARA		
THE FUNDAMENTAL FIELD OF HIERARCHY	BIOLOGICAL AND BIOMEDICAL SCIENCES	LENGTH OF STUDIES	Year I
BRANCH OF SCIENCE	MEDICINE / DENTAL MEDICINE / PHARMACY	THE FIELD OF HIERARCHY	MEDICINE / DENTAL MEDICINE / PHARMACY
FIELD OF UNIVERSITY DOCTORAL STUDIES	MEDICINE / DENTAL MEDICINE / PHARMACY	TRANSFERABLE STUDY LOANS	60 (REQUIRED)

Crt. no.	Educational activities Disciplines	Tip	Semester I				Semester II				Total university (28 saptamani)			
	FD. Mandatory subjects		Cs.	PW	TSC	Verif. form	Cs.	PW	TSC	Verif. form	Cs.	PW	Sem .	TSC
1.	I. Scientific research methodology	FD	1	1	5	E	-	-	-	-	14	14	-	5
2.	II. Ethics of scientific research	FD	1	1	5	E	-	-	-	-	14	14	-	5
3.	III. Biostatistics	FD	1	1	4	E	-	-	-	-	14	14	-	4
4.	IV. Documentation, writing and publication of scientific articles	FD	-	-	-	-	1	1	5	E	14	14	-	5
5.	V. Grant design and management	FD	-	-	-	-	1	1	4	E	14	14	-	4
6.	VI. Ethics and academic integrity	FD	-	-	-	-	1	1	4	E	14	14	-	4
<i>Optional Disciplines CD (optional 1 of 5)</i>														
7.	VII. Experimental models in translational research	CD	-	-	-	-	1	1	3	E	14	14	-	3

8.	VIII. Communication, oral presentation and poster	CD	-	-	-	-	1	1	3	E	14	14	-	3
9.	IX. Modern techniques in medical and pharmaceutical research	CD	-	-	-	-	1	1	3	E	14	14	-	3
10.	X. Bioinformatics and applied genomics in medical research	CD	-	-	-	-	1	1	3	E	14	14	-	3
11	XI. Evidence-based medicine	CD	-	-	-	-	1	1	3	E	14	14	-	3
	XII.		3	3		3E	4	4		4E	98	98		
	XIII. Grand total		6				8				196			
	XIV. Total hours / credits required semester / year				14				16					30

SCIENTIFIC RESEARCH PROJECT (compulsory): 30 credits TOTAL COMPULSORY APPROPRIATIONS / YEAR = 60 credits

Note: FD-fundamental discipline; CD-complementary discipline; E-exam; C-colloquium; Cs-course; PW-practical works; Sem-seminar; TSC-transferable study credits

http://old.umft.ro/data_files/documente-atasate-sectiuni/7046/plan_20de_20_c3_aenv_c4_83_c5_a3_c4_83m_c3_a2nt_2020-2021.pFD

I.2.3. Number of doctoral supervisors:

Within the doctoral field of Dentistry, 14 doctoral supervisors work (quality obtained according to the law).

Distribution by fields of doctoral supervisors in the period 2016-2020

Anul	2016	2017	2018	2019	2020
Dental Medicine					

Number of doctoral supervisors	9	11	14	13	14
Enabling Theses	2	4	1	1	2

I.2.4.Evolution of the number of doctoral students and the number of doctors in the last 5 years:

PhD students enrolled in the period 2015-2020

Anul	2015	2016	2017	2018	2019	2020
Dental Medicine	60	63	69	93	96	87

The situation of admission and enrollment of doctoral students in the first year - academic year 2015-2016

DOCTORATE			
Domain	IF with scholarship	IF without scholarship	Frequency: for a fee
Dental Medicine	2	3	19

Situația admiterii și înmatriculării studenților doctoranzi în anul I – anul universitar 2016 -2017

DOCTORATE			
Field	IF with scholarship	IF without scholarship	Frequency: for a fee
Dental Medicine	2	3	12

The situation of admission and enrollment of doctoral students in the first year - academic year 2017 - 2018

DOCTORATE			
Field	IF with scholarship	IF without scholarship	Frequency: for a fee
Dental Medicine	2	0	18

The situation of admission and enrollment of doctoral students in the first year - academic year 2018 - 2019

DOCTORATE					
Field	IF with scholarship	IF without scholarship	IF without scholarship	Scholar of the Romanian State	Frequency: for a fee

Dental Medicine	3	1	2	0	28
-----------------	---	---	---	---	----

The situation of admission and enrollment of doctoral students in the first year - academic year 2019 - 2020

DOCTORATE			
Field	IF with scholarship	IF without scholarship	Frequency: for a fee
Dental Medicine	2	2	5

The situation of admission and enrollment of doctoral students in the first year - academic year 2020 - 2021

DOCTORATE			
Field	IF with scholarship	IF without scholarship	Frequency: for a fee
Dental Medicine	2	1	8

In the period 2016-2020, the doctoral theses were defended according to the doctoral studies contracts, in order to grant the doctoral title.

In the field of Dentistry, no doctoral thesis has been invalidated.

So far, within the Doctoral School of Dentistry of UMFVBT, no major problems have been reported regarding the doctoral theses and there are no definitively invalidated theses.

The number of doctoral theses defended within UMFVBT, the field of Dentistry in the last 5 years are:

Anul	2016	2017	2018	2019	2020	Total
Dental Medicine						
Number of doctoral theses defended	5	2	1	6	4	18

In order to be awarded the doctoral degree, the articles published in extenso must be included in the research topic of the doctoral thesis. The doctoral student has the obligation to declare his affiliation to UMFVBT in all papers published during his doctoral studies.

Doctoral theses defended in 2016

Dental Medicine

No. Crt.	Name and surname of the	Name and surname of the	The title of the doctoral thesis	Date of thesis defense
----------	-------------------------	-------------------------	----------------------------------	------------------------

	doctoral student	doctoral supervisor		
1	Pasarin Teodora Adina	Prof. Univ. Dr. Podariu Angela	Aesthetic orthodontic treatment in the adult patient with a completely individualized lingual system CONFIRMED OMENCS No. 3769 of 20.04.2017	06.10.2016
2	Bica Anamaria	Prof. Univ. Dr. Podariu Angela	Evaluation of oro-dental health and promotion of dental hygiene methods for children in primary education in Timiș County CONFIRMED OMENCS No. 3769 of 20.04.2017	06.10.2016
3	Mihali George Sorin	Prof. Univ. Dr. Borșun Maria	Remodeling preimplant bone by optimizing milling technique and superstructures on dental implants CONFIRMED OMENCS No. 3148 of 30.01.2017	11.11.2016
4	Cânjău Silvana	Prof. Univ. Dr. Todea Carmen	Optimization of non-invasive techniques for early diagnosis of orofacial lesions CONFIRMED OMENCS No. 3769 of 20.04.2017	18.11.2016
5	Pop Daniel Alexandru	Prof. Univ. Dr. Romînu Mihai	The metal component of fixed prosthetic restorations, between classic and modern CONFIRMED OMENCS No. 3769 of 20.04.2017	07.12.2016

Doctoral theses defended in 2017

Dental Medicine

No. Crt.	Name and surname of the doctoral student	Name and surname of the doctoral supervisor	The title of the doctoral thesis	Date of thesis defense
----------	--	---	----------------------------------	------------------------

1	Buzatu Roxana	Prof. Univ. Dr. Onisei Doina	Changes in aesthetic and gingival parameters in medicine Dental CONFIRMED OMEN No. 4193 of 27.07.2018	12.07.2017
2	Krems Cristina	Prof. Univ. Dr. Podariu Angela	Avant-garde techniques at the intersection of aesthetics with dental cosmetics CONFIRMED OMEN No. 4342 of 27.06.2019	06.10.2017

Doctoral theses defended in 2018

Dental Medicine

No. Crt.	Name and surname of the doctoral student	Name and surname of the doctoral supervisor	The title of the doctoral thesis	Date of thesis defense
1	Hajaj Tareq	Prof. univ.dr. Sinescu Cosmin	Interdisciplinary approaches to evaluating the interface between implant and abutment CONFIRMED OMEN No. 5474 of 14.11.2018	06.07.2018

Doctoral theses defended in 2019

Dental Medicine

No. Crt.	Name and surname of the doctoral student	Name and surname of the doctoral supervisor	The title of the doctoral thesis	Date of thesis defense
1	Mihălcioiu Codruța Victoria	Prof. Univ. Dr. Podariu Angela Codruța	Ethical and deontological aspects in the clinical-radiological practice of dentistry VERY GOOD rating It is requested to complete the CNATCDU file from 18.07.2019 CONFIRMED OMEN No. 4496 of 10.06.2020	18.01.2019

2	Savencu Cristina Elena	Prof. Univ. Dr. Porojan Liliana	Personal considerations regarding evaluations of metallic prosthetic restorations fabricated by additive cad / cam technologies VERY GOOD rating CONFIRMED OMEN No. 5345 of 25.11.2019	13.06.2019
3	Lugoian Toma Simina (Boia)	Prof. Univ. Dr. Stratul Ștefan Ioan	Evaluation of oxidative stress in treated periodontitis patients with systemic antibiotic therapy EXCELLENT rating CONFIRMED OMEN No. 5644 of 30.12.2019	30.09.2019
4	Bălean Octavia Iulia	Prof. Univ. Dr. Podariu Angela Codruța	Terapii neconvenționale de regenerare a țesutului gingival după terapie cu bisfosfonați calificativ EXCELENT CONFIRMAT OMEN No. 3122 din 29.01.2020	25.10.2019
5	Gabor Alin Gabriel	Prof. Univ. Dr. Cosmin Sinescu Prof. Univ. Dr. Virgil-Florin Duma (cotutelă)	Contributions to bone augmentation methods EXCELLENT rating THESIS RESUSED IN 14.02.2020 CONFIRMED OMEN No. 4496 of 10.06.2020	19.12.2019
6	Zaharia Cristian	Prof. Univ. Dr. Negruțiu Meda- Lavinia	Modern concepts in adhesion Dental EXCELLENT rating CONFIRMED OMEN No. 4021 of 07.04.2020	19.12.2019

Doctoral theses defended in 2020

Dental Medicine

No. Crt.	Name and surname of the doctoral student	Name and surname of the doctoral supervisor	The title of the doctoral thesis	Date of thesis defense
-------------	---	--	-------------------------------------	---------------------------

1	Gabor Alin Gabriel	PhD supervisor Prof. univ. Dr. Sinescu Cosmin Co-supervised PhD supervisor Prof. univ. dr. Duma Virgil - "Politehnica" University of Timișoara	CONTRIBUTIONS TO BONE INCREASE METHODS EXCELLENT rating CONFIRMED OMEN No. 4496 of 10.06.2020	14.02.2020
2	Vasiliu Roxana- Diana	Prof. univ. dr. Porojan Liliana	SURFACE CHARACTERIZATION AND OPTICAL PROPERTIES OF DENTAL GLASS- CERAMICS RELATED TO ARTIFICIAL AGING EXCELLENT ratings CONFIRMED OMEN No. 6245 of 21.12.2020	23.10.2020
3	Luca Ruxandra Elena	Prof. univ. dr. Todea Carmen	STUDY OF THE INFLUENCE OF LOW ENERGY LASER RADIATION ON THE BIOLOGICAL MECHANISM OF GUIDED BONE REGENERATION EXCELLENT rating CONFIRMED OMEN No. 3252 of 09.02.2021	06.11.2020
4	Stan Adrian Tudor	Prof. univ. dr. Romînu Mihai	ADVANCED IMAGING METHODS IN THE EVALUATION OF DENTAL TREATMENTS VERY GOOD rating CONFIRMED OMEN No. 3252 of 09.02.2021	13.11.2020

For each verified work, a similarity report is generated in the sistemantiplagiat.ro platform. The system operator must examine the similarity ratio in terms of the occurrence of unauthorized loans at work, in particular consisting of the following:

- a. similarity coefficient 1 does not exceed 50%
- b. similarity coefficient 2 does not exceed 5%

c. presence of unauthorized similarities ("alert")

Based on the analysis of the similarity report, the system operator will prepare the "minutes of control of the originality of the work". The verification period cannot exceed 30 days from the date of submitting the doctoral thesis to the secretariat of the Doctoral School. The doctoral school may request, in addition, the use of a program developed at national level on the detection of similarities.

During the reporting period, the doctoral students who completed the thesis, published and reported in the doctoral dissertation articles in ISI-rated journals with impact factor and articles in BDI journals.

Year	2016	2017	2018	2019	2020	TOTAL
Dental Medicine	21	26	5	22	9	83

I.2.5. Research centers / laboratories:

The doctoral students of the Doctoral School of Dentistry can carry out their scientific research activity in the following advanced and methodological research centers:

1. Research center for pharmacotoxicological evaluations (FARMTOX), center director Prof. Dr. Cristina Dehelean-265.32 points
2. Centru de Cercetare Translațională și Medicina Sistemelor (CERT-MEDS)/ Center for Translational Research and Systems Medicine, director centru Prof. Dr. Danina Muntean- 204,51 puncte

3. Molecular research center in nephrology and vascular pathology, director of the center Prof. Dr. Ligia Petrică- 167.01 points

4. Advanced instrumental screening center (AISC), center director Prof. Dr. Adriana Ledești-165.67 points

5. Angiogenesis research center, Timisoara (ANGIOTM), center director Prof. Dr. Marius Raica - 105.94 points

6. Multidisciplinary research center for antibiotic resistance (MULTIREZ), center director Prof. Dr. Florin George Horhat - 79.49 points
7. Centru de Cercetare Genomică- GENOMICA, director centru Prof. Dr. Maria Puiu 68,77 puncte

8. Center of the Institute of Cardiovascular Diseases Timișoara, center director Prof. Dr. Dan Gaiță - 68.74 points

9. Advanced and digital techniques for endodontic, restorative and prosthetic treatment, TADERP, center director Prof. Dr. Jivănescu Anca- 61.52 points

10. Center for Research and Innovation in Personalized Medicine of Respiratory Diseases (CCIMPBR) / Center for Research and Innovation in Precision Medicine of Respiratory Diseases (CRIPMRD), center director Assoc. Prof. Dr. Ovidiu Fira-Mlădinescu 55.94 points

Methodological and Research Centers

1. Advanced research center in gastroenterology and hepatology, director of the center Prof. Dr. Ioan Sporea - 55,050 points

3. Orthodontic research center (ORTHO-CENTER), center director Assoc. Prof. Dr. Camelia Szuhaneck - 48,090 points

4. Center for the science of complex networks (CSRC), director of the center Assoc. Prof. Dr. Ovidiu Sirbu - 47,281 points

5. Multidisciplinary Heart Research Center, director of the center Prof. Dr. Mirela Tomescu - 45,180 points

6. Center for clinical, experimental and translational research in oral health (CCEx-T-SO) /, center director Prof. Dr. Atena Galuscan - 42,984 points

7. Cognitive research center in neuropsychiatric pathology - NEUROPSY-COG, director of the center Prof. Dr. Catalin Jianu - 39,750 points

8. Research center in dentistry using conventional and alternative technologies, center director Prof. Dr. Cosmin Sinescu - 37,919 points

9. Center for Immunophysiology and Biotechnology Timisoara (CIFB), center director Prof. Dr. Carmen Panaitescu - 33,043 points

10. Biological Systems Modeling and Data Analysis Center, center director Prof. Dr. Diana Lungeanu - 32,408 points

11. The multidisciplinary center for research, evaluation, diagnosis and therapies in oral medicine, director of the center Prof.Dr. Laura Rusu - 32,397 points

13. Research Center in Anesthesia and Intensive Care (CC-ATI), center director Prof.Dr. Dorel Sandesc - 31,066 points

14. ANAPATMOL research center, director of the center Prof.Dr. Alis Dema - 30,490 points

15. Methodological and research center in neurosciences, center director Assoc. Prof. Dr. Andrei Brinzeu - 30,162 points

16. Center for advanced research in cardiovascular pathology and hemostaseology, center director Prof. Dr. Daniel Lighezan - 29,032 points
17. Methodological and Infectious Diseases Research Center (CMCBI), center director Prof. Dr. Iosif Marincu - 27,054 points
18. Doctor Teodor Șora University Professor Center, center director Prof. Dr. Jenel Patrascu - 25,320 points
19. Oftalmo-ENT-EYE-ENT sensory-tumor research center, center director Prof. Dr. Mihnea Muntean - 25,135 points
20. Center for Research on Growth and Developmental Disorders in Children (CRED), center director Prof. Dr. Otilia Marginean - 22,763 points
21. Center for studies in preventive medicine, center director Prof. Dr. Brigitha Vlaicu - 22,709 points
22. Center for the evaluation of the movement of functionality and disabilities (CEMFD), director of the center Assoc. Prof. Dr. Roxana Onofrei - 22,135 points
23. Center for hepato-biliary-pancreatic surgery (CHBP), director of the center As. univ. Dr. Florin Hut - 19,687 points
24. Periodontal and peri-implant disease research center Prof. Dr. Anton Sculean (CCBPPAS), center director Prof. Dr. Ioan Stratul - 19,392 points
25. Centrul de tehnologii avansate în protetica dentară/ Center for Advanced Technologies in Dental Prosthodontics, director centru Prof. Dr. Liliana Porojan - 17,234 points
28. Morphological research center of skin, director of the center Prof. Dr. Caius Solovan - 14,016 points
29. Center for the study of normal and pathological growth of the stomatognathic system in children and adolescents (CSCCA), center director Prof. Dr. Alexandru Ogodescu - 10,661 points
34. Preventive medicine center, director of the Șușan Răzvan center
35. Drug Formulation and Technology Research Center, center director Assoc. Prof. Dr. Vlaia Lavinia
36. Research Center for Medical Communication, center director Assoc. Prof. Dr. Codrina Mihaela Levai
38. Ethics Center in Human Genetic Identification (EtIGen), center director Prof. Dr. Enache Alexandra
39. Research center in vascular and endovascular surgery (CerVase), center director Prof. Dr. Mihai Ionac

I.2.6. Main scientific achievements

The activity in the doctoral school also involves the use, partial or total, of the research results carried out by the doctoral students in the publication of scientific articles and the finalization of the doctoral thesis. All these add value to the activity carried out in this field of interest. We will briefly present some of the scientific achievements generated by the activity of the doctoral school in the field of Dentistry during the evaluated period. Thus, in the academic year 2015-2016, 3 doctoral theses were defended, resulting in 15 scientific articles.

Kralev Lidia Caroline addresses the topic The periodontal risk factor in the management of marginal periodontal disease, publishing 9 scientific articles. Among the main conclusions of this thesis are: Periodontal risk is defined by many components. Periodontal risk factors can be grouped into 6 major groups: etiological, genetic, predisposing, systemic, habitual, psychological. Bacteriological and immunological factors are the most important risk factors, followed by diabetes and smoking. However, the concomitant presence of several risk factors does not increase the periodontal risk in an additive manner, but in an exponential one. The doctoral student's research determined first of all the correlation between the prevalence of periodontal disease and the risk factors of the patients in the study group. The data obtained and their interpretation suggest that the oral examination should be performed in detail, specifying all periodontal risk factors. Smoking was the first place in the category of risk factors, followed by microbial factor and oral hygiene. The amount of biofilm was not necessarily correlated with the severity of periodontal disease but with the pathogenicity of microorganisms in the biofilm. Microbial communities are functionally organized to increase the efficiency of their own metabolism and to become more virulent. The study determined a positive correlation between the clinical parameters and the sulcular values of the proinflammatory cytokines, fact demonstrated by the values of the clinical parameters, whose values increase in both forms of periodontitis. Age and smoking seem to be important factors in determining the level of cytokines in sulcular fluid. Research data suggest that assessment and comparison of the level of cytokines in sulcular fluid can be used as a marker of periodontal disease progression.

