metabolism, low bioavailability, and enzymatic degradation. However, quercetin derivatives may surpass its therapeutic potential. The aim of this study was to evaluate the hepatoprotective effect of enzymatically modified quercetin (dQC-Caf) in an in vivo model of hepatocellular carcinoma (HCC).

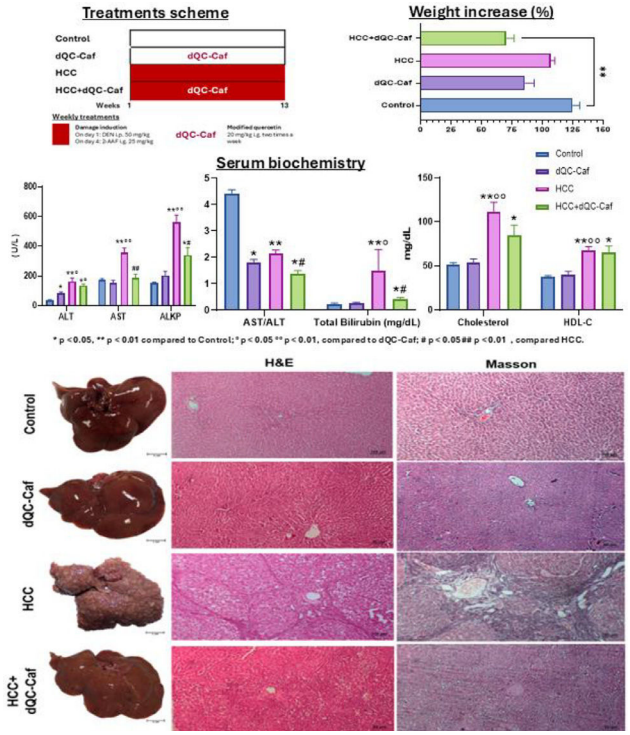
Materials and Methods: Male Wistar rats were randomly divided in groups: Control, HCC, dQC-Caf, and HCC+dQC-Caf. HCC was induced for 13 weeks by weekly administration of 50 mg/kg i.p. diethylnitrosamine and 25 mg/kg i.g N-2-fluorenylacetamide. dQC-Caf was administered twice weekly (20 mg/kg i.g.). Tumors development, serum biochemistry, and liver histology were evaluated. Data was analyzed using GraphPad Prism 10 ($p< 0.05$). The protocol was approved by UDG Committees (Code CI-05023). The authors declare no conflicts of interest.

Results: Compared to the HCC group, macroscopic tumors were noticeably reduced in the HCC+dQC-Caf group, despite liver inflammation. In this group, ALT, AST/ALT, ALKP, total bilirubin, cholesterol, and HDL-C levels tended to improve compared with the HCC group. AST levels were significantly increased in the latter group, but not in the HCC+dQC-Caf group. Altered hepatocytes were found among both damaged groups; however, severe hepatic fibrosis developed in the HCC group, whereas there was no collagen accumulation in the HCC+dQC-Caf group.

Conclusions: Administration of dQC-Caf improved the results of liver function tests and reduced the development of liver fibrosis and macroscopic tumors induced by the damage treatment.

Conflict of interest: None

Modified quercetin effects of chemically induced liver cancer in Wistar rats



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#142

MORINGA OLEIFERA LEAF AQUEOUS EXTRACT IMPROVES SURVIVAL IN A LIVER CANCER MODEL IN WISTAR RATS

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Introduction and Objectives: Moringa oleifera (moringa) extracts have hepatoprotective, antioxidant, and anticancer effects. This study aimed to determine the effect of moringa extract on an in vivo model of liver cancer.

Materials and Methods: Moringa leaves powder was simmered in water at 80°C and its antioxidant capacity was determined using ABTS and DPPH methods. Male Wistar rats were divided in groups: control (Ctl), damage (Dmg), aqueous extract (Leaves-AqE), and 4) damage and Leaves-AqE (Dmg+Leaves-AqE). Leaves-AqE (300mg/kg i.g) was administered daily for two weeks and three times a week during 18 weeks. Since the second week, damage was induced by weekly administration of DEN and 2-AAF for 18 weeks. Serum biochemistry and gene expression were analyzed. Statistical analysis was performed using GraphPad Prism 10 ($p<0.05$). UDG Committees approved the protocol (Code CI-01720). The authors declare no conflicts of interest.

