



## Curriculum vitae

**Prof. RNDr Marie Hubálek Kalbáčová, PhD.**

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## Education:

1993-1995 Charles University, Prague: Faculty of Natural Sciences; **The study was completed by a Bc. degree**

1995-1998 Charles University, Prague: Faculty of Natural Sciences, Department of Molecular Biology, Genetics and Virology; **The study was completed by a Mgr. degree**

1998-2003 Charles University, Prague: Faculty of Natural Sciences, Department of Molecular Biology, Genetics and Virology; **The study was completed by a Ph.D. and RNDr. Degree**

## Employment:

**07/2002-11/2004** Postdoctoral fellowship at Institute of Inherited Metabolic Disorders, 1st Faculty of Medicine, Charles University, Prague, **Czech Republic**, Dr. S. Knoch

**01/2004-03/2004** Postdoctoral fellowship at Max Bergmann Center of Biomaterials, University of Technology, Dresden, **Germany**, Dr. D. Scharnweber

**12/2004-12/2006** Postdoctoral fellowship at Institute of Physiological Chemistry, Medical Faculty of University of Technology, Dresden, **Germany**, Dr. U. Hempel

**01/2007 -06/2009** Research Assistant at Institute of Inherited Metabolic Disorders, 1st Faculty of Medicine, Charles University, Prague, **Czech Republic**

**10/2007** Visiting scientist at Dr. D. Mooney research group, School of Engineering and Applied Sciences, Harvard University, Cambridge, **MA, U.S.A.**,

**07/2008** Visiting scientist at Dr. U. Hempel research group, Institute of Physiological Chemistry, Medical Faculty of University of Technology, Dresden, **Germany**,

- 10-11/2008** Visiting scientist at Dr. M. Strano research group, Department of Chemical Engineering, Massachusetts Institute of Technology (MIT), Cambridge, **MA, U.S.A.**
- 06/2009–07/2014** Assistant Professor at Institute of Inherited Metabolic Disorders, 1st Faculty of Medicine, Charles University in Prague, Prague, **Czech Republic**
- 07/2014- 12/2017** Associate Professor at Institute of Inherited Metabolic Disorders, 1st Faculty of Medicine, Charles University, Prague, **Czech Republic**
- 04/2012-06/2021** Senior Researcher at Biomedical Centre, Faculty of Medicine in Pilsen, Charles University, Pilsen, **Czech Republic**
- 09/2012 – 07/2014** Assistant Professor at Institute of Histology and Embryology, Faculty of Medicine in Pilsen, Charles University in Prague, Pilsen, **Czech Republic**
- 07/2014 – 08/2022** Associate Professor at Institute of Histology and Embryology, Faculty of Medicine in Pilsen, Charles University in Prague, Pilsen, **Czech Republic**
- 01/2018 – present** Professor (since 2022) at Institute of Pathological Physiology, 1st Faculty of Medicine, Charles University, Prague, **Czech Republic**
- 07/2020 – present** Principal Investigator – Head of the Department of Science and Research in Biomedical Applications, Faculty of Health Studies, Technical University of Liberec, **Czech Republic**

#### **Scientific stays**

- 07/1998-12/1998** study stay in Novartis Pharma, Basel, Switzerland – dr. B. Hengerer
- 07/2000-09/2000** study stay in Novartis Pharma, Basel, Switzerland – dr. B. Hengerer
- 08/2001-10/2001** study stay in Novartis Pharma, Basel, Switzerland – dr. B. Hengerer
- 01/2004-03/2004** Postdoctoral fellowship at Max Bergmann Center of Biomaterials, University of Technology, Dresden, **Germany**, Dr. D. Scharnweber
- 10/2007-11/2007** visiting scientist at School of Engineering and Applied Sciences, Harvard University, Cambridge, MA, **U. S. A** – prof. D. Mooney
- 08/2008-09/2008** visiting scientist at Institute of Physiological Chemistry, Technical University Dresden, Dresden, **Germany**, Dr. U. Hempel
- 10/2008-12/2008** visiting scientist at Massachusetts Institute of Technology (MIT), Cambridge, MA, **U. S. A**, prof. M. Strano
- 01/2020** visiting professor at NPUST, National Pingtung University of Science and Technology, **Taiwan**, prof. Ko-Tung Chang
- 10/2023-12/2023** visiting professor at NPUST, National Pingtung University of Science and Technology, **Taiwan**, prof. Hso-Chi Chaung

