Annex 1 - BINDING PARAMETERS OF THE PROJECT

1. The name of the Project

Development of Beta-Titanium based individual implants produced by Additive Manufacturing processes

2. The start date and end date of the Project

01/2020 – 12/2022

3. The aim of the Project

The aim of the project is to design bio-implants from certified titanium beta alloys Ti-13Nb-13Zr (ASTM F1713) and Ti-12Mo-6Zr-2Fe (ASTM F1813) using 3D printing technologies. The materials are not commonly available in powder form for 3D printing and there are no deposition parameters available for 3D printing for these materials. A great advantage of these alloys over experimental alloys solved in other research projects is that they are approved for bioimplantation and therefore significantly reduce time to market. Given the extensive experience of research organizations in the field of biomedical applications, it is legitimate to expect the results to be achieved and their successful commercialization after the end of the project.

4. The main solver of the Project

Petr Bernard DiS.

5. The results of the Project

identification number TM01000061-V7	*The name of result* Certified print technology of Ti-13Nb-13Zr
Description of result The output is certified print technology of biocompatible alloy Ti-13Nb-13Zr. Verification of the technology is made by series of structural and mechanical tests.	
Type of result according to RIV database structure Ztech – Certified technology	

identification number TM01000061-V3	*The name of result* Utility model of traumatology implant
Description of result Protection of intellectual property of technical solution of traumatology implant using specific properties of beta titanium alloy.	
Type of result according to RIV database structure Fuzit – Utility model	

identification number	*The name of result*

TM01000061-V8	Certified print technology of Ti-12Mo-6Zr-2Fe
Description of result The output is certified print technology of biocompatible alloy Ti-12Mo-6Zr-2Fe. Verification of the technology is made by series of series structural and mechanical tests.	
Type of result according to RIV database structure Ztech – Certified technology	

identification number TM01000061-V9	*The name of result* Utility model of implant for bone replacement
Description of result The result provides protection of intellectual property of a bone replacement implant in oncological disease, due to osteonecrosis or osteolysis. The key of the solution is using of titanium alloy with low flexibility modulus (beta titanium alloy) for construction of compact replacement with surface allowing direct interaction with the bone.	
Type of result according to RIV database structure Fuzit – utility model	

6. Identification data of participants

Main recipient – (P) MEDIN, a.s.

Identification number 43378030	*Tax identification number* CZ43378030	*Company name* MEDIN, a.s.
Type of organization Large enterprise		

Other participant – (D) - České vysoké učení technické v Praze

Identification number 68407700	*Tax identification number* CZ68407700	*Company name* České vysoké učení technické v Praze
Type of organization Research organization		

Other participant – (D) – COMTES FHT a.s.

Identification number 26316919	*Tax identification number* CZ26316919	*Company name* COMTES FHT a.s.
Type of organization Research organization		

Other participant – (D) – ProSpon, spol. s r. o.

Identification number 45145466	*Tax identification number* CZ45145466	*Company name* ProSpon, spol. s r. o.
Type of organization Small enterprise		

Foreign partner (Z) – Industrial Technology Research Institute

Identification number 02750963	*Tax identification number* 02750963	*Company name* Industrial Technology Research Institute
Type of organization Research organization		

7. Costs (in Czech Crowns)

The Project

Item/Year	2020	2021	2022	Total maximal amount
Total project costs	6 926 072	11 168 088	10 940 064	29 034 224
Amount of subsidy	5 083 000	8 195 000	8 075 000	21 353 000
Maximal % of subsidy				74 %

Main recipient – (P) MEDIN, a. s.

Item/Year	2020	2021	2022	Total maximal amount
Personal costs	1 355 072	2 437 280	2 264 480	6 056 832
Subcontracting/services	30 000	45 000	55 000	130 000
Other direct costs	305 000	165 000	165 000	635 000
Indirect costs/overhead	696 000	1 355 808	1 255 584	3 307 392
Total project costs	2 386 072	4 003 088	3 740 064	10 129 224
Amount of subsidy	1 250 000	2 100 000	1 950 000	5 300 000
Method of overhead				Full cost

Other participant – (D) - České vysoké učení technické v Praze

Item/Year	2020	2021	2022	Total maximal amount
Personal costs	570 000	1 210 000	1 290 000	3 070 000
Subcontracting/services	50 000	100 000	100 000	250 000
Other direct costs	150 000	250 000	250 000	650 000
Indirect costs/overhead	180 000	365 000	385 000	930 000
Total project costs	950 000	1 925 000	2 025 000	4 900 000
Amount of subsidy	950 000	1 925 000	2 025 000	4 900 000
Method of overhead				Flat rate 25 %

Other participant – (D) – COMTES FHT a.s.

Item/Year	2020	2021	2022	Total maximal amount
Personal costs	1 100 000	1 150 000	1 150 000	3 400 000
Subcontracting/services	250 000	220 000	170 000	640 000
Other direct costs	1 065 000	830 000	780 000	2 675 000
Indirect costs/overhead	490 000	500 000	500 000	1 490 000
Total project costs	2 905 000	2 700 000	2 600 000	8 205 000
Amount of subsidy	2 405 000	2 400 000	2 300 000	7 105 000
Method of overhead				Full cost

Other participant – (D) – ProSpon, spol. s r. o.

Item/Year	2020	2021	2022	Total maximal amount
Personal costs	250 000	1 120 000	1 120 000	2 490 000
Subcontracting/services	105 000	150 000	150 000	405 000
Other direct costs	80 000	150 000	185 000	415 000
Indirect costs/overhead	250 000	1 120 000	1 120 000	2 490 000
Total project costs	685 000	2 540 000	2 575 000	5 800 000
Amount of subsidy	478 000	1 770 000	1 800 000	4 048 000
Method of overhead				Full cost

Foreign partner (Z) – Industrial Technology Research Institute (ITRI)

Item/Year	2020	2021	2022	Total maximal amount
Total project costs	876 500	597 275	623 125	2 096 900
Amount of subsidy	641 250	375 500	373 875	1 390 625