

Characteristics of the submitted research/ artistic/other output

Name and surname	prof. MUDr. Andrea Čalkovská, DrSc.					
Document type:	Characteristics of the submitted research/ artistic/other output					
The name of the university	Comenius University Bratislava					
The seat of the university	Šafárikovo námestie 6, 818 06 Bratislava					
OCA1. - Surname awarded to the assessed person	Čalkovská					
OCA2. - Name awarded to the assessed person	Andrea					
OCA3. - Degrees awarded to the assessed person	prof., MD, DSc.					
OCA4. - Hyperlink to the entry of the person in the Register of university staff	https://www.portalvs.sk/regzam/detail/5344					
1st evaluated output						
OCA5. - Area of assessment	General Medicine, I.+II.degree; Normal and Pathological Physiology. III.degree; Normal and Pathological Physiology - field of habilitation procedure and inaugural procedure					
OCA6. - Category of the research/ artistic/other output	scientific output					
OCA7. - Year of publication of the research/artistic/other output	1999					
OCA8. - ID of the record in the Central Registry of Publication Activity (CRPA) or the Central Registry of Artistic Activity (CRAA)	ID = 1308023					
OCA9. - Hyperlink to the record in CRPA or CRAA	https://app.crepc.sk/?fn=detailBiblioFormChildYU2O8&sid=118F2A3D570393A65B766BDF1D9E&seo=detail-%C4%8C%C3%A1nok					
Title of the publication to which the hyperlink points	Combined effects of high-frequency ventilation and surfactant treatment in experimental meconium aspiration syndrome					
RATP coefficient	A+					
Justification of the RATP	Publication of internationally recognized quality					
OCA17. - List of maximum 5 most significant citations corresponding to the output	<table border="1"> <tr> <td>[o1] 2000 Greenough, A.: Expanded use of surfactant replacement therapy. In: European Journal of Pediatrics, roč. 159, č. 9, 2000, s. 635-640 - SCI ; SCOPUS</td> <td>[o1] 2005 Dargaville, P. A. - Mills, J. F.: Surfactant therapy for meconium aspiration syndrome: Current status. In: Drugs, roč. 65, č. 18, 2005, s. 2569-2591 - SCI</td> <td>[o1] 2016 Lin, C. H. - Jeng, M. J. - Kuo, B. I. T. - Kou, Y. R.: Pediatric Critical Care Medicine, roč. 17, č. 6, 2016, s. e287-e295 - SCI ; SCOPUS</td> <td>[o1] 2016 Turhan, A. H. - Atici, A. - Muslu, N. - Polat, A. - Sungur, M. A.: Experimental Lung Research, roč. 42, č. 4, 2016, s. 199- 204 - SCI</td> <td>[o1] 2021 Sánchez-Luna, M. - González- Pacheco, N. - Santos- González, M. - Tendillo-Cortijo, F.: Clinics in Perinatology, roč. 48, č. 4, 2021, s. 855-868 - SCI ; SCOPUS</td> </tr> </table>	[o1] 2000 Greenough, A.: Expanded use of surfactant replacement therapy. In: European Journal of Pediatrics, roč. 159, č. 9, 2000, s. 635-640 - SCI ; SCOPUS	[o1] 2005 Dargaville, P. A. - Mills, J. F.: Surfactant therapy for meconium aspiration syndrome: Current status. In: Drugs, roč. 65, č. 18, 2005, s. 2569-2591 - SCI	[o1] 2016 Lin, C. H. - Jeng, M. J. - Kuo, B. I. T. - Kou, Y. R.: Pediatric Critical Care Medicine, roč. 17, č. 6, 2016, s. e287-e295 - SCI ; SCOPUS	[o1] 2016 Turhan, A. H. - Atici, A. - Muslu, N. - Polat, A. - Sungur, M. A.: Experimental Lung Research, roč. 42, č. 4, 2016, s. 199- 204 - SCI	[o1] 2021 Sánchez-Luna, M. - González- Pacheco, N. - Santos- González, M. - Tendillo-Cortijo, F.: Clinics in Perinatology, roč. 48, č. 4, 2021, s. 855-868 - SCI ; SCOPUS
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OCA18. - Characteristics of the output's impact on socio-economic practice	The study made it possible to introduce a new animal model at our laboratory. The extension of methods has increased the competitiveness of our laboratory and facilitated the acquisition of further scientific research projects. Its direct impact on socio-economic practice cannot be assessed, but from the point of view of neonatology the potential of the combined therapy is that surfactant overwhelms inhibitors in the lungs, facilitates the opening and stabilization of alveoli and HF ventilation prevents progressive lung damage and further inactivation of endogenous and exogenous surfactant.					
