

Publications Medisip 2020

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- **Tristan Baguet, Jakob Bouton, Jonas Janssens, Glenn Pauwelyn, Jeroen Verhoeven, Benedicte Descamps, Serge Van Calenbergh, Christian Vanhove and Filip De Vos:** Radiosynthesis, in vitro and preliminary biological evaluation of [F-18]2-amino-4-((2-((3-fluorobenzyl)oxy)benzyl)(2-((3-(fluoromethyl)benzyl)oxy)benzyl)amino)butanoic acid, a novel alanine serine cysteine transporter 2 inhibitor-based positron emission tomography tracer. JOURNAL OF LABELLED COMPOUNDS & RADIOPHARMACEUTICALS. 63(10). p.442-455.
- **Tristan Baguet, Jeroen Verhoeven, Glenn Pauwelyn, Jiyun Hu, Patricia Lambe, Stef De Lombaerde, Sarah Piron, Sam Donche, Benedicte Descamps, Ingeborg Goethals, et al.:** Radiosynthesis, in vitro and preliminary in vivo evaluation of the novel glutamine derived PET tracers [18F]fluorophenylglutamine and [18F]fluorobiphenylglutamine. NUCLEAR MEDICINE AND BIOLOGY. 86-87. p.20-29.
- **Annekatrien Boel, Joyce Burger, Marine Vanhomwegen, Aude Beyens, Marjolijn Renard, Sander Barnhoorn, Christophe Casteleyn, Dieter Reinhardt, Benedicte Descamps, Christian Vanhove, et al.:** Slc2a10 knock-out mice deficient in ascorbic acid synthesis recapitulate aspects of arterial tortuosity syndrome and display mitochondrial respiration defects. HUMAN MOLECULAR GENETICS. 29(9). p.1476-1488.
- **Charlotte Bouckaert, Charlotte Germonpré, Jeroen Verhoeven, Seon-Ah Chong, Lucas Jacquin, Georges Mairet-Coello, Véronique Marie André, Karine Leclercq, Christian Vanhove, Filip De Vos, et al.:** Development of a rat model for glioma-related epilepsy. INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES. 21(19).
- **Kim Braeckman, Benedicte Descamps, Christian Vanhove and Karen Caeyenberghs:** Exploratory relationships between cognitive improvements and training induced plasticity in hippocampus and cingulum in a rat model of mild traumatic brain injury: a diffusion MRI study. BRAIN IMAGING AND BEHAVIOR. 14(6). p.2281-2294
- **Jessica Bridoux, Sara Neyt, Pieterjan Debie, Benedicte Descamps, Nick Devoogdt, Frederik Cleeren, Guy Bormans, Alexis Broisat, Vicky Caveliers, Catarina Xavier, et al.:** Improved detection of molecular markers of atherosclerotic plaques using sub-millimeter PET imaging. MOLECULES. 25(8).
- **Jessica Bridoux, Katrijn Broos, Quentin Lecocq, Pieterjan Debie, Charlotte Martin, Steven Ballet, Geert Raes, Sara Neyt, Christian Vanhove, Karine Breckpot, et al.:** Anti-human PD-L1 Nanobody for immuno-PET imaging: validation of a conjugation strategy for clinical translation. BIOMOLECULES. 10(10).
- **Emma Christiaen, Marie-Gabrielle Goossens, Benedicte Descamps, Lars Emil Larsen, Paul Boon, Robrecht Raedt and Christian**

