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SUPPLEMENTARY MATERIAL TO

Molecular designing of nanoparticles and functional materials

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GENERAL EVALUATION OF RESULTS

The research results of the project in the 2011–2016 period were published in 57 SCI articles, cited 757 times in the same period, with a Hirsch index of 15. Eight articles were published in the journal *Colloids and Surfaces, B: Biointerfaces*, 5 in *Materials Science and Engineering, C*, 3 in *Journal of Power Sources*, 3 in *Ceramics International*, 2 in *Materials Letters*, 2 in *Journal of Applied Crystallography*, 2 in the *Journal of Materials Science* and *Ceramic Transactions*, etc. The list of the most cited articles, according to *SCOPUS*, is shown in Table S-I.

TABLE S-I. The most cited publications of MODENAFUNA from the period between 2011. and 2016. (as of 05.12.2016)

Reference	Journal	Citations
1	Journal of Biomedical Materials Research: Part B – Applied Biomaterials	183
2	Nanotoxicology	84
3	Colloids and Surfaces B: Biointerfaces	34
4	Polymer	31
5	Journal of the European Ceramic Society	26
6	Acta Biomaterialia	23
7	International Journal of Nanomedicine	23
8	Journal of Materials Science: Materials in Medicine	22
9	Journal of Power Sources	20
10	Colloids & Surfaces: B Biointerfaces	19

The total number of researchers who implemented this project is 13: 1 senior researcher (team leader), 4 young PhD scientists (heads of project tasks) and 8

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PhD students. The project lasted from January 1, 2011 to December 31, 2016 and had a total budget of ~900.000 EUR, ~500,000 EUR of which was allocated for researchers' salaries, ~300,000 EUR for the major equipment (Setaram Instrumenation: TMA, TGA/DTA/DSC and MS) and 100,000 EUR for the minor equipment and lab items and supplies.

A comparative analysis of the influence factors was carried out for all projects in the field of integral and interdisciplinary research (III) between 2011 and 2016. The factor of influence is defined as the ratio of the number of citations of the principal researcher and the number of publications authored by the project team in the specified period. The project output measured by the number of publications corresponds to the number of publications listed in the five-year report submitted to the Ministry of Education, Science and Technological Development of the Republic of Serbia by the project's principal researcher. Projects in the field of natural sciences (physics and chemistry, OI) in similar areas of work were added to these projects (Fig. S-1). It is observed that the ratio is the highest for our project III 45004. The same applies to the Hirsch index (h), which is the highest (15) for the principal investigator of Project III 45004.

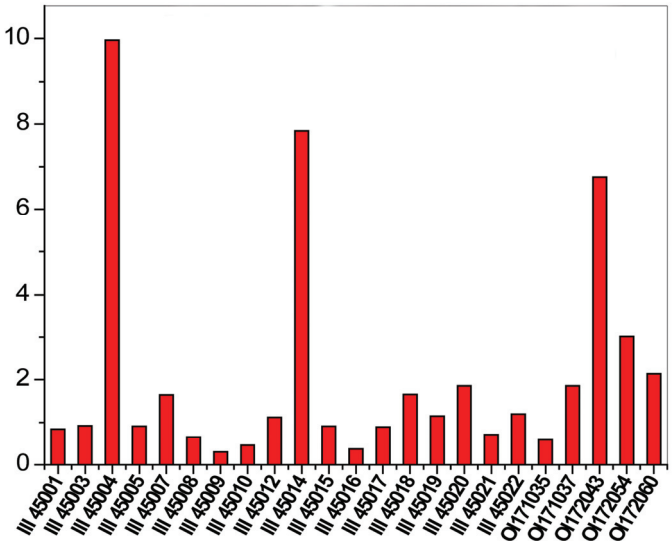

Fig. S-1. The number of citations of the principal investigator/the number of ISI publications authored by the project team in the specified period (2011–2015).

Between 2011 and 2016, Project III45004 associates had the opportunity to cooperate with the numerous renowned scientists and institutions worldwide. The project strategy was to form joint research programs that would encourage study visits and exchange of researchers with international laboratories to gain inter-

national experience. Most papers, 24 of them, were published jointly with authors from the Jožef Stefan Institute (Ljubljana, Slovenia), 7 with the authors from the University of California at San Francisco (San Francisco, CA, USA) and the University of Illinois at Chicago (Chicago, IL, USA), 6 with the authors from the National Institute of Biology (Ljubljana, Slovenia), 4 with the authors from the National Institute of Chemistry (Ljubljana, Slovenia), 2 with the authors from the Chapman University, (Irvine, CA, USA), 2 with the authors from the Korea Institute of Science and Technology (Seoul, Republic of Korea), 2 with authors from the Vavilov State Optical Institute (St. Petersburg, Russia) and 1 paper with the authors from the University College Cork (Cork, UK), University of Oslo (Oslo, Norway), Bragg Institute, Australian Nuclear Science and Technology Organisation (Australia), Czestochowa University Technology (Czestochowa, Poland) and the University of Erlangen-Nuremberg (Germany) each.

Seven PhD theses were successfully defended in the same period: two by M. Vukomanović at Belgrade University and the Jožef Stefan Institute, Ljubljana, Slovenia, where she remained to work after her PhD, Z. Stojanović, A. Stanković, M. Lukić, M. Milović and Lj. Veselinović. Invited lectures were given in the USA, Taiwan, Korea, Italy, Austria and Poland. Twelve international conferences were organized, six for leading researchers in the field of materials sciences from around the world (YUCOMAT 2011–2016) and six for young researchers (YRC 2011–2016).

The project management team was especially attentive to the integration of research, education and innovation, seeking to integrate academic and industrial research. Within this goal, the priority was to protect the achieved innovations as patents. Four patent applications were filed at the national patent office: Procedure of synthesizing multifunctional micro- and nano-composite spheres with nanoparticles of silver coated with biodegradable polymers; Preparation of micro-spheres bioresorbable of polymer poly (D,L-lactide-co-glycolide) containing ascorbic acid; Procedure for obtaining lithium iron phosphate ($LiFePO_4$) and the carbon composite by precipitation method in the of stearic acid melt; Way of obtaining high density bio ceramic materials based on calcium phosphate by the parallel optimization of the synthesis method and the sintering process.

As an aftermath of the obtained results, the new knowledge gained and patents registered in the field of nanoparticles for reconstructive engineering, the spin-off program BORN (Bone Regenerative Nanomaterials) is being established. The technical documentation was compiled on the technological production of a material based on hydroxyapatite nanoparticles suitable for the application in bone tissue reconstructive engineering as a filler, or as a multifunctional drug delivery system. Implementation of the BORN program is being actively discussed with national and international partners from the industry.

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