Kralev Alexander Daniel studied the topic Clinical and laboratory evaluation of a new biomaterial used in keratinized gum augmentation, publishing 3 scientific articles. The main conclusions of the thesis include: The "gold standard" in gum augmentation is currently represented by the creation of a repositioned coronary flap accompanied by a graft of subepithelial connective tissue, this technique increasing the chances of a complete coverage of the root surface. Both the surgical procedure with repositioned flap and free graft and the one with repositioned flap and collagen membrane (Geistlich Mucograft®, Geistlich Pharma AG, Wolhusen, Switzerland) generated an increase in the size of the keratinized gum. However, comparing its dimensions after the postoperative contraction, 3 months after the intervention, a slight increase in the size of the keratinized tissue was found at the sites treated by the free gingival graft technique compared to those treated with the three-dimensional collagen membrane. However, it should not be forgotten that this technique has the additional effect of an additional increase in morbidity due to the donor site. The collagen membrane regenerates the keratinized mucous, reducing operative time and postoperative morbidity, improving healing. At 14 days after

surgery, hematoxylin eosin staining reveals an oral epithelium that is normally organized with epithelial ridges and a keratinized upper layer. Regarding tissue integration, the response of T lymphocytes induced by collagen membrane placement (Geistlich Mucograft®,

Geistlich Pharma AG, Wolhusen, Switzerland) does not appear to interfere with the healing process.

Jianu Alexandru researched the topic Modern methods of clinical-microbiological and imaging evaluation of tissue changes induced by orthodontic treatment in adults affected by periodontal disease, publishing 3 scientific articles.

In the academic year 2016-2017, 6 doctoral theses were defended, resulting in 24 scientific articles.

Păsărin Teodora Adina chooses the topic Aesthetic orthodontic treatment in the adult patient with a completely individualized lingual system, publishing 3 scientific articles. The research findings included: 80% of the surveyed patients consider that lingual brackets have a great physiognomic importance in the relationship with the family and the environment. Regarding professional life, 78% of the patients included in this study consider that the application of brackets on the lingual face of the teeth is of great importance regarding professional life, professional contacts with clients and colleagues. 70.6% of the surveyed patients stated that they do not know the visible damage that can be caused by applying brackets on the external faces of the teeth. 64.7% of the patients included in the study consider that the iatrogenic effects of poor hygiene in combination with brackets glued to the external face are not the first motivation in choosing a lingual orthodontic appliance. Incognito Lite is a quick treatment option for minor problems in the frontal area in patients who do not want to change the occlusion. The included canine anomaly can be treated with a completely individualized lingual aesthetic device. Angle class II abnormalities can be treated with a fully individualized orthodontic appliance in combination with Herbst equipment. In the adult patient, this treatment may be a compromise solution for patients who do not want orthognathic surgery. The result will be a dento-alveolar compensation of the anomaly and positive aesthetic effects. The lingual positioning of the forces is advantageous especially in terms of vertical forces: intrusions, respectively raising the occlusion. This is due to the application of forces very close to the center of resistance, especially in the case of the incisors, exerting very effective intrusive forces.

Bica Anamaria chooses the topic Evaluating oro-dental health and promoting the methods of dental hygiene of children in primary education in Timiș County, publishing 5 scientific articles. The final conclusions included: 55.6% of students change their toothbrush correctly at least 3 months. The period at which they usually change the toothbrush influences the degree of oral health of students $p = 0.02$, pearson = 12,819. The use of oral hygiene aids is not necessarily a habit among students in Timiș County, so 51.7% of students say they have never used dental floss, while 87% of parents say so. Mouthwash is the most used auxiliary means of oral hygiene among students in Timiș County, so 35,% of students say they use it from time to time, a fact confessed by parents in proportion of 30.9%. Over 75% of the students of Timiș County never use an interdental toothbrush, a fact confessed by 76.4% of students and 80.5% by parents.

Regarding fluoride pills, 82% of parents say that they have never given them to their children, and 86.4% of students say that they have never taken fluoride pills. 46.3% of

parents take their children to the dentist only in case of emergency, due to lack of time or material shortages, 26.8% of parents say they go with their children once every six months to the dentist, of which 90% live in urban or peri-urban areas. 35% of students report oral health problems to parents annually, 26.8% once every 2-3 months, 4.2% at least once a week, 4.7% once a month, and 28.3% have never reported oral health problems for parents. This percentage is very close to the percentage of students without caries 24.3%. The opinions of parents compared to the opinions of teachers regarding the attention given by students to oral hygiene are very different, so we can see that 92.1% of parents consider that their children pay more attention to oral hygiene, as opposed to only 21, 6% of teachers consider this, which is observed by us in the oral evaluations of students; 60% of the teachers claim that they face oral health problems in the classroom for at least 2-3 months; 95% of primary school teachers in Timiș County are willing or very willing to collaborate with those who want to carry out actions to promote oral health in schools: Public Health Departments, Companies producing oral hygiene products, Universities of Dentistry, etc; Only 15.2% of students consider that they have received information related to correct oral hygiene in school, although 65% of teachers consider that they have been actively involved in their improvement, so we can conclude that the educational methods used by teachers should be improved, so the involvement of the Directorates of Public Health through the Departments of Health Promotion should come with a curriculum specially created for primary school students that includes games, coloring books, plays, educational films on oral health;

Mihali George Sorin studies the topic Remodeling preimplant bone by optimizing the milling technique and superstructures on dental implants, publishing 5 scientific articles. The final conclusions of the research included: One of the most important factors that ensure implant success is the connection of implants. Due to the lack of ligaments, the purely ceramic or metal-ceramic superstructures they are not indicated in the RPI due to their rigidity and density. The concept of nano-ceramic materials is to be taken into account in situations where cushioning of occlusal forces is desired by using RPI due to the presence of a modulus of elasticity similar to that of dentin. The nano-ceramic prosthetic restoration material offered a very good abrasion resistance, offering an aesthetic similar to that of glass ceramics. The mechanical properties of this material suggest that it can be used successfully in implant prosthetics. Screwed restorations seem to be the most popular nowadays. The conventional method of sealing access holes refers to the RCD. This method has many disadvantages: microinfiltration, rapid wear, bacterial infiltration, discoloration. The ceramic inlays studied are a restoration option with low abrasive wear potential and high aesthetics over a long period of time. Using this concept of prosthetic restoration, it is possible to perform a screwed restoration using aesthetic inlays even if the position of the implant is not ideal. The results obtained from the study with screwed RPFI inlays suggest that ceramic inlays are much more predictable than composite fillings used for this purpose. Aesthetic advantages and long-term stability are offered compared to traditional fillings.

Cânjău Silvana chooses the topic Optimizing non-invasive techniques for early diagnosis of orofacial lesions, publishing 5 scientific articles. Her research also included the following conclusions: General methods of educating the population and in particular

those at high risk, a good theoretical basis to support the key aspects of oral cancer associated with the constant modernization of health care providers in the field of oral pathology, should be significant to succeed in lowering the alarming figures that have accompanied this disease in recent decades. The search for specific biomarkers for this condition should not be abandoned and future research should allow progress towards defining the susceptibility field (etiological factors and their interaction) to put an end to the secular form of presentation that begins with genetic instability of keratinocytes. Current advances in complementary imaging examinations demonstrate the viability of the OCT as a very useful tool in both dental practice and research. It is also expected that technological progress in the most important field in which OCT finds its applicability at this time, eye imaging, leads to an increase in the applicability of OCT in dentistry. The implementation of both TD and SD has proven the unique capabilities of the OCT. For hand-held scanners, the swept source principle (as one of the possibilities of SD) is expected to dominate due to its increased speed which reduces the distortion effects caused by involuntary hand or patient movements. However, for investigations with high cross-resolution, especially in research studies, it is expected that TD-OCT will continue to coexist with SD-OCT methods, additionally providing a fast and low-cost supply of en-face images makes compatibility with dynamic focus. From this point of view, en-face TD-OCT provides a lower cost alternative for increased cross-sectional resolutions of static samples. Several variants of hand samples for OCT scanning were developed by the doctoral student's group, out of the desire to make them as easy, simple and cheap as possible. It has been shown that these samples can be built almost entirely from universal parts and can have an ergonomic design. This piece was used for the ex-vivo study of soft tissue samples. The hand samples developed so far use a one-dimensional galvanometric scanner (1D GS), which generates distortion-free OCT images when guided by triangular signals. In contrast, hand samples based on micro-electro-mechanical systems (MEMS) are sinusoidally guided, using oscillating resonance mirrors; therefore requires post-processing of OCT images to remove distortion. The 1D GS-based hand samples developed by the doctoral student group reached a mass of 0.35 kg compared to MEMS-based samples weighing 0.5 kg and commercially available samples of 1.5 kg (Bioptigen Envisu, USA) or 2.2 kg (Optovue iVue, USA). The introduction of the OCT technique would lead to a simplification of the periodic assessment of potential subjects, avoid unnecessary biopsies, while reducing the complications and risks of these invasive therapeutic maneuvers. miRNAs may play an important role in oral tumor pathogenesis. The identification of miRNA biomarkers in saliva samples is a promising non-invasive analysis for assessing the risk of oral malignancy, which may add value to the histological result. The availability of new genetic testing technologies such as RNA sequencing will allow the current technical limitations to be overcome and will increase the accuracy of testing when extremely small samples will be used. Fundamental research on the basic mechanism of control and activity of miRNAs will facilitate the identification of links between various diseases. Additionally, more efficient numerical prediction models and improved bioinformatics will allow optimal use of miRNA databases..

Pop Daniel Alexandru deepens the topic The metallic component of fixed prosthetic restorations, between classical and modern, publishing 4 scientific articles. The general conclusions also included: Currently no CAD / CAM system can completely

replace traditional techniques, for this reason more studies of this technology are needed in order to develop emerging systems or technologies that can compensate for this impediment. Performing a simulation by the finite element method offers the possibility to easily perform studies of strength, durability or optimization of any type of fixed denture when simulating a masticatory force applied with maximum intensity on the intermediate of the metal skeleton. Following the comparative study of the mechanical properties of the cast and sintered Co-Cr alloy, respectively, a clear difference could be observed in favor of the samples manufactured by the laser sintering process. Thus, the maximum force applied to the sintered samples was more than 2 times higher than in the case of cast ones, major differences can be observed in terms of their rigidity. The results of the clinical study performed on the biocompatibility of fixed dental prosthetic restorations obtained by laser sintering technique showed that although TNF alpha values were higher in this group than in the one that benefited from fixed dental prosthetic restorations, clinically these values are insignificant. Optical Coherence Tomography, in Time Domain mode, is a modern non-invasive technique, with applicability in various fields of medicine, and as we proved in the previous study is an alternative method of analyzing the marginal adaptation of prosthetic restorations, being a useful tool in vivo and in vitro. The in vitro study of the analysis of the marginal fit of fixed prosthetic metal skeletons using Optical Coherence Tomography (OCT) showed that in the case of prosthetic metal skeletons produced by laser sintering the accuracy of the marginal fit is higher than that of prosthetic metal skeletons produced by conventional technology (casting).

Buzatu Roxana approaches the topic Changes in aesthetic and gingival parameters in Dentistry, publishing 3 scientific articles. The conclusions of his research included: The additional use of chlorhexidine may reduce gingival inflammation and plaque, but this effect is slightly dependent on the concentration used. The use of chlorhexidine gels in patients undergoing orthodontic treatment reduces the values of the clinical parameters OHIs PI, GI and BOP and PD, but without significant differences, except for the initial phase of the inflammatory process of gingival tissue. The insertion of a stainless steel orthodontic appliance triggers almost immediate changes in cell composition and salivary antioxidant capacity (expressed by GSH) that can be observed and quantified one week after starting orthodontic treatment. The low salivary flow associated with orthodontic appliances increases the risk of developing oral candidiasis in young people. There is a significant reduction in the number of LAG classes II, III and IV and an implicit increase in the number of LAG classes I which ensures a pleasant transition of the gingival level between the anterior maxillary teeth. Regarding the number of gingival recessions initially found, it showed a significant increase after the end of orthodontic treatment and no correlation could be demonstrated between the sex of patients and the occurrence of gingival recessions after performing orthodontic treatment. Any orthodontic treatment plan is necessary to consider from the beginning the changes in the aesthetic parameters of the gum that may occur as a result.

In the academic year 2017-2018, 2 doctoral theses were defended, resulting in 8 scientific articles.

Krems Cristina considers the topic Avant-garde techniques at the intersection of aesthetics with dental cosmetics, publishing 3 scientific articles. The general conclusions of the research included: polymeric restorations underwent color changes when they came in contact with beverages with a high concentration of dyes, such as cola, coffee

ness or red wine. It was also found that the type of drink has a major influence on the material from which the fixed prosthetic restoration is made. Coffee had the greatest influence and a great impact on polymeric fixed prosthetic restorations. Instead, cola caused minor color changes. It was analyzed whether the proportion of gold, the proportion of RED and the Golden percentage can find their utility in Dental Aesthetics in the frontal area. In addition to the three variants already known, it was chosen that the dental technician together with the dentist to design an individualized dental proportion, presenting defining aspects of the patient's character. The study also envisages the development of correlations between certain facial and dental parameters in the frontal area. An analogy between tooth shape and facial ratios is expected. The results obtained in this study conclude that it is not mandatory to comply with the Golden Proportion, RED Ratio or Golden Percentage to consider the patient's smile aesthetic and attractive. For a natural result the most important thing is that the smile created is proportional to the whole face. It is very important to respect the wishes of patients. In more than half of the analyzed group, it was found that the central and canine incisors had dimensions very close to the proportion of gold and the proportion of RED. For the long-term success of multidisciplinary RPF, it is very important that, in addition to stability, there are contacts in the occlusal, proximal and marginal areas. It is not possible to obtain a uniform marginal adaptation of the fixed prosthetic restoration at the level of the dental abutment, which at the same time ensures a uniform dimensional surface of the cementing material. Until now, the emphasis has been on multiple studies of single-tooth prosthetic restorations, it is recommended to make several documents related to the marginal adaptation of dental bridges, the thickness of the cement layer and the color change of these types of restorations. It must be borne in mind that adapting multi-span bridges is more complex compared to adapting single-tooth restorations. Due to the absence of uniform dimensions in all areas of the dental abutment for the cementing material, there is a risk of color changes of the RPF entirely ceramic or ceramic on zirconium oxide. By the usual method of wax addition it took 73 minutes to achieve the hemiarcade. With the alternative method, the efficiency of the working time was obtained, thus achieving the same hemiarcade in only 43 minutes. The invention has many advantages. In addition to streamlining working time and ergonomic application and modeling with this alternative method, the tool offers the possibility for the dentist to optimize the working stages due to the wax-up directly in the dental office. The hand tool is being patented. Optimizing working time through a medical architecture and creating greater labor productivity and less discomfort for both physicians and patients. The results obtained after evaluating the completed questionnaire, confirmation from doctors, students and dental technicians as a concept for the future. This new design simplifies daily work. In a well-organized and structured clinic it brings long-term benefits, stress is reduced and, last but not least, a well-organized treatment plan will be established from the beginning.

Hajaj Tareq develops research in the field of Interdisciplinary approaches to the evaluation of the interface between implant and abutment, publishing **5 scientific articles**. The conclusions of his research include: A problem debated in the literature is "which connection is better"? And finally, the "war" is between the classic internal hexagonal connection (which tends to lose) and the conical connection. In this regard, a comparative study was conducted between the two types of connections. Two implants on internal hexagonal connection and two implants on 60 conical connection were used.

To study the quality and tightness of the interfaces, the inside of the 4 implants with *S. Mutans* was inoculated.

Subsequently, the abutments were fixed by screwing, following the instructions given by the manufacturers. Once all the abutments were fixed, the 4 implants were placed in test tubes, individually, where they were surrounded by sterile glucose broth. Then, they were moved to an incubator at 37 ° C for 72 hours. After this interval, samples of the solutions from the 4 test tubes were seeded on Columbia agar culture media supplemented with 5% blood, to see which of the implants allowed the bacterial passage and colonization outside them. After 24 hours, the results confirmed the superiority of the tightness of the conical connection, neither of the two implants showing signs of bacterial colonization. The implants on internal hexagonal connection, on the other hand, tested positive, both culture media being colonized by *S. Mutans* at the end of the 24 hours. Subsequently, to confirm the results, the experiment was repeated and a larger batch of implants was used - 5 on internal hexagonal connection and 5 on conical connection - which were left in the incubator, this time for a longer period of time, 7 days. However, the results were similar, the time spent in the incubator not affecting the behavior of the two types of connections. This confirms the closer and more stable contact of the conical connection, both mechanically and microbiologically. To counter microinfiltrations, the contact force between the implant and the abutment must be superior to the destabilizing forces but, more importantly, stable in the long run, to withstand multiple masticatory cycles. In order to minimize the presence of non-functional or excessive masticatory forces, it is therefore necessary, in addition to a good quality connection, and a correct prosthesis. In this sense, we performed a clinical study, guided implantology, to determine the advantages of the method in inserting the implant in the correct three-dimensional position, from a prosthetic point of view, and we measured the insertion torque of all implants. The use of digital planning and surgical guidelines can increase success rates, once by minimizing possible intraoperative complications (damage to the vascular-nervous trunks, perforation of the cortex, etc.), but also by obtaining favorable prosthetic insertion axes. The most important conclusion is that the biological factor is decisive in the success or failure of implant therapy. Although all the studies presented above are relevant and have specific mechanical, technological or operator factors that significantly influence the outcome of these treatments, and the biology and immune system of the patient will ultimately contribute to the success and integration of the dental implant.

In the academic year **2018-2019**, 3 doctoral theses were defended, resulting in **10 scientific articles**.

Mihălcioiu Codruța Victoria researched the topic Ethical and deontological aspects in the clinical-radiological practice of dentistry, publishing **4 scientific articles**. The main findings included: A high percentage of doctors consider the effect of X-rays to be less harmful at low doses of radiation, however 35% consider the effects to be harmful, although most recommend dental radiography to each patient. The ethical and deontological aspects of informed consent represent a challenge for the doctor and the

patient, in the sense that over 50% of the responding patients did not sign such consent, and the doctors do not have enough time for anamnesis and preliminary discussion with the patient. There are statistically significant correlations between the level of patient preparation and the knowledge related to the radiological examinations recommended by the dentist. Most patients in the study group consider X-rays to be harmful and very harmful and should be avoided in children and pregnant women. It is recommended to develop a guide of conduct on the indications and types of radiological investigations recommended in dental practice, correlated with the age and diagnosis of each clinical case. The largest number of respondents belongs to doctors specializing in General Dentistry, who are in the largest percentage of the sample, who also have the highest rate of radiological indications, followed by orthodontists, who need complementary imaging examinations in all cases both for a correct diagnosis as well as for establishing an adequate therapeutic conduct. The indication for CBCT is well justified by most of the doctors surveyed, this being recommended only in certain clinical situations and in children over 12 years of age.

Savencu Cristina Elena approaches the topic Personal considerations regarding evaluations of metallic prosthetic restorations fabricated by additive cad / cam technologies, publishing **4 scientific articles**. The general conclusions included: 3D printing of resin models is a viable alternative to the traditional manufacture of wax models, being cost-effective, time-consuming and accurate, with the potential to completely replace conventional technology in a few years. Modern additive and subtractive technologies are a very good alternative to the fast and economical production of precise and durable models for conventional casting of dental alloys and ceramic pressing, compared to conventional wax models. New additive manufacturing technologies can provide excellent adaptive parts. Over-pressed pottery has not significantly influenced the marginal and internal void of restorations, regardless of the usual manufacturing method produces a frame. From the presented experiments, it can be concluded that computer milling produces frames with the highest biocompatibility, SLM processed Co-Cr alloy seems to induce a growing process apoptosis, while SLS processing seems to produce samples with similar biocompatibility with traditional casting. The differences in corrosion resistance of Co-Cr frames are the result of microstructure and morphology. Improvements can be achieved especially for SLS and SLM techniques by optimizing the method characteristics.

Lugojan Toma Simina (Boia) analyzes the topic Evaluation of oxidative stress in patients with periodontitis treated with systemic antibiotic therapy, publishing **2 scientific articles**. The final conclusions included:

Research on inflammatory biomarkers such as CRP in patients with chronic periodontitis has shown that its detectable values remained present in more patients in the placebo group than in the antibiotic group. In patients with chronic periodontitis who received periodontal therapy in combination with adjuvant antibiotic therapy, the status of

oxidative stress decreased from a very high to an average level 3 months after treatment, while the level of oxidative stress saliva measured by GSH decreased in both groups investigated. Non-surgical periodontal therapy administered in combination with a 7-day antibiotic regimen has been shown to be more effective in improving clinical parameters compared to a 3-day antibiotic regimen. The analysis of the variation of the detection frequency of the main periodontal-pathogenic bacteria (Aa and Td) also demonstrated a superior improvement with the antibiotic regime of 7 days.

In the academic year **2019-2020**, 3 doctoral theses were defended, resulting in **12 scientific articles**.

