

**Titlu proiect: Development and implementation of Grouping and Safe-by-Design approaches within regulatory frameworks (NANoREG II)**

**Categoria de proiect: H2020-NMP-2014-two-stage, Research & Innovation Actions (RIA)**

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**Durata proiect: 01.09.2015-28.02.2020**

**Responsabil proiect, Task co-Leader: Tănăsescu Speranța Valeria**

#### Lista rezultate

Nr. crt.	NUME AUTORI	TITLUL ARTICOLULUI/ CĂRȚII/ COMUNICĂRII ȘTIINȚIFICE	REVISTA / VOLUMUL/EDITURA IN CARE A APARUT / CONFERINTA LA CARE S-A COMUNICAT	ANUL PUBLICARII/ COMUNICARIIL
<b>Documentații, studii, lucrări, planuri, scheme și altele asemenea</b>				
<b>ARTICOLE ISI</b>				
1	A. Mech, K. Rasmussen, P. Jantunen, L. Aicher, M. Alessandrelli, U. Bernauer, R. Draisici, M. Dusinska, A. G. Oomen, M. L. Polci, C. Riebeling, J. Sandström, B. Shivachev, S. Stateva, S. Tanasescu, R. Tsekovska, H. Wallin, M. F. Wilks, S. Zellmer & M.D.Apostolova	Insights into possibilities for grouping and read-across for nanomaterials in EU chemicals legislation	Nanotoxicology, 13, 119-141.	<b>2019</b>
2	A. Giusti, R. Atluri, R.Tsekovska, A. Gajewicz, M.D. Apostolova, C. L. Battistelli, E. A.J. Bleeker, C. Bossa, J.Bouillard, M. Dusinska, P. Gómez-Fernández, R. Grafström, M.Gromelski, Y.Handzhiyski, N.R. Jacobsen, P. Jantunen, K. A. Jensen, A. Mech,	Nanomaterial grouping: Existing approaches and future recommendations	NanoImpact, 16, 100182, 1-18 (Review article)	<b>2019</b>

	J. M. Navas, P. Nymark, A.G. Oomen, T. Puzyn, K. Rasmussen, J. Riego Sintes, B.Suarez-Merino, S.Tanasescu, H. Wallin, A. Haase			
3	A. Precupas, D. Gheorghe, A. Botea-Petcu, A. R. Leonties, R. Sandu, V.T. Popa, E. Mariussen, El Y. Naoule, E. Rundén-Pran, V. Dumit, Y. Xue, M. R. Cimpan, M. Dusinska, A. Haase, S. Tanasescu	Thermodynamic parameters at bio/nano interface and nanomaterial toxicity: A case study on BSA interaction with ZnO, SiO <sub>2</sub> and TiO <sub>2</sub>	Chemical Research in Toxicology, 33, 8, 2054-2071.	<b>2020</b>

**Mentiune: Lucrarea nr. 3 a fost inclusa in Baza de date “Comparative Toxicogenomics Database” (CTD is an NIEHS-funded public database that elucidates molecular mechanisms by which environmental chemicals affect disease).**

#### ARTICOLE TRIMISE SPRE PUBLICARE

1	N. Jeliazkova, M.D. Apostolova, C. Andreoli, F. Barone, A. Barrick, C. Battistelli, C. Bossa, A. Botea-Petcu, A. Châtel, I. De Angelis, M. Dusinska, N. El Yamani, A. Giusti, P. Gómez-Fernández, D. Gheorghe, R. Grafström, M. Gromelski, N. Raun Jacobsen, V. Jeliazkov, K. Alstrup Jensen, N. Kochev, P. Kohonen, N. Manier, E. Mariussen, A. Mech, J. María Navas, V. Paskaleva, A. Precupas, T. Puzyn, K. Rasmussen, P. Ritchie, I. Rodríguez Llopis, E. Rundén-Pran, R. Sandu, N. Shandilya, S. Tanasescu, A. Haase, P. Nymark	Towards FAIR Nanosafety Data,	lucrare trimisa la Nature Nano Technology/ Reference Number Nature Nanotechnology-20061654, lucrare in revizie	<b>2020</b>
2	A. Balmori, R. Sandu, D. Gheorghe, A. Botea-Petcu, A. Precupas, S. Tanasescu, D. Sánchez-García, S. Borrós	Revising protein Corona Characterization: Combining ITC and NanoDSC to Understand the Interaction of Proteins with porous Nanoparticles	lucrare trimisa la Advanced Materials Interfaces, registration number admi.202001615	<b>2020</b>

