

University of Groningen

Role of extracellular vesicles in hypoxia-induced hepatic injury in non-alcoholic fatty liver disease

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DOI:
[10.33612/diss.180853744](https://doi.org/10.33612/diss.180853744)

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Document Version
Publisher's PDF, also known as Version of record

Publication date:
2021

[Link to publication in University of Groningen/UMCG research database](#)

Citation for published version (APA):

Hernandez Villanueva, A. (2021). *Role of extracellular vesicles in hypoxia-induced hepatic injury in non-alcoholic fatty liver disease*. University of Groningen. <https://doi.org/10.33612/diss.180853744>

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Propositions

Belonging to the thesis

Role of Extracellular Vesicles in Hypoxia-Induced Hepatic Injury in Non-alcoholic Fatty Liver Disease:

1. Just like Antoine de Saint-Exupéry said "...it is only with the heart that one can see rightly; what is essential is invisible to the eye..." It is only with a microscopy, using a beam of high-energy electrons transmitted, you can see the extracellular vesicles (EV).
2. We are currently experiencing another worldwide pandemic: the obesity epidemic, which is closely related to the exponential increase in nonalcoholic fatty liver disease (NAFLD).
3. Obstructive sleep apnea (OSA) is characterized by the presence of intermittent hypoxia and is associated with increased severity of NAFLD.
4. There are no effective diagnoses and treatments for NAFLD. Our research to elucidate the underlying mechanisms leading to liver damage in hypoxic and steatotic conditions has the potential to identify novel therapeutic targets (This thesis).
5. EV released from steatotic and hypoxic hepatocytes promote the inflammatory and fibrotic phenotype of non-parenchymal cells. This explains why patients with OSA present greater severity of NAFLD (This thesis).
6. If you achieve something you have to fight. Suffering is something inherent during your PhD and in life in general. The more effort it takes to successfully perform an experiment, the more you will enjoy it later. And that pain is always less than the satisfaction that triumph gives us (This thesis and Kilian Jornet).
7. Caspase-1 is a component of the cargo of EV released from steatotic hepatocytes and promises to be a therapeutic target in patients with OSA and NAFLD (This thesis).
8. NAFLD is a heterogeneous disease. This research provides directions for the development of a personalized approach to treat NAFLD (This thesis).
9. If you can't fly then run, if you can't run then walk, if you can't walk then crawl, but whatever you do you have to keep moving forward (Martin Luther King).

Alejandra Hernández Villanueva, Groningen 2021