Bălean Octavia Iulia analyzed the topic Unconventional therapies for gingival tissue regeneration after bisphosphonate therapy, publishing **5 scientific articles**. The general conclusions included: When stimulating primary gingival fibroblasts with different types of bisphosphonates (Zolendronic Acid, Ossica, Fosamax, Actonel), it was observed that not all types have a cytotoxic effect on them. Bisphosphonates in tablet form (Fosamax, Actonel) showed cytotoxicity, in vitro, depending on the concentration (1.5, 2.5, 5 and 10 μM), on human gingival fibroblast cells. Of all the types of bisphosphonates tested, Actonel has the highest cytotoxicity, in vitro, in human primary gingival fibroblast cells. The application of the O3 solution on human gingival fibroblast cells, previously exposed for 24 hours to bisphosphonates, led to a significant increase in the percentage of viability and led to an improvement in their ability to recover. Stimulation, in vitro, of primary human gingival cells with ozonated solution, led to an increase in the regeneration potential of cells after the application of Actonel and Fosamax. Salvia officinalis essential oil has a protective role on human fibroblast cells previously stimulated with Fosamax and Actonel. The protective effect of the oil has a great significance in the treatment of osteonecrosis of the jaws secondary to the treatment with bisphosphonates.

Zaharia Cristian researched the thematic area Modern Concepts in Dental Adhesion, publishing **3 scientific articles**. The general conclusions included: the development of a new type of adhesive, by introducing ferro-magnetic nanoparticles in the base adhesive and their subsequent application in the sealing procedures of the grooves, pits and dimples of the teeth using a magnetic field, followed by imaging analysis. of teeth performed using digital light microscopy, the development of a new type of encapsulated magnetic adhesive and its application in procedures for restoring cavities on hard dental surfaces, following qualitative and quantitative analyzes of the thickness of the adhesive layer performed using X-ray dispersed energy spectrometry. Optical analyzes were performed with the help of scanning electron microscopy, but also with the help of digital optical microscopy. Making a new type of magnetic adhesive and applying it on the dental surfaces of the teeth using a magnetic field, calculating the inductance of the magnetic field applied on the hard dental surfaces and optically analyzing the samples using microcomputer tomography and digital microscopy. Analyzes of the thickness of the adhesive layers and their distribution in the surface were

performed after the three-dimensional imaging reconstruction of the samples, subsequently performing the chemical analysis of the content of these layers to validate the presence of ferromagnetic nanoparticles. Shear testing was performed to verify the strength of the adhesive interface of the samples.

Gabor Alin Gabriel deepened the topic Contributions to bone augmentation methods, publishing **4 scientific articles**. The research of the doctorand included the following conclusions: the described method, of making scaffolds by 3D printing, which involves the prior realization of the design of the future scaffold, leads to the realization of structures with an optimal marginal adaptation. In the study, the design of the future scaffold was made by two different methods, which led to the obtaining of two types of polymeric scaffolds, adequate in terms of marginal adaptation, at the level of bone defect.

At the interface between the samples and the cortex of the bone defect were determined, using optical microscopy, values between 0.2 mm and 0.5 mm, which represents the size of the interface, values that are optimal for a proliferation area of the revascular vessels, according mentioned in the literature. Another conclusion of this study is to recommend the use of CBCT to design the future scaffold, because it can be viewed in depth and we can establish an interior design of the samples, similar to natural bone. The design of the scaffold can be done with the help of CATIA software, both externally and especially internally, but being a more complex and difficult method for beginners. A number of two dental implants represents an optimal ratio between the treatment costs and its functionality, although with the increase of the number of dental implants the resistance of the scaffold-bone-implants complex increases, but the treatment also costs. We found, using the method of numerical simulations, that the forces are evenly distributed in the bone and scaffold if a number of two implants is used; it also provides good primary stability. Moreover, no significant differences in value were noticed between the samples with two implants and those with three implants, respectively the treatment plan with a single implant is not viable, having numerous deficiencies. In conclusion, the elaboration of the design and the number of stabilization implants must be carefully analyzed, for each case, using non-invasive methods (in the case of the thesis numerical simulation), to better control the biofunctionality of the bone / scaffold / implant / e complex. The ceramic scaffolds obtained meet, according to the literature, all morphological and structural criteria to be a viable alternative in bone augmentation procedures. The apparent porosity of the samples is between the values mentioned in the literature (50-90% porosity). The chemical composition of samples is stable even after the ceramics burn. The samples have a unique, dedicated structure, similar to that of natural bone, the samples having two distinct areas, an external one, which resembles the cortex of natural bone and an internal, porous one, similar to spongy bone. As a result of the experimental investigations of scanning electron microscopy and confocal microscopy with laser scanning we can conclude that the samples have a porous structure, with open pores, interconnected with each other, allowing the development in

the entire structure of the neoformation bone. Moreover, with the help of the same analysis, we can say that the pore size falls within the values mentioned in the literature and that the presence of micropores and macropores (150-900 μm) can be confirmed. Another characteristic identified by the previous analyzes is the superiority of the ceramic samples of its own composition, compared to the samples obtained from commercial ceramics, in terms of pore size (245-720 μm) and their distribution. Ceramic samples obtained from dentin-type and enamel-type ceramics are less porous, compared to those obtained from ceramics of their own composition. The porosity of the samples is also dependent on the polyurethane sponge used, the samples obtained on the sponge with the maximum density being more porous. Another conclusion derives from the evaluation performed by the OCT imaging technique, where similar values of pore dimensions were obtained with the values obtained following the application of the evaluation methods mentioned above, confirming the method described in this study. It can also be concluded that OCT imaging confirms the presence of the two distinct areas, the peripheral area with smaller pores (240 μm), and the median area, with larger pores (720 μm).

I.3. The functioning of the internal quality assurance system at the level of the doctoral university studies field - Dentistry

1.3. The field of doctoral university studies (objectives, mission, curricula, number of doctoral supervisors, evolution of the number of doctoral students and the number of doctors in the last 5 years, research centers / laboratories, main scientific achievements, etc.).

I.3 Functioning of the internal quality assurance system for the PhD studies – Dental Medicine.

1.3 PhD domain (objectives, mission, study plans, number of PhD supervisors, evolution of the PhD students numbers and number of PhD graduates in the past 5 years, research labs/centers, main scientific results, etc);

I.3.1 Objectives and general structure of the internal quality assurance system

Internal commission of quality verification:

Prof. Univ. Dr. Dehelean Cristina Adriana
Prof. Univ. Dr. Muntean Mirela - Danina
Prof. Univ. Dr. Tomescu Mirela Cleopatra
Prof. Univ. Dr. Sinescu Cosmin
Dr. Țogoe Marius Mihai – student-doctorand

As decided by CSUD (minute from the date ...) and H.S. Nr. 205/18470/18.12.2020 (Anex 6)

Main objectives to which this Commission is reporting to:

- a) Permanent implantation of the quality assurance system at CSD MD UMFVBT
- b) Elaboration and coordination of procedures and specific activities of internal quality assurance
- c) Making proposals of upgrading the didactic and research qualities inside of the PhD school
- d) Analyzing the quality of the PhD supervisors and students
- e) Cooperation with the Quality Assurance Commission at the level of CSUD UMFVBT
- f) Elaboration of specific data bases to follow the scientific activity of the PhD supervisors and students
- g) Applying evaluation questionnaires and other specific activities.

I.3.2 Quality assurance and defining procedures policies, beneficiary and their responsibilities

The institutional framework for monitoring the quality is assured through many structures, policies and objective strategies for the management of the quality of teaching activities – learning, research, administrative and auxiliary.

Inside our university is functioning the Quality Assurance Department, with duties like elaborating specific instruments for evaluating the didactic activities, applying these instruments, results analysis and writing the internal evaluation reports of the didactic activity.

Also, at the level of IOSUD it was created a Board to assure quality in the PhD research, and one of the components is a PhD student representative. It has the purpose to assure the consistency of the PhD research, raising the research quality through printing the interdisciplinary character, raising the degree of capitalization of the scientific results and development of the innovative capacity to generate new information and encouraging the obtaining of high impact research results.

The Board for the quality assurance in the PhD is proposing solutions and strategies to improve the quality of the PhD research and follows closely the quality standards and trans-institutional performance indicators in the medical-pharmaceutical domain in Romania and Europe.

The operational structures mentioned above, through their specific activities, contribute to the promotion of a pro-quality culture in the University.

Another factor of pro-quality promotion is the active implication in the quality assurance activities done by the CSD MD, of the PhD supervisors, teachers and

students. In this way it's created the awareness of the consequences of their own actions. In this sens, the Quality Assurance Department has implemented since 2013 the evaluation of the PhD classes, to which it has been added afterwards the evaluation from the PhD supervisors and lecturers. In this way, it has been consolidated a multidimensional evaluation of the PhD School, which is done every year and represents the basis for the permanent improvement of the CSD MD activity.

I.3.3 Personnel, students and external guests participation in the process of quality assurance

The evaluation of the PhD thesis and the abilitation thesis it's done at the level of IOSUD UMF "Victor Babes" from Timisoara, in a complex and objective manner. (See the abilitation and thesis presentation procedure). Evaluations are done from the local level by minimum of two teachers designated by the Director of the CSUD inside CSUD or CSD.

The research Ethic Commission Coordinator is also a teacher who teaches the class to the PhD students, this way we're making sure the students have all the necessary information from the beginning.

The commission for the quality assurance from inside CSUD – IOSUD of UMF "Victor Babes" Timisoara, has in its board also a PhD student. The external parties interested in the PhD activity may access the UMFVBT website at the section CSUD and can follow all the main steps of all PhD students and the solving of the eventual problems related to his activity. All the members of CSUD and CSD are involved in all the activities of the PhD school. The Administration Board and the UMFVBT Senate takes act or decides for all the important aspects of the PhD activity with transparency and fairness.

I.3.4 The interaction between the quality assurance system and University management

The quality assurance system interacts permanently with the management of the University reporting all the existing problems and applying the day to day regulations.

The administration Board, University Senate, but also the Quality Assurance Commission are in close relation with CSUD and the PhD School Councils from UMFVBT.

I.3.5 Transparency and access to information specific to internal quality assurance for the internal and external beneficiaries.

The PhD Dental Medicine school assures the transparency in the organization of the study programs. With all the logistic support of the IOSUD, it assures the online

posting of all necessary information regarding the study programs of the PhD schools, with main focus on the next categories:

- PhD school regulations
- Admission regulations
- Study finalization regulations, which also include the public thesis presentation
- Information regarding the organization of the PhD programs
- Information regarding the content of the PhD study programs
- Information regarding the finance of the studies, and all the other costs supported by the PhD student
- The model of the contract in PhD studies
- Information regarding the PhD thesis, the elaboration standards, procedures and criteria of their evaluation
- PhD thesis summaries which will be presented publicly, as well as the date, time and location, with at least 20 days before the presentation
- Information regarding the admission for the PhD studies of EU countries and the modality of matching the studies of the EU candidates
- Other information of interest for the PhD teachers and students, as a support for the research and writing the final thesis, counseling regarding the career, legislation specific to the research

Moreover, CSD_MD and CSUD comes to support the PhD students to get through the PhD program, by putting at their disposal a series of specific information regarding thesis writing like: the mandatory thesis format – writing instructions, tips for the PPT presentation poster, recommendations for the scientific articles writing and information related to funds accessing for the research, etc.

Our library has been modernized with the help of the University management, by creating a Multimedia room, very well equipped which offers the users – teachers, students, researchers and PhD students, a good environment for study and research. Here function a new brand of computers: Think Station, through them you can access all the publications that are in the library. You can also perform key words searches and advanced searches by a series of filters introduced by the researchers. These things are possible thanks to the two platforms that we owe: Liberty 5 and eBibliophil.

I.3.6 The efficiency of the procedures and structures of the internal quality assurance and their impact over the PhD study activities

Considering the fact that no thesis was completely rejected or the fact that there hasn't been accuses of fraud concerning our PhD school, we consider that all the data regarding the efficiency of the quality assurance activity have an absolute impact. The permanent monitoring at this level will assure the permanent improvement of the PhD school activity.

I.3.7 Utilization of the information produced by the internal quality assurance system, as an instrument for the quality management and for the improvement of the education and related activities

Information depicted from the analyses that come from the quality assurance Commission are and will be permanently analyzed and fast and objective measures will be implemented. The Commission has elaborated a set of urgent measures of evaluating the PhD and abilitation thesis, which has been applied, and in the present it's working at a set of measures in order to develop the international cooperation and the presentation of specific lectures by professionals (see the conferences for the PhD students in 2021)

I.3.8 Monitoring, evaluating and continuum development of the internal quality assurance system

The continuum development of the quality assurance system is a priority and will bring more benefits to SDMD. The Commission members work at a series of aspects including through application from FDI projects, which will assure the close and efficient monitoring the these aspects.

2. The information necessary for the assessment of the degree of fulfillment of the criteria, standards and performance indicators, provided in [annex no. 4](#) to the guide, accompanied by supporting documents accessible in electronic format

Performance indicators
<p>A.1.1.1. Existence of specific regulations and their application in the doctoral school of which the field of doctoral university studies is part of:</p> <ul style="list-style-type: none">a) the regulations of the doctoral school;b) the methodology for conducting the elections for the position of director of the Doctoral School Council (DSC), as well as the election by the students of the representative in the DSC and evidence of their development;c) methodologies for organizing and carrying out doctoral studies (for admitting doctoral students, completing doctoral studies);d) the existence of the mechanisms for recognizing the quality of the doctoral supervisor and for equivalence of the doctorate obtained in other states;e) functional management structures (Doctoral School Council), proving also the regularity of convening the meetings;f) the doctoral university contract;g) internal procedures for analysis and approval of proposals on the subject of the training program based on advanced university studies.

<p>A.1.1.2. The regulation of the doctoral school includes criteria, procedures and mandatory standards for the aspects specified in <u>art. 17 paragraph (5) of the Code of doctoral studies</u>, approved by <u>Government Decision no. 681/2011</u>, with subsequent amendments and completions.</p>
<p>A.1.2.1. Existence and effectiveness of an adequate computer system for the record of doctoral students and their academic career</p> <p>A.1.2.2. Existence and use of an appropriate computer program and evidence of its use to verify the percentage of similarity in all doctoral theses</p>
<p>A.1.3.1. The existence of at least one research or institutional development / human resources grant in implementation at the time of submitting the internal evaluation file, for the analyzed doctoral university field, or the existence, within the field, of at least 2 research or development grants institutional development / human resources obtained by doctoral supervisors from the field evaluated in the past 5 years. The grants address relevant topics to the studied field and, regularly, are carried out with the involvement of doctoral students.</p> <p>*A.1.3.2. The percentage of doctoral students existing at the time of evaluation who benefit, for at least 6 months, from sources of funding other than government funding, through scholarships granted by individuals or legal entities, or are financially supported by research or institutional development grants / human resources is of at least 20%.</p> <p>* A.1.3.3. At least 10% of the total amounts related to doctoral grants obtained by the university through institutional contract and tuition fees collected from doctoral students, from the form of paid education, are used to finance the training expenses of doctoral students (participation in conferences, summer schools, classes, internships abroad, publication of specialized articles or other specific forms of dissemination, etc.).</p>
<p>A.2.1.1. The facilities and the material endowment of the doctoral school allow the accomplishment of the research activities, in the evaluated field, in accordance with the assumed mission and objectives (computers, specific software, apparatus, laboratory equipment, library, access to international databases, etc.). The research infrastructure and the offer of research services are presented publicly through a profile platform. It will be highlighted, distinctly, the research infrastructure described above, acquired and developed in the last 5 years.</p>
<p>A.3.1.1. At least 3 doctoral supervisors within the doctoral field are currently working and at least 50% of them (but not less than 3) meet the minimum standards of CNATDCU in place at the time of evaluation, necessary and mandatory to obtain the certificate of qualification.</p>

<p>* A.3.1.2. At least 50% of the doctoral supervisors in the evaluated doctoral field are holders within IOSUD, employed with the conclusion of an employment contract for an indefinite period.</p> <p>A.3.1.3. The disciplines in the training program based on advanced university studies related to the field are supported by teachers or researchers who have the quality of doctoral / qualified supervisor, professor / CS I or associate professor / CS II with proven expertise in the field of taught subjects or other specialists in field that meet the standards established by the institution for the teaching and research functions mentioned above, in accordance with the law.</p>
<p>*A.3.1.4. The percentage of doctoral supervisors who coordinate more than 8 doctoral students at the same time, but not more than 12, during their doctoral studies ^ 1, does not exceed 20%.</p>
<p>A.3.2.1. At least 50% of the doctoral supervisors in the field under assessment present at least 5 indexed publications Web of Science or ERIH in journals with impact factor or other achievements with relevant semnification for the specific field, in which there are international contributions that reveal a progress in the scientific research-development-innovation for the evaluated field. The mentioned doctoral supervisors have international profile in the last 5 years, consisting in: the quality of member in the scientific committees of the international publications and conferences; membership in the boards of international professional associations; the quality of a guest at conferences or groups of experts held abroad or the quality of a member of commissions for the defense of doctoral theses at foreign universities or in co-supervision with a foreign university.</p> <p>* A.3.2.2. At least 50% of the doctoral supervisors assigned to a field of doctoral studies continue to be scientifically active, obtaining at least 25% of the score required by the minimum CNATDCU standards in place at the date of evaluation, necessary and mandatory criteria for obtaining the qualification certificate based on the scientific results from the last 5 years.</p>
<p>*B.1.1.1. The ratio between the number of master's degree graduates of other higher education institutions in the country or abroad who have registered for the competition for admission to doctoral studies in the last 5 years and the number of places financed from the state budget put up for competition in the field of doctoral studies is at least 0.2 or the ratio between the number of candidates in the last five years and the number of places financed from the state budget put up for competition in the field of doctoral studies is at least 1.2.</p>
<p>*B.1.2.1. Admission to doctoral study programs is based on selection criteria that include: the academic, research and professional performance of the</p>

candidates, their interest in scientific or artistic / sports research, publications in the field and a research topic proposal. An interview with the applicant is a mandatory part of the admission procedure.

B.1.2.2. The expulsion rate of doctoral students, including after dropping out of studies, at 3, respectively 4 years after admission ^ 2, does not exceed 30%.

B.2.1.1. The training program based on advanced university studies includes at least 3 disciplines relevant for the training of scientific students in scientific research, of which at least one discipline is intended for the in-depth study of research methodology and / or statistical data processing.

B.2.1.2. There is at least one discipline dedicated to ethics in scientific research and well-defined intellectual or thematic property on these topics within a discipline taught in the training program.

B.2.1.3. IOSUD has created mechanisms to ensure that the training program based on advanced university studies, related to the evaluated field, aims at "learning outcomes", specifying the knowledge, skills and responsibility and autonomy that doctoral students should acquire after completing each discipline or through research activities ^ 3.

B.2.1.4. Throughout the doctoral training period, doctoral students in the field benefit from the counseling / guidance of functional guidance commissions, an aspect reflected by guidance and points of view expressed in writing or regular meetings.

B.2.1.5. For a field of doctoral studies, the ratio between the number of doctoral students and the total number of teachers / researchers providing guidance should not exceed 3: 1.

B.3.1.1. For the evaluated field there is at least one article or other relevant contribution per doctoral student who has obtained the title of doctor in the last 5 years. The members of the evaluation commission select for analysis, randomly, 5 relevant articles / contributions in the field of doctoral studies. At least 3 of the selected articles should present significant original contributions in the investigated field.

* **B.3.1.2.** The ratio between the number of presentations of doctoral students who completed their doctoral studies in the evaluated period (last 5 years), including posters, exhibitions, made at prestigious international events (held in the country or abroad), and the number of students PhD students who have completed their doctoral studies in the evaluated period (last 5 years) is at least equal to 1.

* **B.3.2.1.** The number of doctoral theses assigned to a certain referent coming from a higher education institution, other than the evaluated IOSUD,

must not exceed two (2) for the theses coordinated by the same doctoral supervisor in one year.

* **B.3.2.2.** The ratio between the number of doctoral theses assigned to a certain scientific referent from another higher education institution than the one in which the doctoral thesis is organized and the number of doctoral theses defended in the same field of doctoral studies within the doctoral school must not be greater than 0.3, by reference to the situation recorded in the last 5 years. It is analyzed only if in the evaluated doctoral field at least 10 doctoral theses have been defended in the last 5 years.