<b>CARTI</b>				
<b>1</b>	S. Tănăescu, D. Gheorghe, A. Precupaş, A. Botea- Petcu, R. Sandu, V.T. Popa	Thermodynamic descriptors of the interaction at the bio/nano interface	Capitol in vol. 28 “Nanomateriale – Proprietăți Funcționale și Aplicații” din seria “Micro- and nanoengineering”, Editura Academiei Române, București, (2020) ISBN 978-973- 27-2982-3.p. 85-97.	<b>2020</b>
<b>DOCUMENTE privind implementarea conceptului de Grupare a Nanomaterialelor (NM) in cadrul Strategiei de Testare Inteligenta (NM Grouping in a global Intelligent Testing Strategy – ITS)</b>				
<b>1</b>	Owners of the content: BfR, <b>IPC</b> , IDEA, IMB-BAS, ISS, JRC, KI, NIA, RIVM, NILU, NRCWE, UniBasel	Deliverable 1.2 <i>Report on Regulatory Needs for implementing grouping</i> , under the <b>Task 1.2 Monitoring future regulatory needs</b> focused on the Regulation of Chemicals under REACH, as well as on the Regulation of Cosmetics.  <b>IPC</b> (S. Tanasescu): Co-Leader of Task 1.2	(Final Version)	<b>2017</b>
<b>2</b>	Owners of the content: , BfR, CEA, IIT, IMB-BAS, KI, <b>IPC</b> , ISS, GAIKER, TEMAS, NRCWE, NILU, INIA, INERIS, RIVM, UCO, UniBasel, UG	Deliverable 1.6 <i>Report on Grouping Demonstration</i> , under the <b>Task 1.4 (Establishing grouping principles)</b>  <b>IPC contribution:</b> Following the results of the study performed on more than 30 MNM-proteins systems, IPC suggested first criteria for MNM grouping approach based on the analysis of binding characteristics of MNM and proteins.	(Final, Version)	<b>2018</b>
<b>3</b>	Owners of the content: BfR, CEA, IIT, <b>IPC</b> , INERIS, INIA, IMB-BAS, ISS, GAIKER, KI, NRCWE, UCO, JRC	Deliverable 1.7 <i>Report on validation</i> , under the <b>Task 1.5 Implementation of Technically Oriented instruments in a global ITS.</b>  <b>IPC contribution:</b> focused on prospective research on new key parameters for MNM grouping and gap filling by essential experimental work on the <i>interaction of NPs with biomolecules: assessing the thermodynamics of binding interactions and the effect of the NPs on the protein stability, as well as EPR measurements.</i>	(Final version)	<b>2019</b>

**COMUNICARI STIINTIFICE NATIONALE**

<b>1</b>	S. Tănăescu	Importanta strategiilor de grupare a nanomaterialelor si de implementare a conceptului de siguranta prin design pentru dezvoltarea cadrului legislativ in domeniul nanomaterialelor si nanotehnologijilor (proiect NanoREG II, RIA)	Seminarul National de Nanostiuanta si Nanotehnologie, Editia a 15-a, 15 iunie 2016, Academia Romana, Bucuresti (lucrare invitata)	<b>2016</b>
<b>2</b>	R. Sandu, A. Botea-Petcu, A. Precupas, D. Gheorghe, V.T. Popa, S. Tănăescu	Thermodynamic characterization of two plasma proteins adsorption to some nanoparticles	A 16-a ediție a Seminarului Național de Nanoștiință și Nanotehnologie, Biblioteca Academiei Române, 6 iunie 2017, București, România. (poster)	<b>2017</b>
<b>3</b>	S. Tănăescu	Challenging aspects of the European projects in the nanosafety area. Implications for the research in the "Ilie Murgulescu" Institute of Physical Chemistry	A 17-a editie a Seminarului Național de Nanoștiință și Nanotehnologie, 7 noiembrie 2018, București, Romania. (lucrare invitată)	<b>2018</b>
<b>4</b>	S. Tănăescu	Key parameters controlling the interaction at the bio/nano interface	A 18-a editie a Seminarului Național de Nanoștiință și Nanotehnologie (SNN2019), 24-25 octombrie 2019, Iași, Romania. (lucrare invitată)	<b>2019</b>

**COMUNICARI STIINTIFICE INTERNATIONALE**

<b>1</b>	S. Tanasescu, A. Precupas, A. Botea-Petcu, D. Gheorghe, R. Sandu, A.M. Toader, V.T. Popa	Thermodynamics of nanoparticles-protein interaction: the effect of TiO <sub>2</sub> and ZnO nanoparticles on the thermodynamic stability of bovine serum albumin	International Conference of Physical Chemistry (ROMPHYSCHM 16), 21-24 September 2016, Galati, Romania. (poster)	<b>2016</b>
<b>2</b>	S. Tanasescu, A. Precupas, D. Gheorghe, A. Botea-Petcu, R. Sandu, V.T. Popa	Thermodynamic investigations of protein stability in the presence of nanoparticles,	ETPN-General Assembly & Annual Event of the European Technology Platform on Nanomedicine, 12-14 October 2016, Heraklion, Greece. (poster)	<b>2016</b>

