Question 1:

True or False: for flaviviruses antibody-dependent enhancement (ADE) is associated with worsening of clinical symptoms only for dengue virus complex.

- ● True

  Explanation:

  ADE has been confirmed in vitro for several flaviviruses and non-flaviviruses. However up to now there is not clinical or epidemiological evidence that ADE plays a role in the clinical outcome of other viral diseases beyond DENV.

- ❍ False

Question 2:

True or False: ADE of Zika virus in vitro by pre-existing flavivirus was only confirmed after the 2015 ZIKV epidemic.

- ❍ True

- ● False

  Explanation:

  ADE of ZIKV induced by immune serum of at least other seven flaviviruses, including dengue was described in 1987.

Question 3:

True or False: there is strong evidence that Guillain-Barre syndrome and Congenital Zika Virus Syndrome are associated to previous exposure to other flaviviruses.

- ❍ True

● False

Explanation:

Additional lines of evidence are needed to prove that there is a direct link between a previous flavivirus exposure and specific clinical presentations following ZIKV infection.

Question 4:

True or False: From a previous dengue infection antibodies are mainly responsible in modulating the immune response to ZIKV.

❍ True

● False

Explanation:

While it is still unclear the contribution of DENV cross-reacting antibodies, new data indicates that DENV pre-exposure affects not only the quantity but also the quality of the cellular immune responses observed following ZIKV infection.

Reference:

Additional information can be found in Grifoni, a et al. DOI 10.1128/jvi.01469-17

Question 5:

True or False: The time between a primary DENV and a subsequent ZIKV infection is not a factor that may affect the course of ZIKV infection.

❍ True

● False

Explanation:

Still little is known about the effect of the time elapse between an heterologous flavivirus

exposure on the course of a secondary ZIKV infection. However, from the dengue experience it is plausible to anticipate that the shorter the time between the infections the more likely the DENV cross-reacting neutralising antibodies may contribute to limit ZIKV viremia.