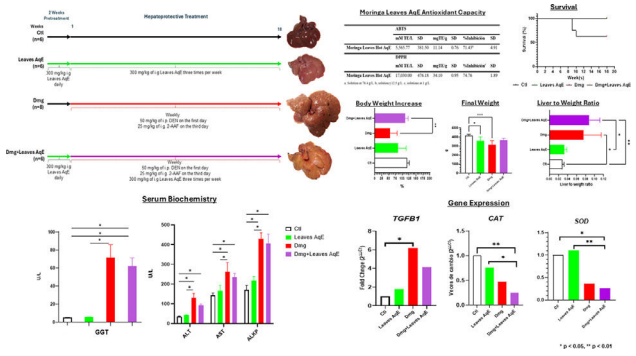
Results: Leaves-AqE had an antioxidant capacity slightly more than 70% in vitro. The administration of the extract led to a decrease in liver tumor development and prevented mortality by the damage treatment. Leaves-AqE did not have significant effects on serum hepatic function markers. Interestingly, CAT and SOD were low in the Dmg+Leaves-AqE group. In addition, TGFB1 showed a tendency to decrease in the Dmg+Leaves-AqE group compared to Dmg group.

Conclusions: The Leaves-AqE extract has an important antioxidant inhibitory capacity in vitro. This capacity may explain why

supplementation with this extract increased survival as well as the tendency to reduce the expression of TGFB1 induced by chemical damage.

Conflict of interest: None

Moringa images ALEH



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#146

INCIDENCE AND PREDICTORS OF POST-TRANSPLANT MALIGNANCY IN LIVER TRANSPLANT RECIPIENTS: A SINGLE-CENTRE COHORT STUDY

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Introduction and Objectives: Cancer is a major long-term complication after liver transplantation (LT). We aimed to characterize its incidence and risk factors in LT recipients at a Canadian center.

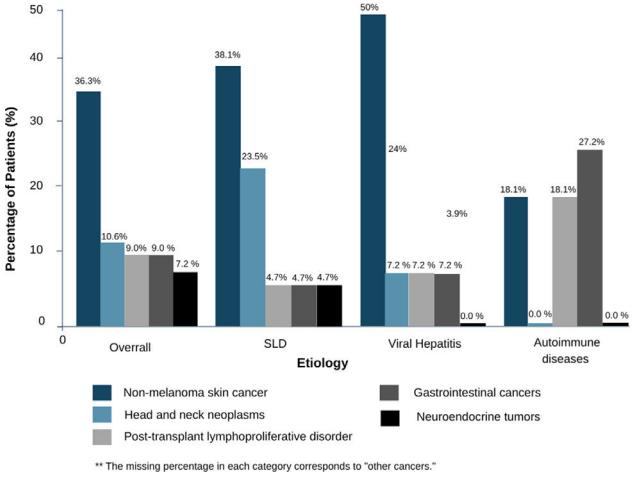
Materials and Methods: Retrospective cohort of patients who underwent LT from 2007–2018, with at least 60 months of follow-up. Demographic, clinical, and oncologic data were analyzed using Cox regression.

Results: We included 575 LT recipients (30% women, median age 53.6 years). Main etiologies were ALD (22.9%), HCV (20.8%), MASLD (13.3%), and PSC (11.1%). HCC was present at LT in 25.7%. During follow-up, 55 patients (9.7%) developed cancer, most commonly non-melanoma skin cancer (3.5% of all recipients), followed by head and neck tumors (1.0%), PTLD (0.9%), gastrointestinal cancers (0.9%), and neuroendocrine tumors (0.7%). Mean time to cancer diagnosis was 27.3±19.1 months. Additionally, 20 patients (3.4%) developed post-LT HCC, with 90% being recurrences. Cancer types differed by underlying etiology (p=0.004): non-melanoma skin cancers predominated in SLD and viral hepatitis, while GI cancers were most common in autoimmune liver disease. Among those with prior HCC, 16.8% developed a non-HCC cancer, mostly skin cancer. In multivariate analysis, pre-LT HCC was independently associated with post-LT non-HCC cancer (HR 2.66; 95% CI 1.39–5.07; p=0.003), while age, gender, alcohol or tobacco use, and liver disease etiology were not.

Conclusions: Cancer occurred in nearly 10% of LT recipients, mostly within three years. A history of HCC at LT tripled the risk of subsequent non-HCC cancer, highlighting the importance of targeted cancer surveillance in this high-risk population.

Conflict of interest: None

Distribution of cancer types by pre-transplant liver disease etiology



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#147

THERAPEUTIC PLASMA EXCHANGE-INDUCED SHIFTS IN BILE SALT COMPOSITION IN ALCOHOL-ASSOCIATED HEPATITIS: INSIGHTS INTO MECHANISMS AND THERAPEUTIC POTENTIAL

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