<b>3</b>	S. Tanasescu, A. Botea-Petcu, D. Gheorghe, A. Precupas, R. Sandu, V.T. Popa	Thermodynamic parameters controlling the interaction of nanoparticles with proteins	European NanoForum Conference (ENF 2017), 21-23 June 2017, Valletta, Malta. (poster)	<b>2017</b>
<b>4</b>	S. Tanasescu	Thermodynamics of binding interactions (bio/nonbio interaction)	NanoReg2 – WP1 Grouping Workshop, September 18-19, 2017, Den Haag, Netherlands (prezentare orala)	<b>2017</b>
<b>5</b>	S. Tanasescu, A. Precupas, D. Gheorghe, A. Botea-Petcu, R. Sandu, V.T.Popa	Correlation between energetic parameters and the dominant contributions determining the adsorption processes during nanomaterials/proteins interactions	12th Annual Event of the European Technology Platform on Nanomedicine (ETPN), 17-19 October 2017, Malaga, Spain (poster)	<b>2017</b>
<b>6</b>	S. Tanasescu	The control of the stability and reactivity of the nanomaterials based on the evaluation of the energetic parameters	BROKERAGE EVENT on H2020 NMBP calls, 12th Annual Event of the European Technology Platform on Nanomedicine (ETPN), 17-19 October 2017, Malaga, Spain. (prezentare orala)	<b>2017</b>
<b>7</b>	D. Gheorghe, A. Precupas, A. Botea-Petcu, V.T. Popa, Speranta Tanasescu	Thermodynamics stability of bovine plasma fibrinogen in the presence of nanoparticles	29 <sup>th</sup> ESAT-European Symposium on Applied Thermodynamics, May 18-21, 2017, Bucharest, Romania. (poster)	<b>2017</b>
<b>8</b>	A. Botea-Petcu, A. Precupas, D. Gheorghe, R. Sandu, V. T. Popa, S. Tanasescu,	Thermodynamic study of protein stability in the presence of SiO <sub>2</sub> nanoparticles	29 <sup>th</sup> European Symposium on Applied Thermodynamics-ESAT, May 18-21, 2017, Bucharest, Romania. (poster)	<b>2017</b>
<b>9</b>	D. Gheorghe, A. Botea-Petcu, A. Precupas, V.T.Pop, Speranta Tanasescu	Thermodynamic parameters of the protein thermal stability in the presence of nanoparticles	XXI International Conference on Chemical Thermodynamics in Russia (RCCT2017) 26-30 June2017, ISBN 978-5-90168-841-0 (poster)	<b>2017</b>
<b>10</b>	A. Botea-Petcu, D. Gheorghe, A. Precupas, R. Sandu, V.T. Popa, S. Tanasescu	The study of the protein – nanoparticles interaction by calorimetric methods	4th Central and Eastern European Conference on Thermal Analysis and Calorimetry (CEEC-TAC4), 28-31 August, Chisinau, Moldova. (poster)	<b>2017</b>