- Vanhove:** Dynamic functional connectivity and graph theory metrics in a rat model of temporal lobe epilepsy reveal a preference for brain states with a lower functional connectivity, segregation and integration. NEUROBIOLOGY OF DISEASE. 139.
- **Elissa-Marie Cocquyt, Ellen Lanckmans, Pieter van Mierlo, Wouter Duyck, Arnaud Szmalec, Patrick Santens and Miet De Letter:** The white matter architecture underlying semantic processing: a systematic review. NEUROPSYCHOLOGIA. 136.
 - **Gaëtan De Gryse, Thuong Van Khuong, Benedicte Descamps, Wim Van Den Broeck, Christian Vanhove, Pieter Cornillie, Patrick Sorgeloos, Peter Bossier and Hans Nauwynck:** The shrimp nephrocomplex serves as a major portal of pathogen entry and is involved in the molting process. PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA. 117(45). p.28374-28383.
 - **Miet De Letter, Arnout Bruggeman, Kim De Keyser, Pieter van Mierlo, Heidi Buysse, Dirk Van Roost and Patrick Santens:** Subthalamic nucleus activity in the processing of body and mental action verbs in people with Parkinson's disease. BRAIN AND LANGUAGE. 202.
 - **Valerie De Meulenaere, Benedicte Descamps, Olivier De Wever, Christian Vanhove and Karel Deblaere:** In vivo selection of the MDA-MB-231br/eGFP cancer cell line to obtain a clinically relevant rat model for triple negative breast cancer brain metastasis. PLOS ONE. 15(12).
 - **Paulo Rauli Rafeson De Vasconcelos Caribé, Stefaan Vandenberghe, André Diogo, David Pérez-Benito, Nikos Efthimiou, Charlotte Thyssen, Yves D'Asseler and Michel Koole:** Monte Carlo simulations of the GE Signa PET/MR for different radioisotopes. FRONTIERS IN PHYSIOLOGY. 11.
 - **Menekse GOKER, Radoslaw Marcinkowski, Mieke Van Bockstal, Vincent Keereman, Roel Van Holen, Jo Van Dorpe, Stefaan Vandenberghe, BOUDEWIJN BRANS, Herman Depypere and Rudy Van den Broecke:** 18F-FDG micro-PET/CT for intra-operative margin assessment during breast-conserving surgery. ACTA CHIRURGICA BELGICA. 120(5). p.366-374.
 - **Delphine Hoorelbeke, Elke Decrock, Maarten De Smet, Marijke De Bock, Benedicte Descamps, Valérie Van Haver, Tinneke Delvaeye, Dmitri Krysko, Christian Vanhove, Geert Bultynck, et al.:** Cx43 channels and signaling via IP3/Ca²⁺, ATP, and ROS/NO propagate radiation-induced DNA damage to non-irradiated brain microvascular endothelial cells. CELL DEATH & DISEASE. 11(3).
 - **Emily Latacz, Pieter-Jan van Dam, Christian Vanhove, Laura Llado, Benedicte Descamps, Núria Ruiz, Ines Joye, Dirk Grünhagen, Steven Van Laere, Piet Dirix, et al.:** Can medical imaging identify the histopathological growth patterns of liver metastases? SEMINARS IN CANCER BIOLOGY.
 - **Wendy McDougald, Christian Vanhove, Adrienne Lehnert, Barbara Lewellen, John Wright, Marco Mingarelli, Carlos Corral, Jurgen Schneider, Sven Plein, David Newby, et al.:** Standardization of preclinical PET/CT imaging to improve quantitative accuracy, precision

and reproducibility: a multi-center study. JOURNAL OF NUCLEAR MEDICINE. 61(3). p.461-468.