#### **Grants:**

- 2014-2016 - Kontakt II (MŠMT ČR) - Doped semiconductor nanocrystals – novel nanomaterials for nano-bio-applications – team member
- 2015-2018 – AZV (MZ ČR- 15-25813A) – Development and comprehensive pre-clinical testing of novel composite materials for bone surgery – main applicant
- 2015-2018 – V4J (MŠMT – 8F15001) - Nanophotonics with metal – group-IV-semiconductor nanocomposites: From single nanoobjects to functional ensembles (NaMSeN) - team member
- 2017-2019 – GAČR (17-11397S) – Study of the endocytotic machinery via modification of viral-based nanoparticles – main applicant

2018 – Pilsen Innovation Voucher – Optimization of protocols for new biosensors application in clinical studies – co-applicant

2019-2022 – AZV(NV19-08-00144) – Humanized patient-derived murine xenografts for experimental therapy of hematologic malignancies and for the study of in vivo acquired drug-resistance

### Scientific awards

**2010** L'Oréal Stipendium for Women in Science

### Patent

Patent EU - EP 2 288 699: Method of making arranged cell structures

### Main research topics

- cell interaction with materials, biocompatibility of materials, cell adhesion, biosensors, nanoparticles and cells, hyaluronic acid and cells, biodegradable scaffolds and cells, bone implants, drug and DNA delivery into cells, eukaryotic and bacterial “race for the surface” on implants, viruses as vehicles for delivery.

### Teaching and Supervision Activities

2008 -2010 – 1<sup>st</sup> Faculty of Medicine, Charles University in Prague, **Cell Biology** – seminar for Czech and international students

2009 – presence – 1. LF UK – **Practical course in confocal microscopy** – course for pregradual and postgradual students of Charles University

2010- presence – Technical University Dresden, Germany - **Biofunktionalisierte Oberflächen** – lecture for postgradual students of TU Dresden

2012- presence – Medical Faculty in Pilsen, Charles University - **Histology and embryology** – pregraduate master course and practicum

2018- presence – Faculty of Mathematics and Physics, Charles University, Prague –

**Nanotechnology in Biology** – post-graduate course

**Physics in Biology** – post-graduate course

2018 – presence – 1<sup>st</sup> Faculty of Medicine, Charles University, Prague – **Stem Cells and Regenerative Medicine** – pre- and post-graduate course

**Supervisor of** - 3 graduated Bachelors, 4 graduated Master of Science, 5 graduated PhD student, currently supervising 1 Master student and 3 Ph.D. students.

### Publications (07/2024)

- about 84 publications (refereed), 2 book chapters

- h-index – 27

- citations without auto-citations – 2 310

### Chapters in monographies

B. Rezek, M. Krátká, E. Ukraintsev, O. Babchenko, A. Kromka, A. Brož, **M. Kalbacova**: *Diamond as functional material for bioelectronics and biotechnology* In: “New Perspectives in Biosensors Technology and Applications” Intech, pp. 177-196, 2011, ISBN 978-953-307-448-1.