<b>11</b>	A. Balmori, D. Gheorghe, A. Botea-Petcu, A. Precupas, R. Sandu, S. Borros, D. Sánchez, S. Tanasescu	The study of protein - mesoporous SiO <sub>2</sub> nanoparticles interaction	4th Central and Eastern European Conference on Thermal Analysis and Calorimetry (CEEC-TAC4), 28 -31 August 2017, Chisinau, Moldova. (poster)	<b>2017</b>
<b>12</b>	S. Tănărescu, A. Precupaş, D. Gheorghe, A. Botea-Petcu, M. Ostermann, F. Teodorescu, R. Sandu, A. Sauter, E. Cimpan, V.T. Popa, M.R. Cimpan	Relating thermodynamics to the dominant contributions determining the toxicity of nanomaterials	13 <sup>th</sup> Annual Event of the European Technology Platform on Nanomedicine (ETPN), 28-30 May 2018, Berlin, Germany (poster)	<b>2018</b>
<b>13</b>	S.Tanasescu	Thermodynamic parameters controlling the interaction of MNM with selected proteins	NanoReg2 – WP1 Meeting, June 19, 2018, Rome, Italy. (prezentare orala)	<b>2018</b>
<b>14</b>	A. Haase, K.A. Jensen, S. Tanasescu, I. Rodriguez, M. Dusinska, M. Apostolova, J. M. Navas, T. Puzyn & all NanoReg2 WP1 Members (D. Gheorghe, A. Precupas, R. Sandu, A. Botea, V.T.Pop),	The NanoReg2 Grouping Approach	Joint event OECD/ NanoReg2/Gracious: Scientific Workshop on Grouping of Nanomaterials, 12-13 September, 2018, Paris, Franta (prezentare orala)	<b>2018</b>
<b>15</b>	D. Gheorghe, A. Precupaş, S. Tanasescu, V.T. Popa	The effect of crystalline structure and surface characteristics of different TiO <sub>2</sub> nanoforms on bovine serum albumin thermal denaturation: a differential scanning calorimetry study	12 <sup>th</sup> European Symposium on Thermal Analysis and Calorimetry (ESTAC12), 27-30 August 2018, Brasov, Romania. (poster)	<b>2018</b>
<b>16</b>	S. Tanasescu, A. Precupas, D. Gheorghe, F. Teodorescu, A. Botea-Petcu, R. Sandu, V. T. Popa, E. Mariussen, N. El Yamani, M. Dusinska, A. Giusti, A. Haase, E. Rundén-Pran	Correlation between the thermodynamic parameters of the nanoparticles/proteins interactions and the dominant contributions determining the toxicity of the nanomaterials	9 <sup>th</sup> International Conference on Nanotoxicology (NanoTox), 18-21 September 2018, Düsseldorf/Neuss, Germania.(poster)	<b>2018</b>
<b>17</b>	A. Giusti, R. Tsekovska, G. Ionita, D. Pietraforte, F. Barone, E. Mariussen, E. Rundén-Pran, M. Dusinska, N. Jacobsen,	Grouping approaches for nanomaterials based on oxidative stress responses	9 <sup>th</sup> International Conference on Nanotoxicology (NanoTox), 18-21 September 2018,	<b>2018</b>

	A. Bahl, S. Tanasescu, T. Puzyn, M. Apostolova, A. Haase		Düsseldorf/Neuss, Germania.(poster)	
18	S. Tanasescu, D. Gheorghe, A. Precupaş, A. Botea-Petcu, R. Sandu, F. Teodorescu, V. T. Popa	Thermodynamic parameters controlling the interaction of MNM with selected proteins	NanoReg2 Consortium Meeting and General Assembly, 26-27 Februarie 2019, Paris, Franta.(poster)	2019
19	D. Gheorghe, A. Precupaş, A. Botea-Petcu, R. Sandu, V.T. Popa, S. Tănasescu	Calorimetric study of the driving forces controlling the protein-nanoparticles interaction	28th Symposium on Thermal Analysis and Calorimetry – Eugen Segal – of the Commission for Thermal Analysis and Calorimetry of the Romanian Academy (CATCAR28) & 2nd Symposium on Thermal Analysis and Calorimetry of Moldova (MoldTAC2), 9-10 May 2019, Timisoara, Romania. (poster)	2019
20	S. Tanasescu, A. Precupas, D. Gheorghe, A. Botea-Petcu, R. Sandu, V.T. Popa	Thermodynamic parameters controlling the interaction at the bio/nano interface: novel criteria for nanomaterials grouping,	EuroNanoForum Conference (ENF2019), June 12-14, 2019, Bucharest, Romania. (poster)	2019
21	S. Tanasescu, D. Gheorghe, A. Precupas, A. Botea-Petcu, R. Sandu, V.T. Popa	Key parameters controlling the bio/nano interface: thermodynamic characteristics of the nanoparticles/protein interaction	Nanomed Europe 2019 – NME19 – June 17-19 – Braga, Portugal. (poster)	2019
22	A. Botea-Petcu, D. Gheorghe, A. Precupaş, R. Sandu, V.T. Popa, S. Tănasescu	Thermodynamic parameters of the protein interaction with SiO <sub>2</sub> nanoparticles	XXII International Conference on Chemical Thermodynamics in Russia (RCCT 2019), June 19-23, 2019, St. Petersburg, Rusia. (poster)	2019
<b>Colecții și baze de date</b>				
1	<b>H2020 NANOREG2 Database</b> <b>eNanoMapper database instance</b> – implementing the eNanoMapper data model - usually consists of data from individual nanosafety projects and may be protected by role-based access to keep data confidential.	( <a href="https://search.data.enanomapper.net/nanoreg2">https://search.data.enanomapper.net/nanoreg2</a> )		2020

**Responsabil proiect,**

**Dr. Tănasescu Speranța Valeria**