C.1.1.1. The doctoral school in which the doctoral university field qualifies proofs constant development in the process of evaluation and internal quality assurance in accordance with a procedure developed and applied at IOSUD level, among the mandatory evaluation criteria:

- a) the scientific activity of the doctoral supervisors;
- b) the infrastructure and logistics necessary for supporting the research activity;
- c) the regulations and procedures based on which the doctoral studies are organized;
- d) the scientific activity of doctoral students;
- e) the training program based on advanced university studies of doctoral students;
- f) social and academic support services (including participation in various events, publication of articles, etc.) and counseling provided to doctoral students.

* **C.1.1.2.** During the doctoral training internship, evaluation mechanisms are implemented aiming to identify the needs, as well as the general level of satisfaction with the doctoral studies program of the phd students, in order to continuously improve the academic and administrative processes. Following the analysis of the obtained results, a plan of measures will be elaborated and implemented.

C.2.1.1. IOSUD publishes on the website of the higher education institution, in compliance with the regulations in place regarding data protection, information such as:

- a) the regulations of the doctoral school;
- b) the acceptance rules;
- c) the doctoral studies contract;
- d) the regulation for completing the studies, including the procedure for public defense of the thesis;
- e) the content of training programs based on advanced university studies;

f) the academic and scientific profile, the thematic areas / research topics of the doctoral supervisors in the field, as well as their institutional contact data;
g) the list of doctoral students in the field with the basic information (year of registration, leader);
h) information about the standards for the elaboration of the doctoral thesis;
i) links to the summaries of the doctoral theses to be defended publicly, as well as the date, time, place where they will be defended, at least 20 days before the defense.

C.2.2.1. All PhD students have free access to a platform with academic databases relevant to their study field.

C.2.2.2. Each doctoral student has access, upon request, to an electronic system which verifies the degree of similarity with other existing scientific or artistic creations.

C.2.2.3. All doctoral students have access to scientific research laboratories or other facilities, depending on the specifics of the field / fields within the doctoral school, according to internal regulations.

A1

A.1.1.1. Existence of specific regulations and their application in the doctoral school of which the field of doctoral university studies is part of:

The activity of the Doctoral School of Dentistry within IOSUD, “Victor Babeș” University of Medicine and Pharmacy from Timișoara is regulated by the following documents:

A.1.1.1.a) Regulation of the Doctoral Schools within the University of Medicine and Pharmacy “Victor Babeș” University of Medicine and Pharmacy from Timișoara
<https://www.umft.ro/reglementari-interne-csud/>

A.1.1.1.b) The methodology for conducting the elections for the position of director of the Doctoral School Council (DSC), as well as the election of the students representative in the DSC and evidence of their development;

<https://www.umft.ro/reglementari-interne-csud/>

Election proof within DSC:

<https://www.umft.ro/alegeri-csd-2021/>

A.1.1.1.c) Methodologies for organizing and conducting doctoral studies (admission of doctoral students, completion of doctoral studies);

- Admission methodology of doctoral students

<https://www.umft.ro/wp-content/uploads/2021/04/1.-Metodologia-privind-organizarea-admiterii-in-ciclurile-universitare-de-doctorat.pdf>

- Methodology for completing doctoral studies

<https://www.umft.ro/reglementari-interne-csud/>

- Procedure regarding the recognition of the doctoral degree and of the title of doctor in sciences obtained abroad by the “Victor Babeș” University of Medicine and Pharmacy from Timișoara <https://www.umft.ro/reglementari-interne-csud/>

- The procedure regarding the automatic recognition of the qualification of doctoral supervisor / habilitation obtained in university educational institutions accredited from abroad by the “Victor Babeș” University of Medicine and Pharmacy from Timișoara <https://www.umft.ro/reglementari-interne-csud/>
http://old.umft.ro/proceduri-pcue_877

- The methodology regarding the organization of the admission exam for doctoral studies within the “Victor Babeș” University of Medicine and Pharmacy from Timișoara 2021-2022

<https://www.umft.ro/wp-content/uploads/2021/04/1.-Metodologia-privind-organizarea-admiterii-in-ciclurile-universitare-de-doctorat.pdf>

- Methodology for completing doctoral studies at the "Victor Babeș" University of Medicine and Pharmacy in Timișoara

<https://www.umft.ro/reglementari-interne-csud/>

- Example of a study contract within the Doctoral University Studies
http://old.umft.ro/reglementari-cu-privire-la-studiile-doctorale_120

- Functional management structures (Doctoral School Council), proving also the regularity of convening meetings;

Council of the Doctoral School of Dentistry

Currently, the Council of the Doctoral School of Dentistry consists of the following members, according to the Decision of the Senate UMFVBT Nr. 151/8890 / 28.04.2021, ([Annex 12](#)):

Prof. Univ. Dr. Sinescu Cosmin - Director

Prof. Univ. Dr. Popovici Ramona Amina - member

Prof. Univ. Dr. Jumanca Daniela - member

Prof. Univ. Dr. Romînu Mihai - member

Prof. Univ. Dr. Marşavina Liviu, Universitatea Politehnica Timișoara - member

Balica Andreea Gabriela, PhD student– member elected by vote

Neagu Carina Sonia, PhD student – member elected by vote

https://www.umft.ro/facultati/csud/csud_componenta-csud-si-descriere/

- *Model of the framework Contract for Doctoral University Studies*
<http://old.umft.ro/reglementari-cu-privire-la-studiile-doctorale> 120

A.1.1.2. The regulation of the doctoral school includes criteria, procedures and mandatory standards for the aspects specified in art. 17 paragraph (5) of the Code of doctoral studies, approved by Government Decision no. 681/2011, with subsequent amendments and completions.

The Regulation of the Doctoral Schools within IOSUD UMF “Victor Babeș” from Timișoara, includes criteria, procedures and mandatory standards for the aspects specified in art. 17, para. 5 of GD 681/2011:

- in Chapter IV, art. 6 (1), respectively in Chapter IV, art. 11 of the doctoral school are references to the acceptance criteria of new doctoral supervisor members as well as regulations regarding the manner in which a doctoral supervisor may be revoked from the doctoral school.
- in Chapter VI, art.23 (1,2,3) respectively art.24 references to the mechanisms through which decisions are taken regarding the opportunity, structure and content of the training program based on advanced university studies.
- In Chapter IV, art.8 (1,2,3) references to the procedures for changing the doctoral supervisor of a certain doctoral student and the procedures for mediating conflicts.
- Chapter II, art. 4 (9) references to the conditions under which the doctoral program may be interrupted.
- Chapter VI, art. 36 (1,2) references to ways to prevent fraud in scientific research including plagiarism.
- In Chapter V, art. 25 (1,2,3,4) references to the provision of research resources.
- In Chapter VI, art. 19 references to the attendance obligations of doctoral students according to a methodology developed by the Ministry of Education, Research, Youth and Sports.

Due to the fact that the regulation of the doctoral schools analyzed includes the mandatory aspects mentioned above, the indicator is considered fulfilled.

A.1.2.1. Existence and effectiveness of an adequate computer system for the record of doctoral students and their academic career

Currently within the Doctoral School of Dentistry, the record of doctoral students and their academic background is made through the excel database available at the secretariat of doctoral schools.

A.1.2.2. Existence and use of an appropriate computer program and evidence of its use to verify the percentage of similarity in all doctoral thesis

To ensure quality scientific research, the university has purchased software to detect plagiarism (www.sistemantiplagiat.ro), available to the entire academic community. All doctoral theses defended within IOSUD are subject to anti-plagiarism evaluation. For each verified paper, the software generates a Similarity Report indicating the values of coefficients 1 and 2, being then analyzed by the doctoral supervisor, who prepares the resolution on acceptance for the presentation of the doctoral thesis before the guidance committee. According to article 36 paragraph (2) of the Regulations of the Doctoral School within IOSUD UMF "Victor Babes" Timisoara, the thesis is submitted to the Doctoral School only if it has attached the anti-plagiarism evaluation form and the agreement of the ethics commission for conducting studies, where applicable.

For each verified work, a similarity report is generated in the www.sistemantiplagiat.ro platform. The system operator must examine the similarity ratio in terms of the occurrence of unauthorized loans in the work, especially consisting of the following:

- a. Similarity coefficient 1 does not exceed 50%
- b. Similarity coefficient 2 does not exceed 5%
- c. presence of unauthorized similarities ("alert")

Based on the analysis of the similarity report, the system operator will prepare, within 48 hours, "the originalty control report of the work".

For access to the internet service Sistemantiplagiat.ro, the "Victor Babeş" University of Medicine and Pharmacy from Timișoara, renewed the contract with Nr. 1017 of 30.03.2021 ([Annex 13](#)).

A.1.3.1. The existence of at least one research or institutional development / human resources grant in implementation at the time of submitting the internal evaluation file, for the analyzed doctoral university field, or the

existence, within the field, of at least 2 research or institutional development grants / human resources, obtained by doctoral supervisors evaluated in the past 5 years. The grants address relevant topics within the research field and, they are mandatory conducted by doctoral students.

In Dentistry field, at the time of submitting the accreditation file, there is at least 1 research grant in progress and at least 14 research / institutional development / human resources grants already implemented. ([Annex 14](#))

Nr. crt	PhD supervisor	At least 2 research or institutional development grants / human resources per field of doctoral studies obtained by doctoral supervisors in the field, evaluated in the last 5 years 2016-2021	Existence of at least one research or institutional development grant / human resources in implementation at the time of submitting the self-assessment file, in every field of doctoral studies
1.	Prof. Univ. Dr. Gălușcan Atena	<p>Research project director</p> <p>1. European Training Platform for Continuing Professional Development of dental Hygienists (EuHyDens) Contract: 2015-1-SE01-KA-012278/25-06-2015 duration (2015-2018) contract value 421 290 Euro National Partner Director in International Project UMFVBT affiliation</p> <p>Project member</p> <p>1. LAURA CRISTINA RUSU, ATENA GALUSCAN, -Formulări de avangardă pe bază de eugenol nanocapsulat cu adresabilitate în medicina dentară- PN-III-P2.2.1 BG-2016-0455 contr. 122 BG/03.10.2016 NANOEUUCAPS</p>	-
2.	Prof. Univ. Dr.	- Research project director	

	Jivănescu Anca	Oral health and complications in patients with diabetes. Strategic Collaborative Initiative/. UMFVBT Global Research, 50 Education, and Collaboration for Health University of Michigan-U033735, perioada 2014-2017 , Acronim Global REACH, UMFVBT affiliation	
3.	Prof. Univ. Dr. Jumanca Daniela Elisabeta	Project member 1.European Training Platform for Continuing Professional Development of dental Hygienists (EuHyDens) Contract: 2015-1-SE01-KA-012278/25-06-2015 duration (2015-2018) contract value 421 290 Euro National Partner Director in International Project UMFVBT affiliation 2. LAURA CRISTINA RUSU, ATENA GALUSCAN, -Formulări de avangardă pe bază de eugenol nanocapsulat cu adresabilitate în medicina dentară- PN-III-P2.2.1 BG-2016-0455 contr. 122 BG/03.10.2016 NANOEUCAPS	-
4.	Prof. Univ. Dr. Podariu Angela Codruța	- Project member 1.European Training Platform for Continuing Professional Development of dental Hygienists (EuHyDens) Contract: 2015-1-SE01-KA-012278/25-06-2015 duration (2015-2018) contract value 421 290 Euro National Partner Director in International Project UMFVBT affiliation	
5.	Prof. Univ. Dr.	Research project director	-

	<p>Popovici Ramona- Amina</p>	<p>1. Aspecte fundamentale inovative privind identificarea de ținte profilactice și curative la nivelul cavității orale și testarea <i>in vitro</i> oși <i>in vivo</i> a unui spectru adaptat de extracte naturale", MUCODENTOSAN - P III-C4-PCFI-2016/2017-04 Grant nr 1121/01.02.2016</p> <p>2. „Valoarea prognostică și terapeutică ținută a profilului molecular al leziunilor precanceroase și a carcinoamelor scuamocelulare ale capului și gâtului" HEADMOLNECK"- PIII-C1-PCFI-2014/2015-02</p> <p>Project member</p> <p>1. Formulări pe bază de betulinășinanoparticule de aurîncombatereaprocesului de îmbătrânire a pielii"BETGOSKIN"- PN-III- P2-2.1.-B.G.-2016-0354</p> <p>2. „Studiu de cercetare in vivo privinddefectulprodusuluiNewBioTIdent asupraplagilorextracționale de pe mucoasaorala la animalele de laborator". Grant nr 14 621/13.11.2015</p> <p>3. Training Platform for Continuing Professional Development of dental Hygenists (EuHyDens) SECTIUNEA KA2 Contract 2015-1-SEO1-KA-012278/25-06-2015</p> <p>4. "Ergonomie, Prevențieși Management performant înmedicinadentarăprinaliniere la standardeeuropene" „ Proiectcofinantat din fondul social European prinProgramulOperațional Sectorial</p>	
--	---------------------------------------	---	--

		Dezvoltarea Resurselor Umane 2007-2013" „Investeste in oameni” 5. Membru în colectivul de cercetare al proiectului "Prevenirea și managementul situațiilor de malpraxis" „Proiect cofinanțat din fondul social European prin Programul Operațional Sectorial Dezvoltarea Resurselor Umane 2007-2013” „Investeste in oameni”	
6.	Prof. Univ. Dr. Porojan Liliana	-	-
7.	Prof. Univ. Dr. Rominu Mihai	-	-
8.	Prof. Univ. Dr. Stratul Ștefan-Ioan	Research project director 1. Grant intern, Microlaborator pentru procesarea biopsiilor de tesuturi nedemineralizate și a preparatelor complexe os-metal-tesuturi moi din implantologia orală Durotom. Competiția internă UMF Victor Babes Timisoara în cadrul programului Dezvoltarea capacităților în cercetarea fundamentală și aplicativă IV-CI-PDCC-2015/2016, contract 7199/01.07.2015 Project member 1. Grant intern, Fundamentări inovative și aplicative ale tomografiei optice coerente în medicina dentară. Validări experimentale alternative DENTALOCT. Competiția internă UMF Victor Babes Timisoara în cadrul	-

		<p>programului Parteneriate in Cercetarea Fundamentala Inovativa – III-C2-PCFI-2015/2016</p> <p>2. Medical Infrastructure for the Development of Excellence Surgical Services in the Cross-border Area. Proiect in cadrul Programului Interreg-IPA de Cooperare Transfrontalieră România-Serbia finanțat de UE.</p>	
9.	Prof. Univ. Dr. Sinescu Cosmin		<p>Research project member:</p> <p>Optical Coherence Tomography for Non-Destructive Testing in Industry (OCT4NDT)</p> <p>PN-III-P2-2.1-PED-2019-4423</p> <p>Contract 418 / 26.10.2020</p> <p>Acronym: OCT4NDT</p> <p>October 26th, 2020 – October 25th, 2022</p> <p>People PED Project 4423 3OM Group PED Project 44233OM</p> <p>Optomechatronics Group Principal Investigator Prof. Dr.-habil. Virgil-Florin Duma Senior Researchers Dr. Gh...</p>

***A.1.3.2.** The percentage of doctoral students existing at the time of evaluation who benefit, for at least 6 months, from sources of funding other than government funding, through scholarships granted by individuals or legal entities, or are financially supported by research or institutional development grants / human resources is of at least 20%.

For the evaluation period we can mention: ([Annex 30](#))

1. Hategan Simona (mobility grant PN-III-P1-1.1-MC2018-2489.)([Annex 29](#) - 1, 2, 3);
2. Gavrilovici Andrei Mihai (contract Dubna 2019) ([Annex 29](#) - 1);
3. Gabor Alin Gabriel (collaboration started with Biotek Company) ([Annex 29](#));
4. Gabor Alin Gabriel (collaboration started with NTU Norway) (**FDI 2018** - proiect ID: **CNFIS-FDI-2018-0459**) ([Annex 29](#));
5. Zaharia Cristian (collaboration started with NTU Norway) (**FDI 2018** - proiect ID: **CNFIS-FDI-2018-0459**) ([Annex 29](#));
6. Cojocariu Andreea Codruta (collaboration started with NTU Norway) (**FDI 2018** - proiect ID: **CNFIS-FDI-2018-0459**) ([Annex 29](#));

For the DOCTORAL STUDENTS competition, 16 applications were submitted ([Annex 29](#)).

C.S.D. Dentistry informs C.S.U.D. which awards scholarships of excellence to doctoral students with special merits in scientific research (publications in extenso in journals rated ISI with an impact factor over 1, oral presentations or posters at the Scientific Sessions of the Doctoral School). The travel and accommodation of the referents from the commissions of the doctoral / habilitation theses are settled according to the law, based on the proving documents. The payment of the fee for the publication of scientific articles is made with the approval of the Vice-Rectorate for Scientific Research based on the report of necessity. In order to settle the participation, travel and accommodation fees for scientific events, doctoral students must present proof of acceptance of the abstract of the paper presented orally or as a poster ([Annex 29](#)).

UMF Victor Babes from Timisoara plans to start the procedure for supporting internal grants for young doctoral students from the budget allocated to CSUD, for the academic year 2021-2022, doctoral students in years II-IV of study. CSUD proposes the allocation of a 5000 euros fund per project and a number of 10 projects with an active period of 1 year starting from the signing of the contract. Among these 10 projects, 2 (two) will also include the possibility of paying the doctoral tuition fee to disadvantaged people. If the two places are not occupied, they will be redistributed. The expenses within these projects refer mainly to the logistics expenses, but details related to them will be presented in the methodology and procedure of the competition.

* **A.1.3.3.** At least 10% of the total amounts related to doctoral grants obtained by the university through institutional contract and tuition fees collected from doctoral students, from the form of paid education, are used to finance the training expenses of doctoral students (participation in

conferences, summer schools, classes, internships abroad, publication of specialized articles or other specific forms of dissemination, etc.).

IOSUD - UMFVBT motivates doctoral students through programs that provide them with certain facilities such as the payment of the tax of articles granted by the UMFVBT Senate Decision no. 24/7135 / 24.06.2020, ([annex 15](#))

The University Senate approves the following cases regarding the payment / statement of publication fees in ISI indexed journals, as follows:

- IF 0.5-0.99 = max 500 euro
- IF 1-1.99 = max 1500 euro
- IF 2-2.99 = max 2000 euro
- IF 3-3.99 = max 2500 euro
- IF 4-5.99 = max 3000 euro
- IF 6-7.99 = max 4000 euro
- IF 8-10 = max 5000 euro
- IF > 10 = limited at 8000 euro

A.2

A.2.1.1. The facilities and the material endowment of the doctoral school allow the accomplishment of the research activities, in the evaluated field, in accordance with the assumed mission and objectives (computers, specific software, apparatus, laboratory equipment, library, access to international databases, etc.). The research infrastructure and the offer of research services are presented publicly through a profile platform. It will be highlighted, distinctly, the research infrastructure described above, acquired and developed in the last 5 years.