OCA19. - Characteristics of the output and related activities' impact on the educational process	The introduction of a new animal model at JLF UK has made surfactant research opportunities more attractive for doctoral and undergraduate students as part of their student professional activities. The results were incorporated into lectures within the respiratory system.					
2nd evaluated output						
OCA5. - Area of assessment	General Medicine, I.+II.degree; Normal and Pathological Physiology. III.degree; Normal and Pathological Physiology - field of habilitation procedure and inaugural procedure					
OCA6. - Category of the research/ artistic/other output	scientific output					
OCA7. - Year of publication of the research/artistic/other output	2008					
OCA8. - ID of the record in the Central Registry of Publication Activity (CRPA) or the Central Registry of Artistic Activity (CRAA)	UK.Bratislava.vtls000204518					
OCA9. - Hyperlink to the record in CRPA or CRAA	http://www.crepc.sk/portal?fn=*review&uid=56928&pageId=resultform&full=0					
Title of the publication to which the hyperlink points	Bronchoalveolar lavage with pulmonary surfactant/dextran mixture improves meconium clearance and lung functions in experimental meconium aspiration syndrome					
RATP coefficient	A+					
Justification of the RATP	Publication of internationally recognized quality					

OCA17. - List of maximum 5 most significant citations corresponding to the output		<table><tr><td>[o1] 2010 Lu, K. W. - Taeusch, H. W.: Combined effects of polymers ... In: Biochimica et Biophysica Acta Biomembranes, roč. 1798, č. 6, 2010, s. 1129-1134 - SCOPUS</td><td>[o1] 2012 Lopez-Rodriguez, E. - Ospina, O. L. - Echaide, M. - Taeusch, H. W. - Perez-Gil, J.: Exposure to polymers reverses ... In: Biophysical Journal, roč. 103, č. 7, 2012, s. 1451-1459 - SCI ; SCOPUS</td><td>[o1] 2012 Speer, C. P. - Sweet, D.: Surfactant Replacement: Present and Future. In: Bancalari, E.: The Newborn Lung. Neonatology Questions and Controversies. Philadelphia : Elsevier Saunders, 2012, S. 298 – SCOPUS</td><td>[o1] 2013 Lu, K. W. - Taeusch, H. W. - Clements, J. A.: Hyaluronan with dextran added ... In: Experimental Lung Research, roč. 39, č. 4-5, 2013, s. 191-200 - SCI ; SCOPUS</td><td>[o1] 2018 Lugones, Y. - Blanco, O. - Lopez-Rodriguez, E. - Echaide, M. - Cruz, A. - Perez-Gil, J.: PLoS ONE, roč. 13, č. 9, 2018, s. e0204050 - SCI ; SCOPUS</td></tr></table>	[o1] 2010 Lu, K. W. - Taeusch, H. W.: Combined effects of polymers ... In: Biochimica et Biophysica Acta Biomembranes, roč. 1798, č. 6, 2010, s. 1129-1134 - SCOPUS	[o1] 2012 Lopez-Rodriguez, E. - Ospina, O. L. - Echaide, M. - Taeusch, H. W. - Perez-Gil, J.: Exposure to polymers reverses ... In: Biophysical Journal, roč. 103, č. 7, 2012, s. 1451-1459 - SCI ; SCOPUS	[o1] 2012 Speer, C. P. - Sweet, D.: Surfactant Replacement: Present and Future. In: Bancalari, E.: The Newborn Lung. Neonatology Questions and Controversies. Philadelphia : Elsevier Saunders, 2012, S. 298 – SCOPUS	[o1] 2013 Lu, K. W. - Taeusch, H. W. - Clements, J. A.: Hyaluronan with dextran added ... In: Experimental Lung Research, roč. 39, č. 4-5, 2013, s. 191-200 - SCI ; SCOPUS	[o1] 2018 Lugones, Y. - Blanco, O. - Lopez-Rodriguez, E. - Echaide, M. - Cruz, A. - Perez-Gil, J.: PLoS ONE, roč. 13, č. 9, 2018, s. e0204050 - SCI ; SCOPUS			