**Hubálek Kalbáčová M.** *Transport of Biomolecules into Cells*. 2015, In D. Smejkalova, & K. Nesperova, Nanoparticulate drug delivery systems (pp. 99-132). ISBN 978-80-260-

**Papers**

- Nguyenova H. Y., **Hubalek Kalbacova M.**, Dendisova M., Sikorova M., Jarolimkova J., Kolska Z., Ulrychova L., Weber J., Reznickova A., *Stability and biological response of PEGylated gold nanoparticles*, Heliyon, 10, e30601, 2024, IF – 4.0
- Lasocka I., Skibniewska E., Skibniewski M., Szulc-Dabrowska L., Jastrzebska E., Pasternak I., Sitek J., **Hubalek Kalbacova M.**, *Graphene monolayer as an appropriate substrate for mesenchymal stem cells support in regenerative medicine*. Indian Journal of Experimental Biology, 61, p 235-243, 2023, IF – 0.944
- Bělinová T., Javorová P., Nguyenová H. J., Rezníčková A., Humlová Z., **Hubálek Kalbáčová M.**, *Ultra-small gold nanoparticles with mild immunomodulatory activity as potential tool for bio-applications*, Folia Biologica, 68, 142-152, 2022, IF – 1.167
- Lasocka I., Jastrzębska E., Zuchowska A., Skibniewska E., Skibniewski M., Szulc-Dąbrowska L., Pasternak I., Sitek J., **Hubalek Kalbacova M.**, *Graphene 2D platform is safe and cytocompatible for HaCaT cells growing under static and dynamic conditions*, Nanotoxicology, 16, 5, 610-628, 2022, IF 5881
- Jonas F., Kesa P., Paral P., Pankrac J., **Hubalek Kalbacova M.**, Miletin J., Sukop A., Molitor M., Stanek K., Sefc L., Mestak O., *The Effect of Vascular Endothelial Growth Factor C and Adipose-Derived Stem Cells on Lymphatic Regeneration in a Rat Vascularized Lymph Node Transfer Model*, Journal of Reconstructive Microsurgery, 39 (04), 311-319, 2022, IF 2.1
- Váňová J., Čihařová B., Hejtmánková A., Epperla C.H., Škvára P., Forstová J., **Hubálek Kalbáčová M.**, Španielová H., *VirPorters: Insights into the action of cationic and histidine-rich cell-penetrating peptides*, International Journal of Pharmaceutics, 611, 121308, 2022, IF – 5.875
- Šugár P., Ludrovcová B., **Hubálek Kalbáčová M.**, Šugárová J., Sahul M., Kováčík J., *Laser Surface Modification of Powder Metallurgy-Processed Ti-Graphite Composite Which Can Enhance Cells' Osteo-Differentiation*, Materials, 14, 6067, 2021, IF – 3.623
- Ju X., **Hubálek Kalbáčová M.**, Šmíd B., Johánek V., Janata M., Dinhová T. N., Bělinová T., Mazur M., Vorokhta M., Strnad L., *Poly(acrylic acid)-mediated synthesis of cerium oxide nanoparticles with variable oxidation state and their effect on regulating intracellular ROS level*, Journal of Materials Chemistry B, 9, 7386, 2021, IF - 6.331
- Tonarova P., Lochovska K., Pytlik R., **Hubalek Kalbacova M.**, *The impact of various culture conditions on human mesenchymal stromal cells metabolism*, Stem Cells International, 6659244, 2021, IF – 5.443
- Lasocka I., Szulc-Dabrowska L., Skibniewski M., Skibniewska E., Gregorczyk-Zboroch K., Pasternak I., **Hubalek Kalbacova M.**, *Cytocompatibility of graphene monolayer and its impact on focal cell adhesion, mitochondrial morphology and activity in BALB/3T3 fibroblasts*, 2021, Materials, 14, 643, IF – 3,057
- Inoue A., Sugimoto H., Sugimoto Y., Akamatsu K., **Hubalek Kalbacova M.**, Ogino C., Fujii, M., *Stable Near-Infrared Photoluminescence from Silicon Quantum Dot–Bovine Serum Albumin Composite*. In press in MRS Communications, 2020, IF – 1.997
- Ju X., Fučíková A., Šmíd B., Nováková J., Matolínová I., Matolín V., Janata M., Bělinová T., **Hubálek Kalbáčová M.**, *Colloidal Stability and Catalytic Activity of Cerium Oxide Nanoparticles in Cell Culture Media*. 2020, RSC Advances, 10, 39373, IF- 3.119
- Belinova T., Machova I., Beke D., Fucikova A., Gali A., Humlova Z., Valenta J., **Hubalek Kalbacova M.**, *The immunomodulatory potential of differently-terminated ultra-small*