- **Jens Mincke, Jan Courtyn, Christian Vanhove, Stefaan Vandenberghe and Kathy Steppe:** Studying in vivo dynamics of xylem-transported $^{11}\text{C}\text{O}_2$ using positron emission tomography. TREE PHYSIOLOGY. 40(8). p.1058-1070.
- **Thomas Naert, Dionysia Dimitrakopoulou, Dieter Tulkens, Suzan Demuynck, Marjolein Carron, Rivka Noelanders, Liza Eeckhout, Gert Van Isterdael, Dieter Deforce, Christian Vanhove, et al.:** RBL1 (p107) functions as tumor suppressor in glioblastoma and small-cell pancreatic neuroendocrine carcinoma in *Xenopus tropicalis*. ONCOGENE. 39(13). p.2692-2706.
- **Sarah Piron, Jeroen Verhoeven, Benedicte Descamps, Ken Kersemans, Kathia De Man, Nick Van Laeken, Leen Pieters, Anne Vral, Christian Vanhove and Filip De Vos:** Intra-individual dynamic comparison of ^{18}F -PSMA-11 and ^{68}Ga -PSMA-11 in LNCaP xenograft bearing mice. SCIENTIFIC REPORTS. 10(1).
- **Molood Shariati, Giovanna Lollo, Kevin Matha, Benedicte Descamps, Christian Vanhove, Leen Van de Sande, Wouter Willaert, Lieve Balcaen, Frank Vanhaecke, Jean-Pierre Benoit, et al.:** Synergy between intraperitoneal aerosolization (PIPAC) and cancer nanomedicine: cisplatin-loaded polyarginine-hyaluronic acid nanocarriers efficiently eradicate peritoneal metastasis of advanced human ovarian cancer. ACS APPLIED MATERIALS & INTERFACES. 12(26). p.29024-29036.
- **Mathieu Sprengers, Robrecht Raedt, Lars Emil Larsen, Jean Delbeke, Wytse Wadman, Paul Boon and Kristl Vonck:** Deep brain stimulation reduces evoked potentials with a dual time course in freely moving rats: potential neurophysiological basis for intermittent as an alternative to continuous stimulation. EPILEPSIA. 61(5). p.903-913.
- **Jara Stalpaert, Elissa-Marie Cocquyt, Yana Criel, Lieselot Segers, Marijke Miatton, Tim Van Langenhove, Pieter van Mierlo and Miet De Letter:** Language and speech markers of primary progressive aphasia: a systematic review. AMERICAN JOURNAL OF SPEECH-LANGUAGE PATHOLOGY. 29(4). p.2206-2225.
- **Felke Steijns, Máté István Tóth, Anthony Demolder, Lars Emil Larsen, Jana Desloovere, Marjolijn Renard, Robrecht Raedt, Patrick Segers, Julie De Backer and Patrick Sips:** Ambulatory electrocardiographic monitoring and ectopic beat detection in conscious mice. SENSORS. 20(14).
- **Felke Steijns, Marjolijn Renard, Marine Vanhomwegen, Petra Vermassen, Jana Desloovere, Robrecht Raedt, Lars Emil Larsen, Máté István Tóth, Julie De Backer and Patrick Sips:** Spontaneous right ventricular pseudoaneurysms and increased arrhythmogenicity in a mouse model of Marfan syndrome. INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES. 21(19).
- **Latoya Stevens, Kristl Vonck, Lars Emil Larsen, Wouter Van Lysebettens, Charlotte Germonpré, Veerle Baekelandt, Chris Van den Haute, Evelien Carrette, Wytse Wadman, Paul Boon, et al.:** A

feasibility study to investigate chemogenetic modulation of the locus coeruleus by means of single unit activity. FRONTIERS IN NEUROSCIENCE. 14.

- **Michael Stouthandel, Christian Vanhove, Wouter Devriendt, Sander De Bock, Charlotte Debbaut, Carl Vangestel and Tom Van Hoof:** Biomechanical comparison of Thiel embalmed and fresh frozen nerve tissue. ANATOMICAL SCIENCE INTERNATIONAL. 95(3). p.390-407
- **Tom Van de Steene, Emmeric Tanghe, Thomas Tarnaud, Stefan Kampusch, Eugenijus Kaniusas, Luc Martens, Roel Van Holen and Wout Joseph:** Sensitivity study of neuronal excitation and cathodal blocking thresholds of myelinated axons for percutaneous auricular vagus nerve stimulation. IEEE TRANSACTIONS ON BIOMEDICAL ENGINEERING. 67(12). p.3276-3287.
- **Wouter Van Lysebettens, Kristl Vonck, Lars Emil Larsen, Latoya Stevens, Charlotte Bouckaert, Charlotte Germonpré, Mathieu Sprengers, Evelien Carrette, Jean Delbeke, Wytse Wadman, et al.:** Identification of vagus nerve stimulation parameters affecting rat hippocampal electrophysiology without temperature effects. BRAIN STIMULATION. 13(5). p.1198-1206
- **Jeroen Verhoeven, Tristan Baguet, Sarah Piron, Glenn Pauwelyn, Charlotte Bouckaert, Benedicte Descamps, Robrecht Raedt, Christian Vanhove, Filip De Vos and Ingeborg Goethals:** 2-[18F]FELP, a novel LAT1-specific PET tracer, for the discrimination between glioblastoma, radiation necrosis and inflammation. NUCLEAR MEDICINE AND BIOLOGY. 82-83. p.9-16

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- **Milan Decuyper, Stijn Bonte, Karel Deblaere and Roel Van Holen:** Automated MRI based pipeline for glioma segmentation and prediction of grade, IDH mutation and 1p19q co-deletion. Medical Imaging with Deep Learning: MIDL 2020 -- Short Paper Track.