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OCA18. - Characteristics of the output's impact on socio-economic practice		The study is of excellent international quality when it comes to originality and outputs. In this study published in the peer-reviewed, impacted journal in Q1, we showed that a mixture of pulmonary surfactant and dextran is very effective in removing aspirated meconium from the lungs. This preclinical study significantly highlighted the potential of lavage with an exogenous surfactant preparation with dextran in the removal of meconium during meconium aspiration syndrome, which is a serious condition in neonatology.								
OCA19. - Characteristics of the output and related activities' impact on the educational process		The introduction of a new animal model among the methodologies used by our laboratory has made the possibilities of surfactant research more attractive for doctoral students and undergraduate students within the framework of student scientific activities. PhD. student is also a co-author of the article (D. Mokrá). The results were incorporated into lectures within the respiratory system.								
3rd evaluated output										
OCA5. - Area of assessment		General Medicine, I.+II.degree; Normal and Pathological Physiology. III.degree; Normal and Pathological Physiology - field of habilitation procedure and inaugural procedure								
OCA6. - Category of the research/ artistic/other output		scientific output								
OCA7. - Year of publication of the research/artistic/other output		2016								
OCA8. - ID of the record in the Central Registry of Publication Activity (CRPA) or the Central Registry of Artistic Activity (CRAA)		ID: UK.Bratlava.vtls000314351								
OCA9. - Hyperlink to the record in CRPA or CRAA		http://www.crepc.sk/portal?fn=*review&uid=1943302&pageId=resultform&full=0								
Title of the publication to which the hyperlink points		Meconium-induced inflammation and surfactant inactivation: specifics of molecular mechanisms								
RATP coefficient		A+								
Justification of the RATP		Publication of internationally recognized quality								
OCA17. - List of maximum 5 most significant citations corresponding to the output		<table><tr><td>[o1] 2017 Echaide, M. - Autilio, C. - Arroyo, R. - Perez-Gil, J.: Biochimica et Biophysica Acta - Biomembranes, roč. 1859, č. 9, 2017, s. 1725-1739 - SCI ; SCOPUS</td><td>[o1] 2018 Anand, V. - Basu, S. - Yadav, S. S. - Narayan, G. - Bhatia, B. D. - Kumar, A.: Journal of Perinatology, roč. 38, č. 2, 2018, s. 137-4, 2020, s. 141 - SCI ; SCOPUS</td><td>[o1] 2020 Koumbourlis, A. C. - Motoyama, E. K.: American Journal of Respiratory and Critical Care Medicine, roč. 202, č. 2018, s. 624-626 - SCI ; SCOPUS</td><td>[o1] 2020 Autilio, C. - Echaide, M. - Shankar-Aguilera, S. - Bragado, R. - Amidani, D. - Salomone, F. - Perez-Gil, J. - De Luca, D.: American Journal of Respiratory Cell and Molecular Biology, roč. 63, č. 3, 2020, s. 327-337 - SCI ; SCOPUS</td><td>[o1] 2021 Ahmed, R. - Mosa, H. - Sultan, M. - Helilli, S. E. - Assefa, B. - Abdu, M. - Ahmed, U. - Abose, S. - Nuramo, A. - Alemu, A. - Demelash, M. - Delil, R.: PLoS ONE, roč. 16, 2021, čl. č. e0255488 - SCOPUS</td></tr></table>				[o1] 2017 Echaide, M. - Autilio, C. - Arroyo, R. - Perez-Gil, J.: Biochimica et Biophysica Acta - Biomembranes, roč. 1859, č. 9, 2017, s. 1725-1739 - SCI ; SCOPUS	[o1] 2018 Anand, V. - Basu, S. - Yadav, S. S. - Narayan, G. - Bhatia, B. D. - Kumar, A.: Journal of Perinatology, roč. 38, č. 2, 2018, s. 137-4, 2020, s. 141 - SCI ; SCOPUS	[o1] 2020 Koumbourlis, A. C. - Motoyama, E. K.: American Journal of Respiratory and Critical Care Medicine, roč. 202, č. 2018, s. 624-626 - SCI ; SCOPUS	[o1] 2020 Autilio, C. - Echaide, M. - Shankar-Aguilera, S. - Bragado, R. - Amidani, D. - Salomone, F. - Perez-Gil, J. - De Luca, D.: American Journal of Respiratory Cell and Molecular Biology, roč. 63, č. 3, 2020, s. 327-337 - SCI ; SCOPUS	[o1] 2021 Ahmed, R. - Mosa, H. - Sultan, M. - Helilli, S. E. - Assefa, B. - Abdu, M. - Ahmed, U. - Abose, S. - Nuramo, A. - Alemu, A. - Demelash, M. - Delil, R.: PLoS ONE, roč. 16, 2021, čl. č. e0255488 - SCOPUS
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OCA18. - Characteristics of the output's impact on socio-economic practice		The article summarizes knowledge in meconium aspiration syndrome which was the topic solved in our laboratory. The study is of international importance as documented by number and quality of citations. Its direct impact on socio-economic practice cannot be assessed, but for neonatology it can have direct clinical impact.								
OCA19. - Characteristics of the output and related activities' impact on the educational process		The introduction of a new animal model of meconium aspiration syndrome at JLF UK has made surfactant research opportunities more attractive for doctoral and undergraduate students as part of their student professional activities. The results were incorporated into lectures within the respiratory system.								
4th evaluated output										
OCA5. - Area of assessment		General Medicine, I.+II.degree; Normal and Pathological Physiology. III.degree; Normal and Pathological Physiology - field of habilitation procedure and inaugural procedure								

OCA6. - Category of the research/ artistic/other output	scientific output
OCA7. - Year of publication of the research/artistic/other output	2021
OCA8. - ID of the record in the Central Registry of Publication Activity (CRPA) or the Central Registry of Artistic Activity (CRAA)	ID: 448271
OCA9. - Hyperlink to the record in CRPA or CRAA	https://app.crepc.sk/?fn=detailBiblioFormChildM6HVE&sid=5BE501D611F83A9AAD9D67DA3F&seo=Cdetail-%C4%8CI%C3%A1nok
Title of the publication to which the hyperlink points	N-Acetylcysteine in Mechanically Ventilated Rats with Lipopolysaccharide-Induced Acute Respiratory Distress Syndrome: The Effect of Intravenous Dose on Oxidative Damage and Inflammation
RATP coefficient	A+
Justification of the RATP	Publication of internationally recognized quality
OCA17. - List of maximum 5 most significant citations corresponding to the output	[n1] 2022 zz ~ Kumar, S. - Bhagat, P. - Pandey, S. - Pandey, R.. - In: Cureus Journal of Medical Science, roč. 14, č. 9, 2022 ; čl. č. e29478 ; SCI [n1] 2022 zz ~ Palikov, V. A. - Palikova, Y. A. - Rudenko, P. A. - Kazakov, V. A. - Borozdina, N. A. - Kravchenko, I. N. - Pakhomova, I. A. - Kazakova, E. N. - Slashcheva, G. A. - Semushina, S. G. - Khokhlova, O. N. - Dyachenko, I. A.. - In: Bulletin of Experimental Biology and Medicine, roč. 173, č. 6, 2022 ; s. 790-793 ; SCI ; SCOPUS [n1] 2023 zz ~ da Costa, R. I. D. - da Silva Fischer, J. M. - Rasslan, R. - Koike, M. K. - Utiyama, E. M. - de Souza Montero, E. F.. - Effects of N-acetylcysteine on the inflammatory response and bacterial translocation in a model of intestinal obstruction and ischemia in rats - In: Acta Cirurgica Brasileira, roč. 37, č. 12, 2023 ; čl. č. e371204 ; SCOPUS [n1] 2023 zz ~ Lim, E. Y. - Lee, S. Y. - Shin, H. S. - Kim, G. D.. - Reactive Oxygen Species and Strategies for Antioxidant Intervention in Acute Respiratory Distress Syndrome - In: Antioxidants, roč. 12, č. 11, 2023 ; čl. č. 2016 ; SCOPUS