Spaces and the material endowment of the doctoral school allow the realization of the research activities in the field of Dentistry:

PhD supervisor	Medical facilities and equipment (computers, specific software, equipment, laboratory equipment, library. Access to international databases, etc.)
Prof. Univ. Dr. Gălușcan Atena	<ul style="list-style-type: none">- 11 dental units- 2 computers- generator ozon gazos HalOzone model X4 Kavo- Diagnodent

Prof. Univ. Dr. Jivănescu Anca	<ul style="list-style-type: none"> -4 cabinets each equipped with 5 dental units, 3 sterilization devices (autoclave) -a Phantom laboratory with 24 work units, a complete CAD / CAM system from Planmeca FIT, - a 3D printer (Prussa SL), - a dental incubator (Ivoclar), - an Eye Special C3 digital camera (Shofu) - an HP laptop (6 years old)
Prof. Univ. Dr. Jumanca Daniela Elisabeta	<ul style="list-style-type: none"> - 11 dental units - 2 computers - generator ozon gazos HalOzone model X4 Kavo - Diagnodent
Prof. Univ. Dr. Meda Lavinia Negrutiu	EP 5000 Ivoclar Vivadent Programmed Ceramic Oven, Zubler Combi Furnace for Welding and Pressing, WIELAND 3Shape D-250 i-mes Scanner, Orion 150s Micro-Welding Machine, APOLLO DI Sirona Intraoral Scanner, OCT Time Domain System, OCT Spectral Domain System , SYNCRISTALLIZING ARGON WELDING SYSTEM, Metallographic microscope, Digital microscope, Mecmesin Emperor i-5 - using an associated software (Emperor) - AT THE HEADQUARTERS OF THE DEPARTMENT OF PROPEDEUTICS AND DENTAL MATERIALS
Prof. Univ. Dr. Porojan Liliana	The area of the Discipline of Dental Prosthesis Technology Computers, Acces to international databases Equipments available at A.1.16.3
Prof. Univ. Dr. Romînu Mihai	EP 5000 Ivoclar Vivadent Programmed Ceramic Oven, Zubler Combi Furnace for Welding and Pressing, WIELAND 3Shape D-250 i-mes Scanner, Orion 150s Micro-Welding Machine, APOLLO DI Sirona Intraoral Scanner, OCT Time Domain System, OCT Spectral Domain System , SYNCRISTALLIZING ARGON WELDING SYSTEM, Metallographic microscope, Digital microscope, Mecmesin Emperor i-5 - using an associated software (Emperor) - AT THE HEADQUARTERS OF THE DEPARTMENT OF PROPEDEUTICS AND DENTAL MATERIALS
Prof. Univ. Dr. Stratul Ștefan-Ioan	high capacity color printer 1 pc, black and white laser printer 2 pcs, medium capacity color multifunction printer, desktop computing units 4 pcs, laptops 5 pcs, large and high resolution monitor 3 pcs, small monitor 3 pcs pcs, dental unit 10 pieces, dental operator microscope 3, complex cart equipped with equipment for high performance endodontics 2 pcs, complex cart airflow prophylaxis master EMS 1

	pcs, melag autoclave 1 pcs, melag instrumental washing machine 1 pcs. PhD students have access to 2 specialized journals (JCLinPerio, JOP), to which the subscription is paid from the guidance team's own funds.
Prof. Univ. Dr. Cosmin Sinescu	Mecmesin Emperor i-5 – using an associated software (Emperor)
	EP 5000 Ivoclar Vivadent Programmed Ceramic Oven
	Zubler Combi Furnace for Welding and Pressing
	Scanner i-mes WIELAND 3Shape D-250
	Orion 150s Micro-Welding Machine
	Scanner intraoral APOLLO DI Sirona
	OCT Time Domain system
	OCT Spectral Domain system
	SYNCRISTALLIZING ARGON WELDING SYSTEM
	Metallographic microscope

A.3

A.3.1. Each field consists in qualified staff with the necessary experience to carry out the doctoral university study program.

A.3.1.1. At least 3 doctoral supervisors within the doctoral field are currently working and at least 50% of them (but not less than 3) meet the minimum standards of CNATDCU in place at the time of evaluation, necessary and mandatory to obtain the certificate of qualification.

Name and surname	O.M. – by which the title of doctoral supervisor / habilitation / recognition decision was conferred	Meets CNATDCU minimum standards
1. Negruțiu Meda Lavinia	4898/18.08.2015 Dental Medicine	YES
2. Sinescu Cosmin	4897/18.08.2015 Dental Medicine	YES
3. Romînu Mihai	479/05.03.2007 Dental Medicine	YES

4. Podariu Angela-Codruța	479/05.03.2007 Dental Medicine	YES
5. Popovici Ramona Amina	4404/19.07.2017 Dental Medicine	YES
6. Rusu Laura-Cristina	4405/19.07.2017 Dental Medicine	YES
7. Jumanca Daniela	5773/27.12.2017 Dental Medicine	YES
8. Gălușcan Atena	5753/27.12.2017 Dental Medicine	YES
9. Porojan Liliana	4885/11.08.2016 Dental Medicine	YES
10. Stratul Ștefan	3291/02.03.2016 Dental Medicine	YES
11. Todea Darinca Carmen	479/05.03.2007 Dental Medicine	YES
12. Jivănescu Anca	4643/30.07.2019 Dental Medicine	YES
13. Oancea Roxana	6351/22.12.2020 Dental Medicine	YES
14. Szuhanek Camelia Alexandrina	4077/09.04.2020 Dental Medicine	YES

* **A.3.1.2.** At least 50% of the doctoral supervisors in the evaluated doctoral field are holders within IOSUD, employed with the conclusion of an employment contract for an indefinite period.

According to art. 166 paragraph (3) of Law 1/2011, in order to conduct doctorates, teachers and researchers who have acquired this right must have an employment contract with an IOSUD or an institution that is a member of an IOSUD and be a member of a school doctoral degree. Qualified teachers and researchers and qualified scientific researchers become doctoral supervisors following the qualification.

The teachers who have concluded an employment contract for an indefinite period with IOSUD -UMF "Victor Babeș" Timișoara in the field of Dentistry are 14, respectively 100% are holders of IOSUD UMFVBT. ([Annex 16](#))

Year	March 2021
Dental Medicine	
Total of PhD supervisors	14

A.3.1.3. The disciplines in the training program based on advanced university studies related to the field are supported by teachers or researchers who have the quality of doctoral / qualified supervisor, professor / CS I or associate professor / CS II with proven expertise in the field of taught subjects or other specialists in field that meet the standards established by the institution for the teaching and research functions mentioned above, in accordance with the law.

The disciplines included in the training program of the Doctoral School of Dentistry based on advanced university studies are performed by teachers, doctoral supervisors, who meet the minimum necessary and mandatory standards for obtaining the certificate of qualification.

* **A.3.1.4.** The share of doctoral supervisors who coordinate more than 8 doctoral students at the same time, but not more than 12, during their doctoral studies 1, does not exceed 20%.

According to H.S. Nr. 11/17694 / 28.11.2018 ([Annex 17](#)), the number of doctoral students who can be guided at the same time by a doctoral supervisor is maximum 8. Between 2016 and March 2021, 14 PhD supervisors work in the doctoral field (quality obtained according to the law) and no doctoral supervisor coordinates more than 8 doctoral students.

Dental Medicine Domain

Nr.	Name and surname of the PhD Supervisor	The order of the minister by which it was confirmed and the doctoral field in which it was confirmed	Nr. PhD Students
1	Prof. Univ. Dr. Gălușcan Atena	5753/27.12.2017 Dental Medicine	8
2	Prof. Univ. Dr. Jivănescu Anca	4643/30.07.2019 Dental Medicine	5

3	Prof. Univ. Dr. Jumanca Daniela Elisabeta	5773/27.12.2017 Medicine	Dental	6
4	Prof. Univ. Dr. Negruțiu Meda Lavinia	4898/18.08.2015 Medicine	Dental	8
5	Prof. Univ. Dr. Oancea Roxana	6351/22.12.2020 Medicine	Dental	0
6	Prof. Univ. Dr. Podariu Angela Codruța**	479/05.03.2007 Medicine	Dental	5
7	Prof. Univ. Dr. Popovici Ramona Amina	4404/19.07.2017 Medicine	Dental	8
8	Prof. Univ. Dr. Porojan Liliana	4885/11.08.2016 Medicine	Dental	7
9	Prof. Univ. Dr. Romînu Mihai	479/05.03.2007 Medicine	Dental	5
10	Prof. Univ. Dr. Rusu Laura Cristina	4405/19.07.2017 Medicine	Dental	7
11	Prof. Univ. Dr. Sinescu Cosmin	4897/18.08.2015 Medicine	Dental	8
12	Prof. Univ. Dr. Szuhanek Camelia Alexandrina	4077/09.04.2020 Medicine	Dental	4
13	Prof. Univ. Dr. Stratul Ștefan Ioan	3291/02.03.2016 Medicine	Dental	7
14	Prof. Univ. Dr. Todea Darinca Carmen Marilena**	479/05.03.2007 Medicine	Dental	8

A.3.2.1. At least 50% of the doctoral supervisors in the field under assessment present at least 5 indexed publications Web of Science or ERIH in journals with impact factor or other achievements with relevant semnification for the specific field, in which there are international contributions that reveal a progress in the scientific research-development-innovation for the evaluated field. The mentioned doctoral supervisors have international profile in the last 5 years, consisting in: the quality of member in the scientific committees of the international publications and conferences; membership in the boards of international professional associations; the quality of a guest at conferences or groups of experts held abroad or the quality of a member of commissions for the defense of doctoral theses at foreign universities or in co-supervision with a foreign university.

All PhD supervisors in the field of Dentistry carry out an internationally visible scientific activity: they present indexed publications Web of Science in journals with impact factor with relevant relevance for the field of Dentistry ([Annex 25](#)) and have an international visibility in the last five years.

** **A.3.2.2.** At least 50% of the doctoral supervisors assigned to a field of doctoral studies continue to be scientifically active, obtaining at least 25% of the score required by the minimum CNATDCU standards in place at the date of evaluation, necessary and mandatory for obtaining the qualification certificate, which is based on the scientific results from the last 5 years.*

All PhD supervisors within the field of Dentistry meet the minimum standards CNATDCU in place at the date of evaluation, necessary and mandatory for obtaining the certificate of qualification, based on scientific results from the last 5 years.

(8 ISI in extenso (IF>0.3)si 20 BDI).

The activity of the doctoral supervisors for the period 2016-2020 is presented as report according to CSUD requirements on the website

https://www.umft.ro/facultati/csud/csud_componenta-csud-si-descriere/

B.1.

** **B.1.1.1.** The ratio between the number of master's degree graduates of other higher education institutions in the country or abroad who have registered for the competition for admission to doctoral studies in the last 5 years and the number of places financed from the state budget put up for competition in the field of doctoral studies is at least 0.2 or the ratio between the number of candidates in the last five years and the number of places financed from the state budget put up for competition in the field of doctoral studies is at least 1.2.*

PhD students enrolled in the period 2015-2020

The admission status and enrollment of doctoral students in the first year - academic year 2015-2016

DOCTORAT				
Field	IF with scholarsh ip	IF without scholarsh ip	With frequency: With tax	Total
Dental Medicine	2	3	19	24

The admission status and enrollment of doctoral students in the first year - academic year 2016-2017

DOCTORAT				
Field	IF with scholarsh ip	IF without scholarsh ip	With frequency: With tax	Total
Dental Medicine	2	3	12	17

The admission status and enrollment of doctoral students in the first year - academic year 2017-2018

DOCTORAT				
Field	IF with scholarsh ip	IF without scholarsh ip	With frequency: With tax	Total
Dental Medicine	2	0	18	20

The admission status and enrollment of doctoral students in the first year - academic year 2018-2019

DOCTORAT						
Field	IF with scholarsh ip	IF without scholarsh ip	IFR fără bursă	Bursier al Statului român	With frequency: With tax	Total
Dental Medicine	3	1	2	0	29	35

The admission status and enrollment of doctoral students in the first year - academic year 2019-2020

DOCTORAT				
Field	IF with scholarsh ip	IF without scholarsh ip	With frequency: With tax	Total
Dental Medicine	2	2	5	9

$$(24+17+20+35+9) / (5+5+2+6+4) = 105 / 22 = 4,7$$

* **B.1.2.1.** Admission to doctoral study programs is based on selection criteria that include: the academic, research and professional performance of the candidates, their interest in scientific or artistic / sports research, publications in the field and a research topic proposal. An interview with the applicant is a mandatory part of the admission procedure.

In 2016-2020, the admission to doctoral university studies was organized in accordance with the admission regulations approved by the University Senate, in accordance also with the laws in force.

http://old.umft.ro/admitere-2020_815

Currently, the admission to doctoral university studies is made in accordance with the Methodology regarding the organization of admission in the cycles of doctoral university studies within the University of Medicine and Pharmacy "Victor Babeș" from Timișoara 2021-2022

<https://www.umft.ro/admitere-doctorat-2021/>

Project evaluation methodology for obtaining the doctoral grant program GD 2021 „Victor Babeș” University of Medicine and Pharmacy from Timișoara

<https://www.umft.ro/admitere-doctorat-2021/>

The "Victor Babeș" University of Medicine and Pharmacy in Timișoara has the right to organize an admission contest for doctoral studies in the fundamental field of Biological and Biomedical Sciences with the field of ranking: Medicine, Dentistry and Pharmacy in compliance with university autonomy according to the UMFVBT Charter. The doctorate is the higher cycle of university studies whose purpose is to develop knowledge through advanced scientific research. The doctorate is a distinct cycle of university studies that has two components: a training program based on advanced university studies and a scientific research program.

Admission to doctoral studies consists of an examination of language proficiency, the submission of projects for obtaining doctoral grants and an interview with the doctoral supervisor and a committee that mainly aims at the following:

1. The level of knowledge by the candidate based on the consultation of the specialized bibliography, of the issues of the respective field, of the recent researches regarding the candidate's preoccupations in relation to his orientation towards the chosen topic.
 2. The research activity carried out by the candidate, the research topics addressed to be reflected in scientific research papers as the person in charge of the topic or co-author
 3. Publishing activity: scientific papers published in specialized journals indexed Web of Science, Pubmed / Medline, other international databases, nationally recognized;
 4. Papers presented at international and national conferences and published in abstracts in journals with ISSN or ISBN;
 5. The capacity of analysis, synthesis and conception, to undertake creative activities, of structuring and interpretation of some results; formulating and arguing personal opinions.
- The committee for the oral test (interview) consists of
- a president (doctoral supervisor)
 - 3 members who can be part of the research team of the doctoral supervisor.
- These can be teachers affiliated to the doctoral school or teachers and researchers not affiliated to it.

B.1.2.2. The expulsion rate of doctoral students, including after dropping out of studies, at 3, respectively 4 years after admission ^ 2, does not exceed 30%.

In the field of Dentistry, in the period 2015 - 2020 there were 4 doctoral theses that had the CNATDCU resolution requesting the completion of the file.

In the field of Medicine and Dentistry, no doctoral thesis has been definitively invalidated, without the right to remake. ([Annex 18](#))

Dental Medicine Field

Dropout rate for doctoral students ([Annex 18](#)) ([Annex 18](#))

Number of PhD students date of registration: 01.10.2015	43
Number of doctoral students dropout on 30.09.2016	0 (0 % <30%)

Dropout rate for doctoral students ([Annex 18](#))

Number of PhD students date of registration: 01.10.2016	52
Number of doctoral students dropout on 30.09.2017	3

	(5,76 % <30%)
--	---------------

Dropout rate for doctoral students ([Annex 18](#))

Number of PhD students date of registration: 01.10.2017	68
Number of doctoral students dropout on 30.09.2018	4 (5,88 % <30%)

Dropout rate for doctoral students [Annex 18](#)

Number of PhD students date of registration: 01.10.2018	93
Number of doctoral students dropout on 30.09.2019	4 (4,30 % <30%)

Dropout rate for doctoral students [Annex 18](#)

Number of PhD students date of registration: 01.10.2019	97
Number of doctoral students dropout on 30.09.2020	6 (6,18 % <30%)

B.2.

B.2.1.1. The training program based on advanced university studies includes at least 3 disciplines relevant for the training of scientific students in scientific research, of which at least one discipline is intended for the in-depth study of research methodology and / or statistical data processing.

According to the Curriculum from 2016-2020 for the field of Dentistry, the disciplines of Scientific Research Methodology and Biostatistics are part of the training program. Curricula 2016 - 2020:

<http://old.umft.ro/oferta-educationala> 117

Mandatory subjects

Scientific research methodology

Ethics of scientific research

Biostatistics

Documentation, writing and publication of scientific articles

Grant design and management

Ethics and academic integrity

Optional subjects

Experimental models in translational research
Communication, oral presentation and poster
Modern techniques in medical and pharmaceutical research
Bioinformatics and applied genomics in medical research
Evidence-based medicine and research
Evidence-based medicine

B.2.1.2. In the training program for doctoral students there is as a compulsory discipline, the discipline Ethics of scientific research, which is part of the Curriculum, considering this fact a fulfilled criteria.

http://old.umft.ro/oferta-educationala_117

B.2.1.3. IOSUD has created mechanisms to ensure that the training program based on advanced university studies, related to the evaluated field, aims at "learning outcomes", specifying the knowledge, skills and responsibility and autonomy that doctoral students should acquire after completing each discipline or through research activities.

In accordance with the Procedure for elaborating the doctoral study programs and the curriculum within the "Victor Babeș" University of Medicine and Pharmacy from Timișoara and the Regulation for the examination and grading of doctoral students within the "Victor Babeș" University of Medicine and Pharmacy " from Timisoara, <https://www.umft.ro/reglementari-interne-csud/>, within the disciplines and research activities, through training programs based on advanced university studies, doctoral students will acquire the following knowledge and skills:

After completing the course, Scientific Research Methodology, PhD students will acquire professional skills and transversal skills:

Professional skills:

- Ability to select professional medical and pharmaceutical information of high scientific quality from the printed bibliography and from internet sources.
- Ability to detect the main sources of systematic and random errors that may occur in a clinical study / scientific experiment.

- Ability to correctly select a certain statistical protocol / statistical test according to the design of the study / experimental research.

- The ability to correctly integrate a statistical protocol in the context of a scientific paper in the biomedical field. Deepening the methodological knowledge of scientific publication.

Transversal skills:

- Improving the analysis capacity of the doctoral student regarding the sources of information in the medical and pharmaceutical field.

- Efficient solution of problems with medium degree of difficulty, respecting the principles and norms of professional ethics, respectively promoting a responsible attitude towards university training.

- Effective application of communication and relationship techniques at organizational and disciplinary level.

- Development of acquired skills and adaptation to the requirements of a dynamic society.

Within the **Ethics discipline of scientific research**, doctoral students acquire the following:

Professional skills:

- Understanding and applying ethical principles in medical and pharmaceutical research

- Establishment of ethical standards in the research project, adequacy with ethical requirements in research on human subjects, in experimental animal research or in fundamental research (for the individual doctoral research project)

- Deepening the ethical evaluation of the types of medical-pharmaceutical research and adapting it to one's own research

- Identify ethical requirements and minimum moral standards in biomedical research

Transversal skills:

- Awareness of the roles in a medical scientific research team, as well as interpersonal relationships, based on the principles, norms and values of the research ethics code.

- Skills in implementing and monitoring ethical requirements in research projects

- Identifying responsibilities in a team and applying effective relationship and work techniques within it

- Critical reflection and adaptation in the researcher-subject relationship of the research

Following the compulsory course of **Biostatistics** and the practical works within the Doctoral School, the participants are supposed to acquire the following competencies and skills:

- The possibility to analyze through a critical perspective the results of medical scientific research
- Understanding the notions of statistical processing of biomedical data (data types, data description, estimation intervals, statistical tests, linear correlation and regression analysis, risk analysis) at a professional level.
- Inference of some results from the level of some samples at the level of the populations of interest.
- Calculation of parameters and statistics needed to describe research results.
- Interpretation of statistical results obtained.
- Practical skills needed to analyze medical data with statistical packages and interpret the results from a statistical point of view.
- Developing the ability to integrate information gathered from different sources of information.
- The use of state of the art technological tools in medical research.
- How to disseminate the results of scientific research.
- Writing and interpreting research results.

After completing the course **Documentation, writing and publishing scientific articles**, doctoral students will have the following skills:

- Knowledge of platforms and documentation sources
- Ability to analyze and synthesize research results
- The principles of elaborating a scientific paper
- Capitalizing on the results of scientific research by publishing in specialized journals
- Concern for professional development by training critical thinking skills demonstrated through active participation in the course and laboratory / seminar / project.
- Learning the methods of systematization and presentation of the studied information.
- Involvement in scientific research activities by participating in the development of scientific articles.
- Efficient use of information sources and communication resources and assisted professional training (Internet, specialized software applications, databases, online courses, etc.)

Within the course of **Ethics and academic integrity** specific competencies accumulated and professional skills are:

- Proven ability to select, combine and use appropriately knowledge, skills and other values and attitudes, in order to successfully solve a certain category of work or learning situations, limited to the medical profession, in terms of effectiveness and efficiency.
- Knowledge, understanding and use of specific language;
- Explaining and interpreting the differences between explicit rules and implicit rules governing intellectual work;
- Applying, transferring and solving problems in specific intellectual activities;
- Critical and constructive reflection;
- Creativity and innovation in academia, developing a culture of responsibility in intellectual work.
- Transversal skills
- Autonomy and responsibility in a multidisciplinary team;
- Social interaction (application of relationship techniques and efficient work in a multidisciplinary team and in relation to the patient);
- Personal and professional development (efficient use of information sources, communication resources and professional training both in Romanian and in a language of international circulation; identification of objectives to be achieved, stages of work, deadlines, available resources , risks and conditions for completion of projects under coordination.)