- silicon carbide nanoparticles*, 2020, *Nanomaterials*, 10(3), 573, IF- 4. 234
- Machova I., Hubalek M., Belinova T., Fucikova A., Stehlik S., Rezek B., **Hubalek Kalbacova M.**, *The bio-chemically selective interaction of hydrogenated and oxidized ultra-small nanodiamonds with proteins and cells*. 2020, *Carbon*,162, 650-661, IF – 8.821
- Vanova J., Hejtmankova A., Zackova Suchanova J., Sauerova P., Forstova J., **Hubalek Kalbacova M.**, Spanielova H.,*Influence of cell-penetrating peptides on the activity and stability of virus-based nanoparticles*, *Int. Journal of Pharmaceutics*, 576, 119008, 2020, IF - 4.845
- Vanova J., Hejtmankova A., **Hubalek Kalbacova M.**, Spanielova H., *The Utilization of Cell-Penetrating Peptides in the Intracellular Delivery of Viral Nanoparticles*, *Materials*, 12, 2671,2019, IF – 3.057
- Sauerova P., Suchy T., Supova M., Bartos M., Klima J., Juhasova J., Juhas S., Kubikova T., Tonar Z. Sedlacek R., Piola M., Soncini M., Fiore G. G.,Soncini M., **Hubalek Kalbacova M.**, *Positive impact of dynamic seeding of mesenchymal stem cells on bone-like biodegradable scaffolds with increased content of calcium phosphate nanoparticles*, *Molecular Biology Reports*, 46,4483-4500, 2019, IF - 1.402
- Suchý T., Šupová M., Sauerová P., **Hubálek Kalbáčová M.**, Eva Klapková, Marek Pokorný, Lukáš Horný, Jan Závora, Rastislav Ballay, František Denk, Martin Sojka, Lucie Vištejnová, *Evaluation of collagen/hydroxyapatite electrospun layers loaded with vancomycin, gentamicin and their combination: comparison of release kinetics, antimicrobial activity and cytocompatibility*, *European Journal of Pharmaceutics and Biopharmaceutics*, 140, 50-59, 2019, IF – 4.604
- Lasocka I., Jastrzebska E., Szulc-Dąbrowska L., Skibniewski M., Pasternak I, **Hubalek Kalbacova M.**, Skibniewska E.M. *The effects of graphene and mesenchymal stem cells in cutaneous wound healing and their putative action mechanism*, *Journal of Nanomedicine*, 14, 2281-2299, 2019, IF – 5,115
- Reznickova, A., Slavikova N., Kolska, Z., Kolarova K., Belinova T., **Hubalek Kalbacova M.**, Cieslar M., Svorcik V., *PEGylated gold nanoparticles: Stability, cytotoxicity and antibacterial activity*, *Colloids and Surfaces A* 560, 26-34, 2019, IF – 3.99
- Smatlikova P., Juhas S., Juhasova J., Suchy T., **Hubalek Kalbacova M.**, Ellederova Z., Motlik J., Klima I., *Adipogenic differentiation of bone marrow-derived mesenchymal stem cells in pig transgenic model expressing human mutant huntingtin*, *Journal of Huntington's Disease*, 8, 33-51, 2019
- Pislova M., **Hubalek Kalbacova M.**,Vrabcova L., Slepicka P., Kolska Z., Svorcik V., *Preparation of noble nanoparticles by sputtering – their characterization*, *Digest Journal of Nanomaterials and Biosructures*, 13, 1035-1044, 2018, IF – 0.638
- Kubikova T., Bartos M., Juhas S., Suchy T., Sauerova P., **Hubalek Kalbacova M.**, Tonar Z., *Comparison of ground sections, paraffin sections and micro-CT imaging of bone from the epiphysis of the porcine femur for morphometric evaluation*, in press in *Annals of Anatomy*, 2018, IF – 1,852
- Pawlik A., Socha R. P., **Hubalek Kalbacova M.**, Sulka G. D., *Surface modification of nanoporous anodic titanium dioxide layers for drug delivery systems and enhanced SAOS-2 cell response*,*Colloids and Surfaces B:Biointerfaces*, 2018, 171:58-66, IF – 3,997
- Belinova, T., Vrabcova, L., Machova, I., Fucikova A., Valenta J., Sugimoto H., Fujii M., Hubalek Kalbacova M., *Silicon quantum dots and thier impact on differnet human cells*, *Physica Status Solidi (b)*, early view 1700597, 2018, IF – 1.674

