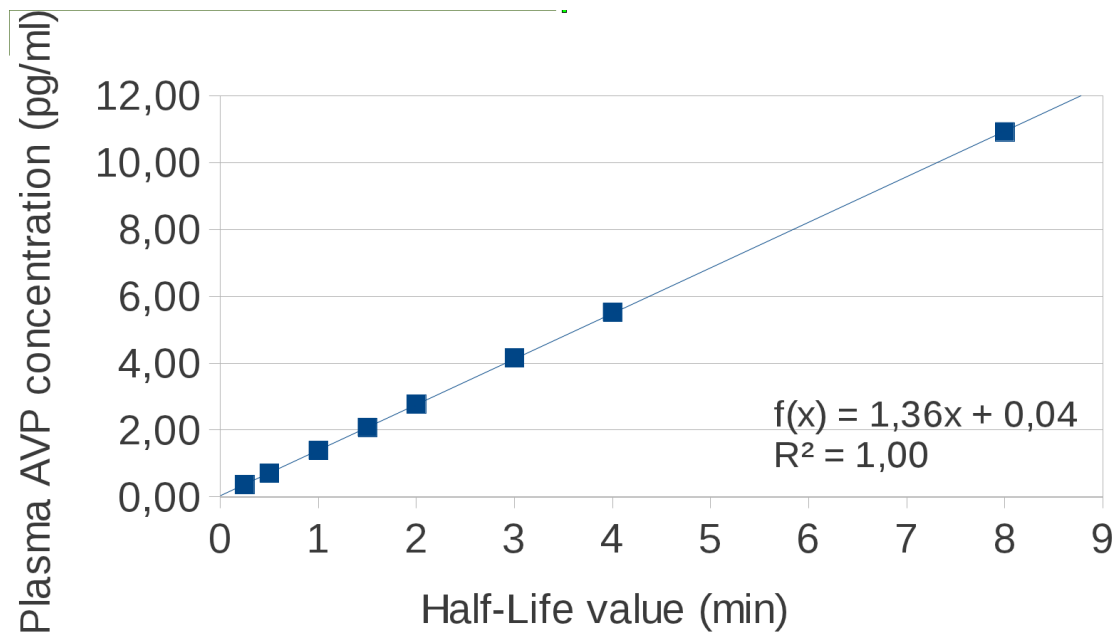


Online Resource 3 – Effect of varying the AVP half-life on plasma [AVP]

AVP half-life is a critical parameter for the prediction of plasma [AVP]. Based on the study of Leng and Ludwig (2008), we made the assumption of implementing 2 minutes as for the AVP half-life in our mathematical model. However, other values have been reported for AVP half-life (see table 1), and AVP dynamic might not be described using a single exponential function (Wilson et al., 1978). Therefore, we tested the impact of varying this parameter on plasma [AVP] to explore the leeway that we might introduce to fine-tune AVP half-life in order to predict a realistic plasma [AVP].



Relationship between AVP half-life and plasma [AVP] under iso-osmotic condition (0 mosmol/L).

All the parameters, except AVP half-life, used to create this simulation are identical to those presented in Figure 5. As expected, R^2 indicated a pure linear relationship between AVP half-life and plasma [AVP]. Note that the value 5 min presented in table 1 is not a realistic value of AVP half-life. Indeed, that specific value of AVP half-life predicts an unrealistic basal level of plasma [AVP].