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- **Ghazal Adeli Koudehi, Matthias Van Impe, Pieter Cornillie, Christophe Casteleyn, Christian Vanhove, Charlotte Debbaut and Patrick Segers:** Modelling lymph propulsion in a series of contracting lymphangions: from idealized 2D to reconstructed 3D. 2020 Summer Biomechanics, Bioengineering and Biotransport Conference: proceedings book.
- **Ghazal Adeli Koudehi, Carlos Alejandro Silvera Delgado, Matthias Van Impe, Pieter Cornillie, Christophe Casteleyn, Christian Vanhove, Charlotte Debbaut and Patrick Segers:** Modelling lymph propulsion in a 3D reconstructed murine collecting vessel. 19th National Day on Biomedical Engineering, Abstracts.
- **Emma Christiaen, Marie-Gabrielle Goossens, Benedicte Descamps, Robrecht Raedt and Christian Vanhove:** Dynamic functional connectivity in a rat model of temporal lobe epilepsy reveals a preference

for brain states with a lower functional connectivity. SWO Midwinter meeting, Abstracts.

- **Emma Christiaen, Marie-Gabrielle Goossens, Benedicte Descamps, Robrecht Raedt and Christian Vanhove:** Dynamic functional connectivity and graph theory metrics in a rat model of temporal lobe epilepsy reveal a preference for brain states with a lower functional connectivity, segregation and integration. ISMRM Benelux Chapter meeting 2020, Abstracts.
- **Emma Christiaen, Marie-Gabrielle Goossens, Benedicte Descamps, Robrecht Raedt and Christian Vanhove:** Dynamic functional connectivity and graph theory metrics in a rat model of temporal lobe epilepsy. 15th European Molecular Imaging Meeting (EMIM 2020), Abstracts.
- **Marie-Gabrielle Goossens, Kristl Vonck, Chris Van den Haute, V. Baekelandt, Wytse Wadman, Christian Vanhove, Paul Boon and Robrecht Raedt:** Long-term effect of chemogenetic suppression of excitatory hippocampal neurons on spontaneous seizures in a rat model for temporal lobe epilepsy. FENS 2020 Virtual Forum, Abstracts.
- **Marie-Gabrielle Goossens, Kristl Vonck, Chris Van den Haute, Veerle Baekelandt, Wytse Wadman, Christian Vanhove, Paul Boon and Robrecht Raedt:** The effect of chemogenetic hippocampal suppression on evoked potentials and seizures in a multifocal rat model for temporal lobe epilepsy. American Epilepsy Society (AES) Annual Meeting 2020, Abstracts.
- **Jara Stalpaert, Tim Van Langenhove, Marijke Miatton, Anne Sieben, Pieter van Mierlo and Miet De Letter:** De diagnostische toepassing van taalgerelateerde potentialen in de non-fluente variant van primair progressieve afasie: een gevalstudie. 41ste VVL-congres, Abstracts.
- **Mariele Stockhoff, Roel Van Holen and Stefaan Vandenberghe:** Identifying potential sources of resolution degradation in monolithic scintillators: simulations vs experiments. IEEE Nuclear Science Symposium and Medical Imaging Conference (NSS/MIC), Abstracts.
- **Mariele Stockhoff, Milan Decuyper, Roel Van Holen and Stefaan Vandenberghe:** Spatial resolution of large monolithic detector: performance evaluation with two positioning algorithms. IEEE Nuclear Science Symposium and Medical Imaging Conference (NSS/MIC), Abstracts.

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- **Paulo Rauli Rafeson De Vasconcelos Caribé:** Evaluation of image quality and reconstruction parameters in recent PET-CT and PET-MR systems.
- **Jens Mincke:** Unravelling xylem-transported CO₂ dynamics in poplar branches and leaves using positron emission tomography and autoradiography.