- Bartos, M., Suchy T., Tonar Z., Foltan R, **Hubalek Kalbacova M.**, *Micro-CT in tissue engineering scaffolds designed for bone regeneration: principles and application*, *Ceramics-silikáty*, 2018,62:194-199, IF – 0.439
- Jirik M., Bartos M. , Tomasek P., Maleckova A., Kural T., Horakova J., Lukas D., Suchy T., Kochova P., **Hubalek Kalbacova M.**, Kralickova M., Tonar Z., *Generating standardized image data for testing and calibrating quantification of volumes, surfaces, lengths and object counts in fibrous and porous materials using X-ray microtomography*, *Microscopy Research and Technique*, 2018, ,81:551-568, IF – 1.147
- Suchy T., Supova M., Bartos M., Sedlacek R., Piola M., Soncini M., Fiore G. G., Sauerova P., **Hubalek Kalbacova M.**, *Dry versus hydrated collagen scaffolds: are dry states representative of hydrated states?* *Journal of Materials Science:Materials in Medicine*, 2018, 29:20 IF - 2.325
- Herynkova K., Simakova P., Cibulka O., Fucikova A., **Hubalek Kalbacova M.**, *Hydrophilic Luminescent Silicon nanoparticles in steric colloidal solutions: Their size, agglomeration and toxicity*, *Physica Status Solidi C*, 170195, 2017
- Sauerova P., Pilgrova T., Pekar M., **Hubalek Kalbacova M.**, *Hyaluronic acid in complexes with surfactants reduces their cytotoxic effect on human cell types*, *International Journal of Biological Macromolecules*,103:1276-1284, 2017 – IF – 3.138
- Verdanova M., Sauerova P., Hempel U., **Hubalek Kalbacova M.**, *Initial cell adhesion of three cell types in the presence and absence of serum proteins* *Histochemistry and Cell Biology*,148:273-288, 2017 – IF – 2.78
- Suchý T., Šupová M., Klapková E., Adámková V., Závora J., Žaloudková M., Rýglová Š., Ballay R., Denk F., Pokorný M., Sauerová P., **Hubálek Kalbáčová M.**, Horný L., Veselý J., Voňavková T., Průša R., *The Release Kinetics, Antimicrobial Activity and Cytocompatibility of Differently Prepared Collagen/Hydroxyapatite/Vancomycin Layers: Microstructure vs. Nanostructure*, *European Journal of Pharmaceutical Sciences*, 100:219-229, 2017 – IF 3,773
- Broz A, Ukraintsev E., Kromka A., Rezek B., **Hubalek Kalbacova M.**, *Osteoblast adhesion, migration and proliferation variations on chemically patterned nanocrystalline diamond films evaluated by live-cell imaging*. *J Biomed Mater Res Part A*, 105, 1469-1478, 2017 – IF 3,263
- Ostrovská L., Broz A., Fucikova A., Belinova T., Sugimoto H., Kanno T., Fujii M.,Valenta J., **Hubalek Kalbacova M.**, *The impact of doped silicon quantum dots on human osteoblasts*, *RSC Advances*, 6, 63403, 2016, IF 3,289
- Verdanova M., Rezek B., Broz A., Ukraintsev E., Babchenko O., Artemenko A., Izak T., Kromka A., Kalbac M., **Hubalek Kalbacova M.**, *Nanocarbon Allotropes - Graphene and Nanocrystalline Diamond - Promote Cell Proliferation*, *Small*, 12: 2499-2509, 2016, IF 8,315
- Ostrovská L., Vistejnova L., Dzugan J., Slama P., Kubina T., Ukraintsev E., Kubies D., Kralickova M. , **Hubalek Kalbacova M.**, *Biological evaluation of ultra-fine titanium with improved mechanical strength for dental implant engineering*, *Journal of Materials Science*, 51: 3097-3110, 2016 – IF 2,302
- Suchy T., Supova M., Sauerova M., Verdánová M., Sucharda Z., Ryglova S., Zaloudkova M, Sedlacek R., **Hubalek Kalbacova M.**, *The effects of different cross-linking conditions on collagen-based nanocomposite scaffolds - an in vitro evaluation using mesenchymal stem cells*, *Biomedical Materials*,10: 065008, 2015 – IF 3,697

