CONCLUSIONS

The principal findings of this project were:

1. Silymarin at doses of 100 or 200 μM does not significantly affect cell viability in 9-13 or Huh-7 cells for 24 h, or in CNS3 cells for 48 h.
2. Silymarin down-regulates HCV core mRNA and protein levels in a dose-dependent fashion for 24 and 48 h in CNS3 cells.
3. Silymarin up-regulates HO-1 mRNA levels in CNS3, 9-13 and Huh-7 cells at 24 and 48 h.
4. HO-1 up-regulation by Silymarin is not related to the expression of transcription factors Bach1 or Nrf2.
5. Silymarin do not down-regulate HCV core protein through the Jak-Stat pathway.

There are few published clinical trials that evaluate the usefulness of Silymarin as a treatment for chronic hepatitis C. However, the study of administering this natural compound to cell cultures expressing HCV replicons can potentially give us valuable clues to understand whether Silymarin treatment positively affects HCV infection and, if so, the mechanism by which this occurs. Due to the number of people who utilize CAM is increasing all over the world, so it is important to better understand and, if possible, improve any useful effects of Silymarin treatment on HCV infection. This work is an initial step to find out the possible beneficial role of Silymarin on HCV infection, however when cells containing full HCV genome are treated with Silymarin it will provide more precise effects and scientific information.