OCA18. - Characteristics of the output's impact on socio-economic practice	The study is published in the Journal with high impact (IF=6.081), because of the topic of international importance. We are the only research group that uses an animal model of lipopolysaccharide-induced lung injury of such extent that requires artificial lung ventilation. The results obtained using this model are significant from an international point of view in the field of intensive care medicine.
OCA19. - Characteristics of the output and related activities' impact on the educational process	The study has educational importance because one of the authors is PhD student (J.Hanusrichterová) and a student-volunteer, who was engaged in student scientific activity (K.Maťašová). Both of them are co-authors. The results were incorporated into lectures within the respiratory system.
5th evaluated output	
OCA5. - Area of assessment	General Medicine, I.+II.degree; Normal and Pathological Physiology. III.degree; Normal and Pathological Physiology - field of habilitation procedure and inaugural procedure
OCA6. - Category of the research/ artistic/other output	scientific output
OCA7. - Year of publication of the research/artistic/other output	2024
OCA8. - ID of the record in the Central Registry of Publication Activity (CRPA) or the Central Registry of Artistic Activity (CRAA)	ID = 1268376
OCA9. - Hyperlink to the record in CRPA or CRAA	https://app.crepc.sk/?fn=detailBiblioFormChildW14K5C&sid=23E35B476CDBF92DB520BDA28BDF&seo=Cdetail-%C4%8CI%C3%A1nok
Title of the publication to which the hyperlink points	Pulmonary surfactant and prostaglandin E2 in airway smooth muscle relaxation of human and male guinea pigs
RATP coefficient	A+
Justification of the RATP	Publication of internationally recognized quality
OCA17. - List of maximum 5 most significant citations corresponding to the output	The study has been published at the end of 2024 and has no citations yet
OCA18. - Characteristics of the output's impact on socio-economic practice	The results contribute to basic knowledge regarding the influence of pulmonary surfactant on airway smooth muscle, but for an important outcome for clinical practice. In future, exogenous pulmonary surfactant could become a part of the treatment of diseases that have significant obstructive component, such as asthma or chronic obstructive pulmonary disease. The study made possible to develop an international cooperation with University of Calgary.
OCA19. - Characteristics of the output and related activities' impact on the educational process	The importance of the work from an educational point of view lies in the fact that the first author dealt with this issue as part of her dissertation. Other young scientists also worked on the project, as well as a qualified intern from the Department of Physiology, who was engaged in student scientific professional activity and presented the results at the student scientific conference. The results were also incorporated into the lectures on the respiratory system for pre-gradual students.