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- Sauerova P., Verdanova M., Mravec F., Pilgrova T., Venerova T., **Hubalek Kalbacova M.**, Pekar M.: *Hyaluronic acid, a useful modulator of the cytotoxic effects of cationic surfactants*, *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 493: 155-161, 2015 – IF 2,760
- Verdanova M., Pytlik R., **Hubalek Kalbacova M.**, *Evaluation of sericin as an FBS-replacing cryoprotectant during freezing of human mesenchymal stromal cells and human osteoblast-like cells*, *Biopreservation and Biobanking*, 12: 99-105, 2014 – IF 1,34
- Fucikova A., Valenta J, Pelant M., **Hubalek Kalbacova M.**, Broz A., Rezek B., Kromka A, Bakaeva Z.: *Silicon nanocrystals and nanodiamonds in live cells: photoluminescence characteristics, cytotoxicity and interaction with cell cytoskeleton*, *RSC Advances*, 4: 10334-10342, 2014 – IF 3,840
- Hubalek Kalbacova M.**, Verdanova M., Broz A., Vetushka A, Fejfar A., Kalbac M.: *Modulated surface of single-layer graphene controls cell behaviour*, *Carbon*, 72: 207-214, 2014 – IF 6,196
- Kalbacova M.**, Verdanova M., Mravec F., Halasova T., Pekar M.: *Effect of CTAB and CTAB in the presence of hyaluronan on selected human cell types*, *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 460: 204-208, 2014 – IF 2,752
- Verdanova M., Broz, A, Kalbac, M., **Kalbacova M**: *Influence of oxygen and hydrogen treated graphene on cell adhesion in the presence or absence of fetal bovine serum*, *Physica status solidi (b)* 249: 2503-2506, 2012 – IF 1,489
- Kalbacova, M**; Broz, A; Kalbac, M: *Influence of the fetal bovine serum proteins on the growth of human osteoblast cells on graphene*, *J Biomed Mater Res Part A*, 100A: 3001-3007, 2012 – IF 2,834
- Kratka, M; Kromka, A; Ukrainsev, E; Ledinsky, M; Broz; A; **Kalbacova, M**; Rezek, B: *Function of thin film nanocrystalline diamond-protein SGFET independent of grain size*, *Sensors and Actuators B*, 166-167: 239-245, 2012 – IF 3,535
- Neykova, N; Broz; A; Remes, Z; Hruska, K; **Kalbacova, M**; Kromka, A; Vanecek, M: *ZnO hedgehog-like structures for control cell cultivation*, *Applied Surface Science*, 258: 3485-3489, 2012 – IF 2,112
- Kalbacova, M**; Broz; A; Kromka, A; Babchenko, O; Kalbac, M: *Controlled oxygen plasma treatment of single-walled carbon nanotube films improves osteoblast cells attachment and enhances their proliferation*, *Carbon*, 49: 2926-2934, 2011 – IF 5,378
- Kalbacova M**, Broz A, Kong J, Kalbac M, *Graphene substrates promote adherence of human osteoblasts and mesenchymal stromal cells*, *Carbon*, 48: 4323-4329, 2010 – IF 4,504
- Rezek B., Kratka M., Kromka A., **Kalbacova M.**, *Effects of protein inter-layers on cell-diamond FET characteristics*, *Biosensors and Bioelectronics*, 26:1307-1312, 2010 – IF 5,361
- Jin H, Heller DA, **Kalbacova M**, Kim J-H, Zhang J, Boghossian AA, Maheshri N, Strano MS, *Detection of single-molecule H<sub>2</sub>O<sub>2</sub> signaling from epidermal growth factor receptor using fluorescent single-walled carbon nanotubes*, *Nature Nanotechnology*, 5: 302-309, 2010 – IF 30,306
- Rezek B., Ukrainsev E., Kromka A., Ledinsky M, Broz A, Noskova L, Hartmannova H, Kalbacova M., *Assembly of osteoblastic cell micro-arrays on diamond guided by protein pre-adsorption*, *Diam Rel Mater*, 19:153-157, 2010 – IF 1,825