Educational objectives of the course **Experimental models in translational research** :

General objective: Acquisition of general knowledge on different experimental models and their value in translational research - with emphasis on classical models used in research on cardio-metabolic pathology: ischemia-reperfusion-cardio-protection, endothelial dysfunction (with emphasis on MAO-mediated) and mitochondrial dysfunction. Specific objectives: Acquisition of in-depth knowledge on some classical experimental models with a role in translational research that can be subsequently practiced individually in order to acquire practical skills / abilities to achieve them, as follows:

- Animal models of in vivo and in vitro study of myocardial ischemia / reperfusion and cardioprotection strategies investigated over time on animal models with (and without) translational potential in humans.
- Study model of endothelial dysfunction in organ bath: ways to induce and evaluate experimental endothelial dysfunction, techniques for evaluating oxidative stress, innovative therapies in vasculoprotection.
- The study model of mitochondrial dysfunction: ways to evaluate respiratory mitochondrial function and cellular bioenergetic profile, mitochondria as a therapeutic target in pathology.

Professional skills

- Knowledge of the terminology related to the concept of translational research.

- Ability to list and explain the principle and usefulness for translational research of the experimental models presented.
- Formulation of research hypotheses based on knowledge and interpretation of the current state of knowledge on the chosen doctoral topic.
- Proposing a scientific research activity on an experimental model relevant for conducting doctoral studies on the chosen topic.

Transversal skills

- Ability to work in a team, identify roles and responsibilities in a multidisciplinary team and apply effective relationship techniques and teamwork.
- Efficient use of information sources and resources for communication and assisted training (Internet portals, ex PubMed, databases, online courses, specialized software applications - eg Mendeley, EndNote, etc.) both in Romanian and in English.
- Identifying the objectives to be achieved, the available resources, their completion conditions, working stages, working times, related deadlines and related risks.

Following the course about **Writing the doctoral thesis**, the doctoral students will be able to:

- Cite the sources correctly
- Avoid plagiarism
- To request the anti-plagiarism verification of the doctoral thesis at UMF "Victor Babeș" Timișoara and to understand the results of the similarity report obtained
- To know the standards for the elaboration of the doctoral thesis within UMF "Victor Babeș" Timișoara
- To demonstrate in the doctoral thesis the advanced scientific knowledge of the researched field, To emphasize the elements of originality in the development or solution of the research topic, as well as the ways of scientific validation of one's own results.

Following the course of **Bioinformatics and applied genomics in medical research**, doctoral students will acquire the following knowledge:

General knowledge: knowledge of genome study methods (genomics), in computer technologies that can be applied in doctoral studies in the fields of medicine, biology, computer science and mathematics.

Specific knowledge: knowledge of fundamental concepts (phenotype - genotype), practical methods for obtaining genetic information (genotyping, classical and modern sequencing), theoretical methods for studying genetic information (chain analysis, association studies), extraction methods of the biological-clinical relevance starting from the results of the study of the genetic material (annotation, elucidation of the concept of the causal variant).

Following the course **Communication, oral presentation and poster**, doctoral students will acquire the following:

Knowledge and understanding (knowledge and appropriate use of discipline-specific notions)

- Identify and use the language and specialized knowledge in the field of medicine, especially regarding the elaboration of scientific texts.
- Use of methods and techniques of data collection and processing from different sources. Making specific graphic materials.
- Elaboration of studies and specialized projects.
- Capitalizing on the results obtained from analyzes of studies and geographical projects.

Explanation and interpretation (explanation and interpretation of ideas, projects, processes, as well as the theoretical and practical contents of the discipline)

- Applying efficient and responsible work strategies, based on the principles, norms and values of the code of professional ethics.
- Applying efficient work techniques in a multidisciplinary team, ethical attitude towards the group, respect for diversity and multiculturalism, acceptance of diversity of opinion

The general objective of the discipline aims both to identify and use specialized medical language and to apply writing techniques in different contexts of doctoral studies.

Deepening some notions of the theoretical and practical structuring of the medical text.

Knowledge of the typology of medical scientific works. Forming the skills of elaborating medical scientific texts and assimilating the general principles of their writing.

Following the course **Modern techniques in medical and pharmaceutical research**, doctoral students will acquire the following:

- Presentation, explanation and acquisition of fundamental notions regarding molecular processes related to nucleic acid biology
- Presentation, explanation and acquisition of the basic principles of DNA / RNA molecular tests useful in clinical medical practice and research
- Presentation and explanation of the main categories of DNA / RNA molecular tests used in clinical medical practice and research
- Knowledge of the main stages and techniques used in plant research as sources of new drugs.
- Knowledge of the main stages and techniques used in the quality control of photopreparations.
- Knowledge, understanding of theoretical notions on modern technologies in dentistry.
- Learning specific skills involved in experimental studies.
- Professional development by training the skills of critical thinking regarding the molecular processes / techniques of analysis of nucleic acids presented.

- Efficient use of information and training resources (internet, software applications, analysis of online databases, online courses, etc.)
- Abilities to select the most representative bibliographic sources; the ability to distinguish high quality professional bibliographic sources.
- Identifying the objectives, the available resources, the conditions for their completion, the work stages, the deadlines related to each work stage and the risks related to the research activities.

After completing the **Design and Management of Grants** course, PhD students acquire specific skills:

- Acquisition of appropriate medical and scientific language.
- Knowledge of the forms for a series of funding sources / research grants.
- Learning to fill in the competition forms.
- Learn to reason critically about research grant competitions.
- Concern for professional development by training critical thinking skills demonstrated through active participation in the course and laboratory / seminar / project;
- Forming an ethical attitude towards grant grants.
- Involvement in scientific research activities by participating in the elaboration of papers, studies, specialized articles;
- Efficient use of information sources and resources of communication and assisted professional training (Internet portals, specialized software applications, databases, online courses, etc.) both in Romanian and in a language of international circulation.

After completing the **Evidence-Based Medicine** course, PhD students acquire professional and transversal skills:

At the end of the courses the doctoral students will be able to:

- assess the need for information
- ask substantive and prominent questions
- to choose the appropriate evidence
- to interpret the results of the studies

Evidence-based medicine prepares doctoral students to assess the need for information, to ask questions to be answered, to identify appropriate evidence, to evaluate this evidence, to interpret the results, and to use the evidence for patient care.

- Demonstrate the ability to ask focused, well-formulated questions when faced with a clinical problem
- Demonstrate the ability to efficiently perform a search in the literature using the Pubmed

database

- Demonstrate the ability to critically evaluate the published report of a clinical trial
- Demonstrate the ability to incorporate evidence assessment into individual patient decision-making
- Acquisition of analytical skills and information integration
- Development of critical judgment
- Efficient use of information sources (Internet portals, databases).

After completing the course **Methodology of writing and publishing scientific articles**, doctoral students will be able to:

- To know the rules for writing scientific articles
- To know the importance of ethics and deontology in the activity of publishing research results
- To know the types of articles that can be published, the types of magazines in which they can be published
- To know the importance of the visibility of published articles (Hirsch index, impact factor, influence factor, etc.)
- To know the steps to be followed in writing and publishing scientific articles
- To be able to communicate the results of their own research and to discuss the objectives, results and implications of personal research in medical journals;

B.2.1.4. Throughout the doctoral training period, doctoral students in the field benefit from the counseling / guidance of some functional guidance commissions, aspect reflected by guidance and points of view expressed in writing or regular meetings.

In the regulation of the Doctoral Schools within the UNIVERSITY OF MEDICINE AND PHARMACY „VICTOR BABEȘ” from TIMIȘOARA are found all the aspects related to the guidance, counseling in the doctoral training during the whole doctoral training stage.

<https://www.umft.ro/reglementari-interne-csud/>

In order to ensure a coherent scientific path, the doctoral student gives presentations of the progress of his scientific research program to the guiding committee and the doctoral supervisor, who have the role of guiding, correcting and supporting the scientific path of the doctoral student. The minutes accompanied by the stage report / the presented report will be submitted to the personal file of the doctoral student.

The scientific research program is considered to be concluded only after the submission of at least 2 or 3 reports on the progress of the doctoral student's scientific research.

The scientific research program is carried out under the guidance of the doctoral supervisor and the guidance team.

The intermediate results of the research program are presented by the doctoral student for evaluation by the doctoral supervisor and the guidance team in the form of reports / reports on the scientific research progress of the doctoral student.

B.2.1.5. For a field of doctoral studies, the ratio between the number of doctoral students and the total number of teachers / researchers providing guidance should not exceed 3: 1.

The ratio between doctoral students and supervisors is not higher than 3 to 1

In Dental Medicine field each doctoral student is offered guidance in completing the Doctoral Thesis, as well as in the elaboration of scientific research.

Total number of doctoral students for the evaluated period = A = 102 students

Total number of guides for the evaluated period = B = 49 guides

$$\begin{aligned} A/B &= C \\ C &= 2.081 \leq 3 \\ \text{Criterion met} \end{aligned}$$

([Annex 19](#))

B.3.

B.3.1.1. For the evaluated field there is at least one article or other relevant contribution per doctoral student who has obtained the title of doctor in the last 5 years. The members of the evaluation commission select for analysis, at random, 5 such relevant articles / contributions per field of doctoral studies. At least 3 of the selected articles present significant original contributions in the field concerned.

The table with articles by doctoral students in the field of Dentistry who obtained the title of doctor in the period 01.10. 2015 - 30.09.2020 can be found in [annex 27](#).

***B.3.1.2.** The ratio between the number of presentations of doctoral students who completed their doctoral studies in the evaluated period (last 5 years), including posters, exhibitions, held at prestigious international events (held in the country or abroad), and the number of students PhD students who have completed their doctoral studies in the evaluated period (last 5 years) is at least equal to 1.

The 17 doctoral students who completed their doctoral studies in the field of Dentistry made 118 presentations ([Annex 26](#)) at prestigious international events, the ratio in the indicator being $118/17 = 6.94$. This ratio, higher than the minimum value of 1 imposed by ARACIS, confirms the fulfillment of the indicator.

***B.3.2.1.** The number of doctoral theses assigned to a certain referent coming from a higher education institution, other than the IOSUD evaluated, must not exceed two (2) for the theses coordinated by the same doctoral supervisor in one year.

In the case of Dentistry Domain, the number of doctoral theses assigned to a referent from an educational institution other than IOSUD UMF Victor Babeș Timișoara does not exceed 2 for the theses coordinated by the same supervisor in one year

Year 2015-2016

- to Mrs. Prof. Univ. Dr. Onisei Doina, PhD supervisor was in the committee x2:
Prof. Univ. Dr. Surlin Petra - UMF „Grigore T. Popa” Iași
- to Mr. Prof. univ. dr. Cărligeriu Virgil was in commission x1 Prof. Univ. Dr. Surlin Petra - UMF „Grigore T. Popa” Iași

Year 2016-2017

- to Mrs. Prof. Univ. Dr. Podariu Angela Codruța, PhD supervisor was on the committee x2 Prof. Univ. dr. Păcurar Mariana - UMF Târgu Mureș
- to Mrs. Prof. Univ. Dr Onisei Doina, PhD supervisor was on the committee x1 Prof. univ. dr. Păcurar Mariana - UMF Târgu Mureș

*** B.3.2.2.** The ratio between the number of doctoral theses assigned to a certain scientific referent from another higher education institution than the

one in which the doctoral thesis is organized and the number of doctoral theses defended in the same field of doctoral studies within the doctoral school must not be greater than 0.3, by reference to the situation recorded in the last 5 years. It is analyzed only if in the evaluated doctoral field at least 10 doctoral theses have been defended in the last 5 years.

Scientific referent from another educational institution	Number of doctoral theses assigned						Report on the situation recorded in the last five years
	2015 - 2016	2016 - 2017	2017 - 2018	2018 - 2019	2019 - 2020	Total/ past 5 years	Total nr. Of doctoral thesis in the past 5 years (17)
rof. Univ. Dr. Mârțu Silvia UMF „Gr. T. Popa” Iași	2	1	-	-	-	3	0,176
rof. Univ. Dr. Șurlin Petra UMF Craiova	3	-	-	1	1	5	0,294
rof. Univ. Dr. Păcurar Mariana UMF Târgu Mureș	1	3	1	1	-	6	0,352
Prof. Univ. Dr. Badea Mândra UMF „Iuliu Hațieganu” Cluj Napoca	-	2	-	-	-	2	0,117
Prof. Univ. Dr. Mihai Augustin UMF „Carol	-	1	-	-	-	1	0.058

Davila” București							
Prof. Univ. Dr. Pătrașcu Ion UMF „Carol Davila” București	-	1	-	-	-	1	0.058
Prof. Univ. Dr. Nimigean Victor UMF „Carol Davila” București	-	1	-	-	-	1	0.058
Prof. Univ. Dr. Băciut Mihaela UMF „Iuliu Hațieganu” Cluj Napoca	-	1	-	-	-	1	0.058
Prof. Univ. Dr. Păuna Mihaela UMF „Carol Davila” București	-	1	-	-	-	1	0.058
Prof. Univ. Dr. Popșor Sorin UMF Târgu Mureș	-	1	1	-	-	2	0,117
Prof. Univ. Dr. Dudea Diana UMF „Iuliu Hațieganu” Cluj Napoca	-	-	1	-	1	2	0,117
rof. Univ. Dr. Manolea	-	-	1	-	1	2	0,117

Horea Octavian UMF Craiova							
Conf. Dr. Hedesiu Mihaela - UMF „Iuliu Hatieganu” Cluj Napoca	-	-	-	1	-	1	0.058
Conf. Univ. Dr. Baci Sorana Florica - UMF „Iuliu Hatieganu,, Cluj Napoca	-	-	-	1	-	1	0.058
Prof. Univ. Dr. Mercut Veronica - UMF Craiova	-	-	-	1	1	2	0,117
Prof. Univ. Dr. Roman Alexandra – UMF “Iuliu Hatieganu” Cluj	-	-	-	1	-	1	0.058
Prof. Univ. Dr. Ing. Marsavina Liviu – Universitate a Politehnica Timisoara	-	-	-	-	1	1	0.058
Prof. Univ. Ing. Antoniac Iulian Vasile –	-	-	-	-	1	1	0.058

Universitate a Politehnica Bucuresti							
--	--	--	--	--	--	--	--

C.1.

C.1.1.1. The doctoral school in which the doctoral university field falls is the proof of the constant development of the process of evaluation and internal quality assurance in accordance with a procedure developed and applied at IOSUD level, among the evaluated criteria being obligatorily found:

a) the scientific activity of the doctoral supervisors;

In the CSD MD – UMFVBT, evaluations are periodically made regarding the scientific activity of the doctoral supervisors, within the Doctoral Schools according to the Evaluation Sheet of the doctoral supervisors within IOSUD - UMFVBT.

b) the infrastructure and logistics necessary for carrying out the research activity;

In order to carry out scientific research activities, doctoral students from the Doctoral Schools, Dentistry Field can carry out research activities in the centers within IOSUD - UMFVBT.

<https://www.umft.ro/cercetare/centre-de-cercetare/>

The technical-material base was continuously improved, the research laboratories being equipped with modern equipment and installations, which allowed both raising the quality of education and scientific research, the members of the discipline having studies published in journals included in international databases.

The spaces and the material endowment of the doctoral schools within IOSUD - UMFVBT, allow the realization of the research activities according to the annexes:

c) the regulations and procedures on the basis of which the doctoral studies are organized;

The activity of the Doctoral Schools within IOSUD - UMFVBT is regulated by the following documents:

- The Institutional Regulation for the organization and functioning of the doctoral university studies within the “Victor Babeș” University of Medicine and Pharmacy from Timișoara
<https://www.umft.ro/reglementari-interne-csud/>

- Regulation of the Doctoral Schools within the University of Medicine and Pharmacy “Victor Babeș” University of Medicine and Pharmacy from Timișoara
<https://www.umft.ro/reglementari-interne-csud/>

- Methodology regarding the appointment and election of the council for doctoral studies and of the Council of the Doctoral School in the “Victor Babeș” University of Medicine and Pharmacy from Timișoara

<https://www.umft.ro/reglementari-interne-csud/>

- The methodology regarding the election of the directors of the doctoral school councils in the “Victor Babeș” University of Medicine and Pharmacy from Timișoara.

<https://www.umft.ro/reglementari-interne-csud/>

- The procedure for elaborating the doctoral study programs and the curriculum within the “Victor Babeș” University of Medicine and Pharmacy from Timișoara

<https://www.umft.ro/reglementari-interne-csud/>

- Procedure regarding the completion of doctoral studies at the "Victor Babeș" University of Medicine and Pharmacy in Timișoara

<https://www.umft.ro/reglementari-interne-csud/>

- Procedure regarding the recognition of the doctoral degree and the doctoral degree in sciences obtained abroad by the “Victor Babeș” University of Medicine and Pharmacy from Timișoara

<https://www.umft.ro/reglementari-interne-csud/>

- The procedure regarding the automatic recognition of the quality of doctoral supervisor / habilitation obtained in university educational institutions accredited from abroad by the “Victor Babeș” University of Medicine and Pharmacy from Timișoara

<https://www.umft.ro/reglementari-interne-csud/>

- The methodology regarding the organization of the admission in the cycles of doctoral university studies within the “Victor Babeș” University of Medicine and Pharmacy from Timișoara 2021-2022 <https://www.umft.ro/wp-content/uploads/2021/04/1.-Methodology-regarding-organizing-admission-in-doctoral-university-cycles.pdf>

- Methodology for completing doctoral studies at the "Victor Babeș" University of Medicine and Pharmacy in Timisoara

<https://www.umft.ro/reglementari-interne-csud/>

- Model of the Framework Contract for Doctoral University Studies http://old.umft.ro/reglementari-cu-privire-la-studiile-doctorale_120

d) the scientific activity of doctoral students;

Within UMFVBT, PhD students have published the results of research in national and international publications.

PhD students from IOSUD-UMFVBT participated in national and international conferences between March 11-12, 2021, the Scientific Webinar of PhD students from the Doctoral Schools of the “Victor Babeș” University of Medicine and Pharmacy in Timișoara took place. During the webinar, articles in extenso published in ISI journals

were presented, with an impact factor, participants in the webinar registered in number of 18 doctoral students.

http://old.umft.ro/evenimente-din-cadrul-universitatii-de-medicina-si-farmacie-victor-babes-din-timisoara_172/webinarul-stiintific-al-studentilor-doctoranzi-din-cadrul-scolilor-doctorale-ale-umfvbt_521

In the period 2016 - 2019 within the “Victor Babeș” University of Medicine and Pharmacy from Timișoara, the Scientific Session of the doctoral students took place, on the occasion the even “Days of the “Victor Babeș” University of Medicine, Timișoara”. Doctoral students from the Doctoral Schools participated in the oral presentation sessions and posters and were awarded.

http://old.umft.ro/noutati-cu-privire-la-studiile-doctorale_114

e) the training program based on advanced university studies of doctoral students;

Within IOSUD - UMFVBT, the training program based on doctoral university studies is made according to the curriculum.

http://old.umft.ro/oferta-educationala_117

The advanced university training program is carried out on the basis of the curriculum, with a duration of 2 semesters for the fields of Medicine, Dentistry and Pharmacy.

The curriculum for doctoral studies is in accordance with national and European standards and ensures the acquisition of knowledge defining the fields of doctoral studies: Medicine, Dentistry, Pharmacy.

The curriculum for doctoral studies includes compulsory subjects, optional subjects and the advanced scientific research project.

- The compulsory subjects ensure the accumulation, by the students, of the basic knowledge, indispensable for the field of study.
- The optional disciplines allow the deepening of some particular directions, in accordance with the specialization targeted by the student.

At the end of the year of advanced university training, doctoral students achieve the total number of credits provided in the curriculum.

f) social and academic support services (including participation in various events, publication of articles, etc.) and counseling provided to doctoral students.

IOSUD - UMFVBT has implemented at the level of Doctoral Schools the stimulation of enrollment of doctoral students from disadvantaged social backgrounds by allocating special places for Roma doctoral students, by exempting the tuition fee, without doctoral grant, thus within the Doctoral School of Dentistry, in 2019 the enrollment in the field of dentistry of a Roma doctoral student took place.

Also, to encourage potential future PhD students to pursue doctoral studies at the University of Medicine and Pharmacy "Victor Babeș" in Timisoara, reducing the tuition fee for the academic year 2020-2021 from 5000 lei to 3000 lei according to the Regulation on the amount of tuition fees and other fees within the "Victor Babeș" University of Medicine and Pharmacy in Timișoara, was approved by HS No.19 / 6022 / 27.05.2020.