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- Kalbacova M**, Rezek B, Baresova V, Wolf-Brandstetter C, Kromka A, *Nanoscale topography of nanocrystalline diamonds promotes differentiation of osteoblasts*, Acta Biomaterialia 5:3076-3085, 2009 - IF 3,975
- Kalbacova M**, Broz A, Babchenko O, Kromka A, *Study on cellular adhesion of human osteoblasts on nano-structured diamond films*, Physica Status Solidi B, 246: 2774-2777, 2009 – IF 1,15
- Ukrainsev E., Rezek B, Broz A, **Kalbacova M**, *Long-term adsorption of fetal bovine serum on H/O-terminated diamond studied in situ by atomic force microscopy*, Physica Status Solidi B, 246: 2832-2835, 2009 – IF 1,15
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- Rezek B, Michalikova L, Ukrainsev E., Kromka A., **Kalbacova M.**, *Micro-Pattern guided adhesion of osteoblasts on diamond surfaces*, Sensors 9 (5):3549-3562, 2009 – IF 1,821
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- Kalbacova M**, Macak J.M., Schmidt-Stein, F., Mierke, C. T., Fabry, B., Schmuki, P., *TiO<sub>2</sub> nanotubes: Photocatalyst for cancer cell killing*, Physica Status Solidi (RRL) 2: 194-196, 2008 - IF 2,147
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### Invited Lectures

- 2021 – FuNaM-3 – International Workshop on Functional Nanostructured Materials, Krakow, Poland Applications of nanomaterials in biomedicine
- 2018 – Debugging Nanobio-interfaces to promote clinical translation, Mainz, Germany – Ultra-small nanoparticle interaction with different cells
- 2018 – Stem cells and cell therapy:from research to moder applications, Černá Hora, Czech Republic – Impact of cultivation conditions on mesenchymal stem cells of different origin
- 2018 – 43<sup>rd</sup> FEBS Congress, Prague, Czech Republic – Carbon materials for cell growth
- 2015 - Stem cells and cell therapy: from research to modern applications, Černá Hora, Czech Republic – Mechanically Improved Collagen-based Scaffolds for MSC cultivation.
- 2014 – Knochenklub, Universitaetsmedizin Rostock, Germany – Cell Responses on Nanostructured Materials
- 2013 – Biosystems-Material-Interaction – IV. Lecture tour, Universitaetsmedizin Rostock, Germany – Nanomaterials in Cell Biology

### Editorial work (reviewer for journals)

Nanomaterials, ACS Application, Materials, Scientific Reports, Acta Biomaterialia, J. Biomedical Nanotechnology, Carbon, Small, Journal of Biomedical Material Research, Frontiers, Folia Biologica, etc.

**International cooperation**

Prof. Ko-Tung Chang, NPUST, Tchaiwan; prof. Minoru Fujii, Kobe University, Japonsko; prof. Adam Gali, Wigner Institute, Budapest, Hungary; dr. Guiseppe Bardi, Genova, Italy; Dr. Ute Hempel and prof. Vera Hintze, TU-Dresden, German, Dr. Daniel Heller, Memorial Sloan Kettering Cancer Center, New York, U.S.A., etc.