<https://www.umft.ro/reglementari-interne-csud/>

IOSUD - UMFVBT motivates doctoral students, through programs that provide them with certain facilities, namely, the payment of articles granted by the UMFVBT Senate Decision no. 24/7135 / 24.06.2020,

The University Senate approves the following levels regarding the payment / statement of publication fees in ISI indexed journals, as follows:

- IF 0.5-0.99 = max 500 euro
- IF 1-1.99 = max 1500 euro
- IF 2-2.99 = max 2000 euro
- IF 3-3.99 = max 2500 euro
- IF 4-5.99 = max 3000 euro
- IF 6-7.99 = max 4000 euro
- IF 8-10 = max 5000 euro
- IF > 10 = up until 8000 euro

According to H.S. Nr. 25/7135 / 24.06.2020 The University Senate approves the annual financial support for:

a. The article with the highest impact factor.

1st place - 5,000 RON

2nd place –3,000 RON

3rd place - 1,000 RON

b. The project with the highest funding (projects funded from national and international competitions, non-reimbursable funds)

1st place - 5,000 RON

2nd place - 3,000 RON

3rd place - 1,000 RON

The CSUD budget for 2020 is approved with the Decision of the Board of Directors dated 13.03.2020, thus a percentage of 90% of the revenues collected from doctoral students with fee is allocated for the organization and functioning of the Council for Doctoral Studies (CSUD) within Of the Organizing Institution of Doctoral University Studies - "Victor Babeș" University of Medicine and Pharmacy from Timișoara, approved by HS Nr. 3/4579 / 25.03.2020

During the UMFVBT Days, between 2016 and 2020, merit scholarships, performance scholarships or scholarships of excellence were awarded, as the case may be, to doctoral students with special merits in scientific research who presented publications in extenso in ISI-rated journals with factor impact over 1, oral presentations or posters.

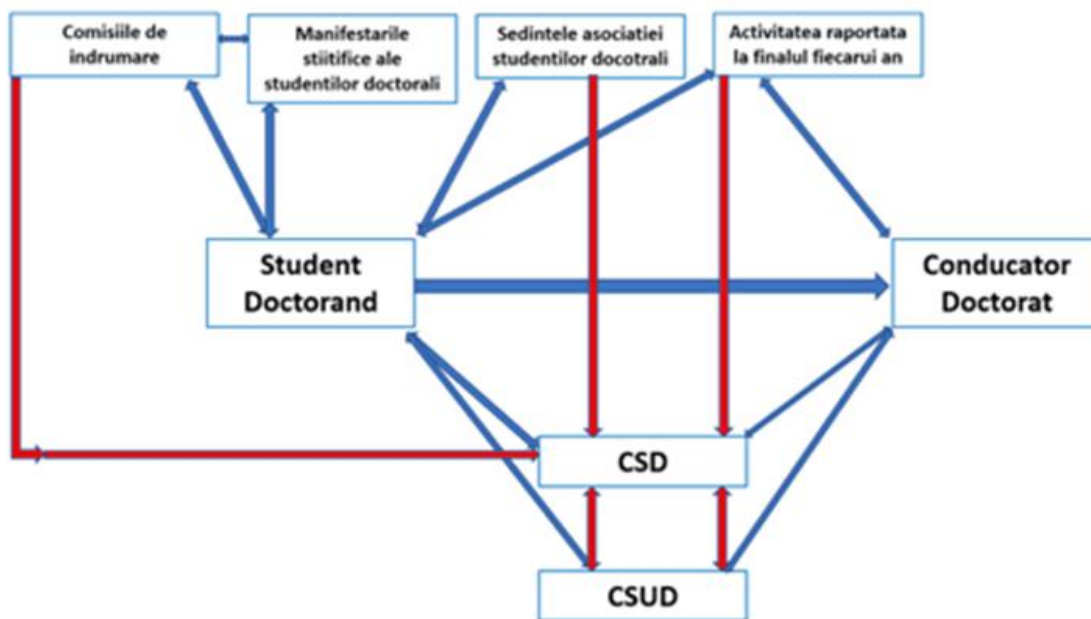
http://old.umft.ro/noutati-cu-privire-la-studiile-doctorale_114

* **C.1.1.2.** During the doctoral training internship, evaluation mechanisms are implemented aimed at identifying the needs, as well as the general level of satisfaction with the doctoral studies program of doctoral students, in order to continuously improve the academic and administrative processes. Following the analysis of the obtained results, the elaboration and implementation of a plan of measures is proved. ([Annex 29](#), [30](#))

During the doctoral training internship, the doctoral student's relationship with the doctoral supervisor is extremely important. The good development of the doctoral research depends on the quality of this interaction and last but not least its finalization through quality scientific publications and the writing of the final thesis. In order to support this directive, the Doctoral School of Dentistry also implements a plan of measures in order to monitor and possibly optimize the doctoral student's activity, so that he can complete the research activity within the predetermined time interval.

This plan of measures involves several levels of work:

- (1) the relationship with the doctoral supervisor;
- (2) the activity reported at the end of each year;
- (3) manifestations of doctoral students;
- (4) meetings of doctoral students;
- (5) guidance commissions;
- (6) direct interaction with CSD members;
- (7) direct interaction with CSUD members;



Thus, the first mechanism responsible for the good development of the doctoral activity is given by the direct collaboration with the doctoral supervisor in parallel with the following of the curricula from the first year of the doctoral school. Following these interactions, scientific results are generated that will have the potential to be disseminated and published in specialized scientific events. In this directive, the doctoral student has the possibility to meet with the external evaluation made by the Scientific Committees of the profile events or of the journals in which the publication is tried, representing a first step in identifying the possible problems that need to be solved in accordance with the requirements of the commissions. Collaboration with the PhD supervisor can fully solve these problems, or, as the case may be, the members of the guidance committee can be involved. Solving the identified needs generates the acceptance for presentation / publication of the partial results obtained by the doctoral student. If the problems cannot be solved at this level, the CSD members are informed who will supervise and optimize the doctoral research activity carried out by the mentioned team (doctoral student-doctoral supervisor) by additional involvement of specialists in the field of interest, resulting in solving the needs. identified. Failure to resolve these issues at this level leads to information and involvement of CSUD to address the identified needs.

The participation of doctoral students in specialized events has another important advantage: new ways of approaching research topics and / or laboratories / institutions that are specialized in different ways of investigation, necessary for the completion of doctoral research.

The meetings of the doctoral students' association have a very important role in presenting the problems that have appeared or that have the potential to happen in the doctoral studies. The feedback given by the docotrans students from the senior / terminal

years can partially or totally solve the reported problems. Failure to resolve these issues will result in the Association informing CSD members and involving them in resolving them. Also, not solving at this level involves informing and involving CSUD members in solving the identified problems.

Another mechanism implemented to monitor the research activity in the Doctoral School of Dentistry is the reporting that must be done by each doctoral student at the end of the year. These reports are evaluated by the CSD and are identified any problems that have arisen or have the potential to manifest in the future. Problems can be solved partially or totally at this level. Failure to solve them leads to information and involvement of CSUD members with the total solution of the problems. Students were sent questionnaires (Appendix 28) to complete in order to observe the level of satisfaction and observation of their needs.

Last but not least, both the doctoral student-doctoral supervisor team and each doctoral student can contact the CSD members directly and, as the case may be, the CSUD members for presenting and solving any problems arising within the Doctoral School activity, their solution being made, in depending on the complexity of the two levels of competence mentioned.

C.2.

C.2.1.1. IOSUD publishes, on the website of the higher education institution, in compliance with the regulations in force regarding data protection, information such as:

The IOSUD - UMFVBT website publishes the necessary information regarding the doctoral university study programs, the candidates for these programs, the university community and other interested natural or legal persons. [www.umft.ro](http://old.umft.ro), http://old.umft.ro/prezentare-general-a-studii-doctorale_115

a) the regulations of the doctoral school;

Regulation of the Doctoral Schools within the University of Medicine and Pharmacy "Victor Babeș" University of Medicine and Pharmacy from Timișoara
<https://www.umft.ro/reglementari-interne-csud/>

b) the admission regulation;

- The methodology regarding the organization of the admission in the cycles of doctoral university studies within the "Victor Babeș" University of Medicine and Pharmacy from Timișoara 2021-2022

<https://www.umft.ro/wp-content/uploads/2021/04/1.-Metodologia-privind-organizarea-admiterii-in-ciclurile-universitare-de-doctorat.pdf>

c) the doctoral studies contract;

- Model of the Framework Contract for Doctoral University Studies
http://old.umft.ro/reglementari-cu-privire-la-studiile-doctorale_120

<https://www.umft.ro/reglementari-interne-csud/>

d) the regulation for completing the studies, including the procedure for public defense of the thesis;

- Methodology for completing doctoral studies at the "Victor Babeș" University of Medicine and Pharmacy in Timisoara <https://www.umft.ro/reglementari-interne-csud/>

e) the content of training programs based on advanced university studies;

Within CSD MD –UMFVBT, the training program based on doctoral university studies is made according to the curriculum.

http://old.umft.ro/oferta-educationala_117

f) the academic and scientific profile, the thematic areas / research topics of the doctoral supervisors in the field, as well as their institutional contact data;

The academic and scientific profile, the thematic areas, the research topics of the doctoral supervisors in the field of doctorate Medicine, Dentistry, Pharmacy, as well as their institutional contact details are made public on the UMFVBT website.

https://www.umft.ro/faculta/csud/csud_componenta-csud-si-descriere/

g) the list of doctoral students in the field with the basic information (year of registration, leader);

List of enrolled students, Medicine field, Dentistry field: https://www.umft.ro/category/csud/informatii_doctoranzi/

h) information about the standards for the elaboration of the doctoral thesis;

The standards for the elaboration of the doctoral thesis within the "Victor Babeș" University of Medicine and Pharmacy from Timișoara

Model for writing the doctoral thesis at the "Victor Babeș" University of Medicine and Pharmacy in Timișoara

<https://www.umft.ro/reglementari-interne-csud/>

i) links to the summaries of the doctoral theses to be defended publicly, as well as the date, time, place where they will be defended, at least 20 days before the defense.

Public data regarding the theses to be defended publicly within IOSUD - UMF „Victor Babeș” from Timișoara:

http://old.umft.ro/2021_941

https://www.umft.ro/teze-csd_mf-2021/

https://www.umft.ro/teze-csd_md-2021/

C.2.2.1. All PhD students have free access to a platform with academic databases relevant to the field of doctoral studies analyzed.

Through the research centers and the direct involvement of CSUD and CSDs, doctoral students are received and supported in the development of academic research and development. The UMFVBT library and the agreements with the universities allow doctoral students access to platforms with important databases ATU Alliance, Timișoara University Alliance (HS No. 36/6022 / 27.05.2020) and G6 - UMF alliance between the main medical and pharmaceutical universities in the country according to HS No.86 / 12188 / 16.09.2020.

<https://www.umft.ro/category/dezvoltare/acorduri-interuniversitare/>

<https://www.umft.ro/biblioteca/biblioteca-multimedia/>

<https://www.umft.ro/biblioteca/>

"Victor Babeș" University of Medicine and Pharmacy in Timișoara has concluded a contract with the Association of Universities, Research and Development Institutes and Central University Libraries in Romania on the implementation of the Project "Electronic national access to scientific literature to support the research and education system in Romania - ANELIS PLUS 2020 ". ([Annex 20](#), [Annex 21](#))

C.2.2.2. Each doctoral student has access, upon request, to an electronic system for verifying the degree of similarity with other existing scientific or artistic creations.

To ensure quality scientific research, the university has purchased software for the detection of plagiarism (www.sistemantiplagiat.ro), made available to the entire academic community. All doctoral theses defended within IOSUD are subject to anti-plagiarism evaluation. ([Annex 22](#))

C.2.2.3. All PhD students have access to scientific research laboratories or other facilities, depending on the specifics of the field / fields within the doctoral school, according to internal regulations.

In IOSUD-UMF “Victor Babeș” from Timișoara, doctoral students from the Doctoral School of Dentistry, in the field of Dentistry have access to advanced research centers and methodological and research centers.

The research centers operate according to the Regulation on the establishment, recognition and operation of the centers in the “Victor Babeș” University of Medicine and Pharmacy in Timișoara.

<https://www.umft.ro/cercetare/centre-de-cercetare/>

C.3.

C.3.1. There is a strategy and it is applied to increase the internationalization of doctoral studies.

* **C.3.1.1.** IOSUD, for the evaluated field of study, has concluded mobility agreements with foreign universities, with research institutes, with companies that carry out activities in the studied field, aiming at the mobility of doctoral students and teachers (for example, ERASMUS agreements for the cycle of Doctoral studies). At least 35% of doctoral students have completed a training course abroad or another form of mobility, such as participation in international scientific conferences. IOSUD develops and implements policies and action plans aimed at increasing the number of doctoral students participating in training courses abroad, up to at least 20%, which is the target at the level of the European Higher Education Area.

IOSUD-UMFVBT has concluded mobility agreements with various universities abroad aimed at the mobility of doctoral students and teachers, including ERASMUS agreements. These aim to increase the number of doctoral students who carry out research internships abroad. PhD students in the field of Dentistry have numerous participations in international scientific conferences ([Annex 23](#)).

CSD Dentistry together with CSUD UMF VBT constantly stimulates on the one hand the increase in the number of collaboration agreements with universities and national and international research institutes, where doctoral students to carry out a part of their research activity in the field of interest, as well as the dissemination of the obtained results, to be presented at prestigious international events. Such events are completed by invitations of various personalities in the field of interest to lecture at the Doctoral School of Dentistry, a place where other collaborations can leave and other high-

performing teams can be formed. Some of these invitations are presented in ([Annex 23](#)). We mention that at least 36 PhD students (35%) have completed an internship abroad or another form of mobility, such as participation in international scientific conferences ([Annex 23](#))

C.3.1.2. Within the evaluated field of studies is supported, including financially, the organization of doctorates in international co-supervision, respectively the invitation of first rank experts to give courses / lectures for doctoral students.

UMF Victor Babes Timisoara, which supported the participation of valuable researchers (including PhD supervisors) in internationally renowned events. Thus, during the Great New York Meeting in 2014, the team led by Prof. Univ. Dr. Meda Lavinia Negrutiu wins the First Prize, at which point the scientific collaboration negotiations between the two schools began: UMFVBTM and NYU. One of the consequences of this collaboration was a thesis in co-tutoring with NYU (Prof. Dr. Meda Lavinia Negrutiu - UMFVBT and Prof. Dr. Angela Kamer - NYU), which has so far registered 3 publications:

Hategan, SI; Kamer, AR; Sinescu, C; Craig, RG; Jivanescu, A; Gavrilovici, AM; Negrutiu, ML, Periodontal disease in a young Romanian convenience sample: radiographic assessment, BMC ORAL HEALTH, Volume: 19, Article Number: 94, pg.1-8, Published: MAY 29 2019, ISSN: 1472-6831, DOI: 10.1186 / s12903-019-0774-9, WOS: 000469470400004, IF 1.911 / 2019 (reprint author = main author; last author = main author)

Hategan, SI; Kamer, SA; Craig, RG; Sinescu, C; of Leon, MJ; Jianu, DC; Marian, C; Bora, BI; Dan, TF; Birdac, CD; Mark, A; Kamer, AR; Negrutiu, ML, Cognitive dysfunction in young subjects with periodontal disease, NEUROLOGICAL SCIENCES, Early access iconEarly Access: FEB 2021, ISSN: 1590-1874, eISSN: 1590-3478DOI: 10.1007 / s10072-021-05115-3, WOS: 000619690900003, PMID: 33606127., IF 2.415 / 2019 (last author = main author)

Hategan SI, Craig RG, Sinescu C, Kamer AR, Stratul SI, Gavrilovici AM, Jivanescu A, Negrutiu ML, Chronic oral inflammatory conditions in a Romanian population–focus on periodontal disease, International Seminar on Biomaterials and Regenerative Medicine BIOREMEDI 2017 Today`s research for tomorrow medicine, 5-7 October 2017, Timisoara, Abstract Book, pg.151, ISSN: 2601-0372, <http://bioremed.umft.ro/2017/>

As a result of the above example, several co-supervised theses are targeted in the near future, and thanks to the support of UMF Victor Babes Timisoara, which has

supported researchers' initiatives to conclude valuable and long-term collaborations with international research centers. The basis of these relations consists in inviting these foreign experts to lecture in national and international events. Among these invitations we mention:

Prof. Dr. Michael Razzoog, DDS, MS, MPH University of Michigan, Department of Prosthodontics USA – PROTETICĂ DENTARĂ (<https://www.romedic.ro/zilele-stomatologice-banatene-editia-a-xx-a-0N50699>);

Prof. Dr. Vincenzo Iorio Siciliano, DDS, PhD Department of Periodontology, University of Naples Federico II Italia - PARODONTOLOGIE(<https://www.romedic.ro/zilele-stomatologice-banatene-editia-a-xx-a-0N50699>);

Dr. Adrian Bradu, Physicist, MSc, PhD Research Associate, School of Physical Sciences, University of Kent, Canterbury United Kingdom – OPTOELECTRONICA ȘI APLICAȚII ÎN BIOLOGIE ȘI MEDICINĂ(<https://www.romedic.ro/zilele-stomatologice-banatene-editia-a-xx-a-0N50699>);

Prof. Dr. Adrian Mănescu Universita Politecnica delle Marche, Ancona Italia - EVALUĂRI NEDISTRUCTIVE ALE BIOMATERIALELOR(<https://www.romedic.ro/zilele-stomatologice-banatene-editia-a-xx-a-0N50699>);

Roeland De Moor, Universiteit Gent (Belgium) (<https://spie.org/Publications/Proceedings/Volume/8925>);

Peter Verheyen, Private Practice (Belgium) (<https://spie.org/Publications/Proceedings/Volume/8925>);

Adrian Gh. Podoleanu, University of Kent (United Kingdom) (<https://spie.org/Publications/Proceedings/Volume/8925>);

Josep Arnabat, Universitat de Barcelona (Spain) (<https://spie.org/Publications/Proceedings/Volume/8925>);

Antoni Espana, Universitat de Barcelona (Spain) (<https://spie.org/Publications/Proceedings/Volume/8925>);

- Prof. Dr. Adrian Mănescu Universita Politecnica delle Marche, Ancona Italia - EVALUĂRI NEDISTRUCTIVE ALE BIOMATERIALELOR(<https://www.romedic.ro/zilele-stomatologice-banatene-editia-a-xx-a-0N50699>);
- Roeland De Moor, Universiteit Gent (Belgium) (<https://spie.org/Publications/Proceedings/Volume/8925>);
- Peter Verheyen, Private Practice (Belgium) (<https://spie.org/Publications/Proceedings/Volume/8925>);
- Adrian Gh. Podoleanu, University of Kent (United Kingdom) (<https://spie.org/Publications/Proceedings/Volume/8925>);
- Josep Arnabat, Universitat de Barcelona (Spain) (<https://spie.org/Publications/Proceedings/Volume/8925>);
- Antoni Espana, Universitat de Barcelona (Spain) (<https://spie.org/Publications/Proceedings/Volume/8925>);

- Adrian Mănescu, Università Politecnica delle Marche (Italy) (<https://spie.org/Publications/Proceedings/Volume/8925>);
- Roly Konbilt, Università degli Studi di Roma La Sapienza (Italy) (<https://spie.org/Publications/Proceedings/Volume/8925>);
- Umberto Romeo, Università degli Studi di Roma La Sapienza (Italy) (<https://spie.org/Publications/Proceedings/Volume/8925>);
- Alessandro Del Vecchio, Università degli Studi di Roma La Sapienza (Italy) (<https://spie.org/Publications/Proceedings/Volume/8925>);
- Gianfranco Semezz, Private Practice (Italy) (<https://spie.org/Publications/Proceedings/Volume/8925>);
- Peter Fahlstedt, Karolinska Institute, Stockholm (Sweden) (<https://spie.org/Publications/Proceedings/Volume/8925>);
- Norbert Gutknecht, RWTH Aachen Universität Hospital (Germany) (<https://spie.org/Publications/Proceedings/Volume/8925>);
- Sharonit Sahar Helft, Hebrew University-Hadassah of Jerusalem (Israel) (<https://spie.org/Publications/Proceedings/Volume/8925>);
- Samir Nammour, University of Leige (Belgium) (<https://spie.org/Publications/Proceedings/Volume/8925>);
- Roeland De Moor, Universiteit Gent (Belgium) (<https://spie.org/Publications/Proceedings/Volume/10831?SSO=1>);
- Adrian Gh. Podoleanu, University of Kent (United Kingdom) (<https://spie.org/Publications/Proceedings/Volume/10831?SSO=1>);
- Josep Arnabat, Universitat de Barcelona (Spain) (<https://spie.org/Publications/Proceedings/Volume/10831?SSO=1>);
- Antoni Espana, Universitat de Barcelona (Spain) (<https://spie.org/Publications/Proceedings/Volume/10831?SSO=1>);
- Umberto Romeo, Università degli Studi di Roma La Sapienza (Italy) (<https://spie.org/Publications/Proceedings/Volume/10831?SSO=1>);
- Alessandro Del Vecchio, Università degli Studi di Roma La Sapienza (Italy) (<https://spie.org/Publications/Proceedings/Volume/10831?SSO=1>);
- Gianfranco Semezz, Consultant (Italy) (<https://spie.org/Publications/Proceedings/Volume/10831?SSO=1>);
- Paolo Vescovi, Università degli Studi di Parma (Italy) (<https://spie.org/Publications/Proceedings/Volume/10831?SSO=1>);
- Marina Vitale, Università degli Studi di Pavia (Italy) (<https://spie.org/Publications/Proceedings/Volume/10831?SSO=1>);
- Charles James Kirkpatrick (DE) (http://bioremed.umft.ro/2017/keynote_plenary_speakers.html);
- Adrian Gh. Podoleanu (UK) (http://bioremed.umft.ro/2017/keynote_plenary_speakers.html);
- Angela R Kamer (USA) (http://bioremed.umft.ro/2017/keynote_plenary_speakers.html);
- Wenche S. Borgnakke (USA) (http://bioremed.umft.ro/2017/keynote_plenary_speakers.html);

- Kinga Laczkóné Turzó (HU)
(http://bioremed.umft.ro/2017/keynote_plenary_speakers.html);
- José Miguel Martín Martínez (ES)
(http://bioremed.umft.ro/2017/keynote_plenary_speakers.html);
- Ahmed El-Ghannam (USA)
(http://bioremed.umft.ro/2017/keynote_plenary_speakers.html);
- Kunio Ishikawa (JP) (http://bioremed.umft.ro/2017/keynote_plenary_speakers.html);
- Corrado Piconi (IT) (http://bioremed.umft.ro/2017/keynote_plenary_speakers.html);
- Ilaria Cacciotti (IT) (http://bioremed.umft.ro/2017/keynote_plenary_speakers.html);
- Yasuhiko Tabata (JP) (http://bioremed.umft.ro/2017/keynote_plenary_speakers.html);
- Lia Rimondini (IT) (http://bioremed.umft.ro/2017/keynote_plenary_speakers.html);
- Guy Daculsi (FR) (http://bioremed.umft.ro/2017/keynote_plenary_speakers.html);
- Franco Rustichelli (IT) (http://bioremed.umft.ro/2017/keynote_plenary_speakers.html);
- Kiro Papakoca (MK) (http://bioremed.umft.ro/2017/invited_speakers.html);
- Fjola Jonsdottir (IS) (http://bioremed.umft.ro/2017/invited_speakers.html);
- Hyungsuck Cho (KOREA) (http://bioremed.umft.ro/2017/invited_speakers.html);

C.3.1.3. The internationalization of doctoral studies activities is also supported by other concrete measures (for example, participation in educational fairs to attract international doctoral students; inclusion of international experts in commissions for guidance or defense of doctoral theses, etc.).

UMFVBT supports the internationalization of doctoral studies activities by participating in educational fairs to attract international students. In this sense, the events of the Vocatium2go fair (2018, Stuttgart) can be mentioned ([Annex 24](#))

The importance that UMFVBT attaches to the development of quality and objectivity in doctoral students' research is supported by the evaluators exclusively from abroad for the Doctoral Grants Competition 2019. Within this competition, four applications were submitted from the Faculty of Dentistry. The evaluation of the applications was performed pro bono by evaluators from 17 countries (Figure 1), guaranteeing the objectivity of the evaluation and the selection of the most relevant projects. ([Annex 24](#))

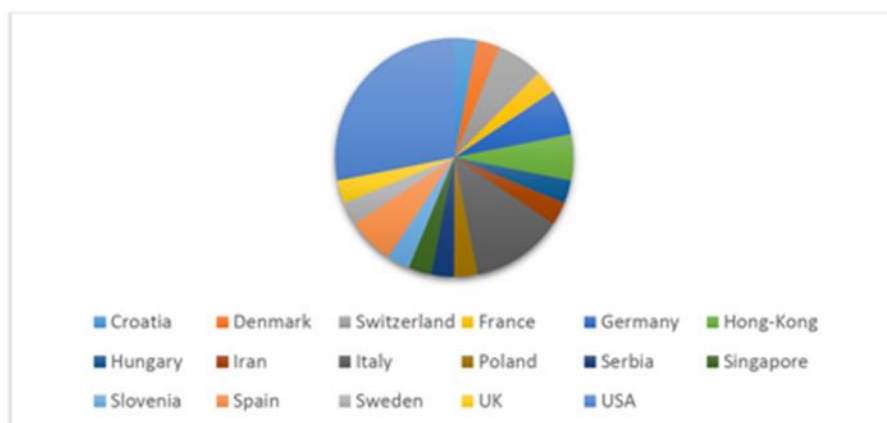


Figure 1. Distribution by countries of evaluators for the doctoral students competition - internal grants UMFVBT, 2019 session (source: «Report on the internal grants competition of UMFVBT 2019 session with funding from 2020»)

3. Strategies and procedures implemented at the level of doctoral university studies, as measures for continuous improvement of the quality of doctoral study programs, other than those provided by the minimum standards, provided in annex no. 4 to guide.

STRATEGIC DEVELOPMENT PLAN 2018-2020 OF THE DOCTORAL SCHOOL - DENTAL MEDICINE IN THE UNIVERSITY OF MEDICINE AND PHARMACY "VICTOR BABEȘ" TIMISOARA

1. Context

1.1. Legislative framework

This strategic development plan was drafted based on the National Education Law no. 1/2011 and Government Decision no. 681/2011 regarding the approval of the Code of University Doctoral Studies, with the subsequent modifications. The methodology used for self-assessment was the one specified in Order no. 5403/2018 of November 1, 2018 of the Minister of National Education on establishing the Methodology for evaluating the doctoral university and the systems of criteria, standards and performance indicators used in the evaluation, published in the Official Gazette no. 962 of November 14, 2018. The legislative framework that was taken into account included:

National education law no. 1/2011, with subsequent amendments and completions;

H.G no. 681/2011 on the approval of the Code of doctoral studies, with subsequent amendments and completions

Research strategy in UMF "Victor Babeș" from Timișoara in the period 2013-2020

ORDER no. 3751 of 29 April 2015 approving the Framework Methodology on the process of establishing and choosing management structures and functions at the level of institutions in the national higher education system DECISION no. 134/2016 of March 2, 2016 for the amendment and completion of the Code of doctoral studies ORDER no. 3842 of March 24, 2016 on the approval of the Regulation of organization and functioning of the National Council for Attestation of University Degrees, Diplomas and Certificates
National Strategy for Tertiary Education 2015 – 2020

The institutional regulation for the organization and functioning of the doctoral university study programs within UMF “Victor Babeș” from Timișoara, during 2016-2020 UMF Charter “Victor Babeș” Timișoara

MEN Order no. 5403 of 1 Nov 2018 on establishing the Methodology for evaluating doctoral university studies and the systems of criteria, standards and performance indicators used in evaluation

1.2. Current status:

In the European higher education area, the Bologna system has substantiated 3 cycles of fundamental studies. The 3rd cycle is dedicated to the doctorate and obtaining the doctorate. Doctoral education is considered a priority in the training of specialists with real scientific research skills and is of particular importance in universities everywhere, being considered the activity that brings the greatest added value in evaluating higher education institutions and asserting their prestige.

Doctoral School - the field of Dentistry is part of the Organizing Institution of University Doctoral Studies (IOSUD) which operates within the University of Medicine and Pharmacy “V. Babeș ”from Timișoara (UMFVBT).

2. Assumed principles

The development plan was designed according to the national legislation in the field and is in accordance with the Management Programs of the Rector of UMF “V. Babeș ”Timișoara, of the CSUD director, respectively of the dean and vice-deans of the deans of the Faculty of Dentistry.

The main provisions are:

Romania is committed to exploiting the opportunities offered by the European Union (EU) and the Member States and uses the basic documents and EU directives in the development of this strategy;

Romania uses good practices for building a relevant, efficient and effective tertiary education in the short, medium and long term;

Romania is committed to the development of tertiary education as an important tool in the general strategy of socio-economic development, supporting all the other development

plans and initiatives of the state, in particular, the National Reform Program, the National Strategy for Competitiveness 2021 - 2027, based on the successful concepts from the 2014-2020 program exercise and the Research-Development-Innovation Strategy, as well as some directions and modern concept, in resonance with the directions of development, research and innovation in the existing European space and their future trends.

3. General objectives

The general objectives include aspects directly related to the docotrans students, the docotrate leaders, the research activity and the current tendencies in the fields of interest as well as a major focus related to the internationalization of this process.

Thus, the following objectives were structured:

- 3.1. Application of the new legislative provisions regarding doctoral studies
- 3.2 Obtaining the accreditation of the MD Doctoral School of UMFVBT by the Ministry and National Education
- 3.3. Introduction of principles used by similar schools in European universities, on the recommendation of the European Association of Universities (EUA), such as:
 - Orientation towards increasing research capacity and capacity
 - Orientation of research towards topics approached at international level
 - Optimization of structures dedicated to doctoral studies
 - Stimulating mobility
- 3.4. Increasing the scientific performance of doctoral students, for a better integration in the socio-economic and professional environment.
- 3.5. Increasing the visibility and prestige of the Faculty of Dentistry and implicitly of UMF "V.Babeş", improving its position as a highly trusted Faculty as part of a university of excellence in international rankings (SCOPUS, SCIMAGO), its inclusion in the category of focused faculties on advanced education and research.

4. Academic management - doctoral students

Challenges related to this directive include:

Domestic and international inter-university and labor market competition;
Discrepancies between the skills and competences developed through the tertiary cycle of higher education and those required by the labor market;

Awareness, at social level, of the importance of the originality of scientific creation, with special emphasis on combating plagiarism;

An extremely rapid development of technologies and research methods in all scientific branches, an aspect that determines an explosion of interdisciplinary knowledge;

As possible solutions we have included:

Development of a stronger PR program that would allow the extension of the selection base for doctoral students to other faculties in the country you have chosen from abroad;

Organizing, for doctoral students in the first year of studies, courses of:

techniques for writing scientific papers (communications, posters, articles);

good practice techniques in organizing and conducting rigorous experimental / theoretical research;

Courses dedicated to the latest news in the fields of interest (webinars, online courses with prestigious researchers, national and international to clarify and possibly generate starting points for future research programs);

Involvement of PhD students in fundamental research directions that allow theoretical developments based on cutting-edge experimental research through access to electives research facility (eg Magurele Research Institute or CERN, etc.);

Promotion of internships in doctoral and postdoctoral programs, carried out mainly in national research institutions and international, state or private to expand the areas of information and skills of doctoral students;

Stimulating the increase in the number of doctorates in co-tutoring and / or international collaborations of doctoral supervisors.

Encouraging and supporting by CSUD the publication by doctoral students of scientific articles in ISI-rated journals, with an impact factor over 1, by paying the publication fee

Reimbursement by CSUD of professional training expenses of doctoral students (participation in conferences, summer schools, courses, internships abroad),

Information internships with the scientific leaders of the university for the efficient use of modern laboratory equipment, computer technology and existing scientific programs, for a modern processing of experimental information and substantiation of advanced theoretical concepts;

Stimulating the organization of doctoral students to create a strong networking network both at European and global level, by holding workshops, joint courses, lucrative internships and interdisciplinary and international collaborations (supporting scientific reports, exams, publications, participation in congresses / conferences / symposia);

Bi-annual organization of a session for scientific communications of doctoral students

Continuous optimization of the research infrastructure to support the development of activities specific to doctoral studies (library, free access to international academic databases, laboratory equipment), to be presented on the SD website.

The guidance of doctoral students by two functional commissions (one for pre-clinical research and one for clinical research), complementary to those offered by the scientific doctoral supervisor.

Stimulating the participation in doctoral / postdoctoral students' brainstorming communication sessions on interdisciplinary fields with stimulating the evaluation of a problem but especially in solving it at interdisciplinary level;

5. Human resources management

Human resources are the fundamental element necessary to obtain exceptional performance. The lack of a quality human resource is a decisive obstacle in increasing the national and international prestige of any institution.

Challenges:

High average age of SD members;

Lack of basic funding for conducting research activities in the laboratory with doctoral students;

Lack of adequate financial incentives for high-performing PhD supervisors;

Reduced cooperation on interdisciplinary projects / research;

Actions:

Encouraging experienced doctoral supervisors to contribute to the human and professional training of younger colleagues, in order to obtain the qualification;

Encouraging and supporting teachers to acquire the quality of doctoral supervisor;

Development of doctorates in co-tutelage (with other universities, but also with research institutes)

Developing partnerships with economic agents to define doctoral research topics that solve practical problems; this would create opportunities for cooperation for the development of joint research projects.

Guiding doctoral students to participate in the Scientific Communications Session addressed to them;

Guiding PhD students in publishing scientific results in ISI-rated journals, with high impact factor

Increasing the participation of doctoral supervisors, together with their doctoral students, in national and international scientific events, encouraging doctoral students to present oral papers;

Encouraging research with practical applicability;

Continuing the tradition, CSUD, of awarding scholarships of excellence for doctoral students with special scientific activity;

Collaboration with international funding centers (including private ones) that allow the identification of partners in the EU area interested in the research conducted, the generation of collaboration contracts and the writing of projects in partnership with them;

6. Management of research activities

The notion of the "knowledge triangle" - education, research and innovation - is a central element of the European Commission's Strategy for Education and Training 2020 (ET2020), being complemented in the strategy of the 2021-2027 technology transfer programs.

Challenges:

Maintaining insufficient and unpredictable funding at national level;

Excessive polarization between various departments and collectives;

The small number of patents granted, compared to the number of SDMD UMFVT members

Actions:

Identification of priority research topics for the year 2021-2027 compatible with the major research directions existing in SD UMFVBT, which would allow interdisciplinary and complementary collaborations, aiming to increase the quality of research;

Encouraging patenting activities-increased attractiveness and stimulating technology transfer;

Orientation of research towards directions with immediate and perspective practical applications, by approaching complex issues with teams, strategies and interdisciplinary solutions;

7. Internationalization

Challenges:

The transformation of SDMD of UMFVBT into an internationally recognized center of excellence in research, which will attract students from the faculty (Ro and Engl section) as well as researchers from abroad to do their doctorate here, or doctoral students from abroad to do research internships in SD UMFVBT.

Actions:

Stimulating doctoral supervisors in taking over foreign doctoral students;

Acceptance of international criteria for quantifying scientific production and orientation of activities so that SD UMFVBTs advance in national and international rankings;

The use of the international scientific cooperation relations of the doctoral supervisors for increasing the international visibility of UMFVBT, by attracting participants from prestigious universities or their association within the faculty / university (visiting professor etc);

Concluding Research Agreements with prestigious universities abroad, with research institutes, aimed at active participation in joint or complementary research directions and stimulating the mobility of doctoral students and teachers to conduct research, communication and information internships in areas of interest;

Promotion of doctorates in international co-tutoring;

Inviting international experts to give lectures / courses organized by SDMF;

Promoting research partnerships with European / international specialists / researchers and companies that allow the filing of European / international patents and whose technological transfer to produce financial consequences. A major emphasis is on spin-offs / start-ups that can be generated by doctoral students and that work based on research.

8. Quality

Challenges:

Isolation of SDMDUMFVBT on a conservative position, of neglecting new trends in international research, in its quantification and too little receptive to the requirements of the socio-economic environment.

Actions:

SDMD UMFVBT must permanently improve the quality of scientific research, guidance and collaboration with doctoral students, connection to the main directions of scientific research in the lumen by:

conscious assumption of the performance criteria used to rank the research scientific;

use of self-criticism tools to define the necessary changes at strategic and operational level - identifies weaknesses at collective and individual level, and acts to eliminate them; putting cooperation and collaboration at the forefront, but also accepting domestic and international competition, as a constructive and transparent tool for progress;

performance recognition

2. Given the strategic objectives of the university, SD UMFVBT must:

develop an internal self-assessment procedure, with clear, transparent criteria and in line with good international scientific practice, to increase the quality of all its activities;

prepare, responsibly, the international evaluation process and accept its results;

analyze the conclusions of the national and international evaluation commission and implement the necessary measures;

prepare and implement an annual self-assessment sheet for PhD supervisors and PhD students;
promote transparency regarding the quality of SD activities;
update the SD website with relevant information on the institutional status of the quality.

9. Social responsibility

Among the fundamental principles of social responsibility assumed by the University of Medicine and Pharmacy "V. Babeş" Timișoara, SD UMFVBT applies the following, according to its level of competencies:

Ethics and transparency;
Promoting dialogue with the socio-economic environment;
Sharing / encouraging expertise;
Supporting professionals;
Imposing sustainability as a research paradigm;

10. Strategic, financial, investment and administrative management

In order to build a top doctoral school, a team with a correct vision of its mission and objectives is needed, which can ensure both the current administrative management and the implementation of large-scale measures, ensuring, on the fly, the necessary corrections, in depending on domestic and international signals.

Actions:

Assumption, by each member of the SDMD, of a specific mission:
Identifying partnerships with socio-economic units, the problems they face and colleagues who have the competence to solve them;
Internationalization of SD by attracting foreign doctoral students, implementation of doctoral internships and exchange of professors to give lectures on topics of interest to SD UMFVBT;
Permanently updating the SDMD WEB page, ensuring, in this way, the transparency of the activities within SDMD;
Organizing the session of scientific communications of doctoral students;
Organizing, at the beginning of each academic year, joint courses for first year doctoral students;
Identifying the main directions of scientific research in the national programs, respectively the doctoral supervisors who could collaborate in the submission of joint projects, following the complementary competencies;

Appendix attached:

[Annex 1](#) Criterii, standarde și indicatori

[Annex 2](#) OMENCS nr. 5382 din 29.09.2016

[Annex 3](#) H.S NR 18-8140-27.06.2018

[Annex 4](#) PV CSD MD 25.09.2018 conducători doctorat

[Annex 5](#) PV CSD MD 25.09.2018 studenți doctoranzi

[Annex 6](#) HS nr. 10-13008 din 26.09.2018

[Annex 7](#) HS nr. 208 din 18.12.2020 Componenta consiliului interimar al CSD MD

[Annex 8](#) PV CSD MD 25.03.2021 conducători doctorat

[Annex 9](#) PV CSD MD 29.03.2021 studenți doctoranzi

[Annex 10](#) H.S. Nr. 151 8890 din 28.04.2021 Consiliul Școlii Doctorale Medicină Dentară

[Annex 11](#) H.S. Nr. 205 18470 din 18.12.2020 Consiliul pentru Asigurarea Calității

[Annex 12](#) H.S. Nr. 151 8890 din 28.04.2021 Consiliul Școlii Doctorale Medicină Dentară

[Annex 13](#) Contract de servicii antiplagiat Nr.1017 din 30.03.2021

[Annex 14](#) Membrii proiect granturi

[Annex 15](#) H.S. nr. 24 7135 din 24.06.2020

[Annex 16](#) CV si coordonatori cursuri

[Annex 17](#) H.S NR 11-17694-28.11.2018

[Annex 18](#) B.1.2.2.

[Annex 19](#) B215

[Annex 20](#) Contract Anelis

[Annex 21](#) Act aditional semnat

[Annex 22](#) Procedura de lucru antiplagiat 28.04.2021

[Annex 23](#) C3.1.1.

[Annex 24](#) Participari la targuri internationale

[Annex 25](#) A3.2.1.

[Annex 26](#) B3.1.2.

[Annex 27](#) B3.1.1.

[Annex 28](#) Chestionar de evaluare

[Annex 29](#) A.1.3.2.

[Annex 30](#) PV CSUD nr. 15741 din 28.10.2020