## ABSTRACT FORM ECAT SYMPOSIUM 8 – 9 NOVEMBER 2018

### Name:

Martine van Essen-Hollestelle

ECAT Foundation, Voorschoten, The Netherlands

### Title:

**Results of ECAT EQA programme on DOACs**

### Abstract:

*Introduction:* Although standard laboratory testing is not necessary for direct oral anticoagulants (DOACs), for some cases knowledge about the concentration of DOACs is clinically relevant. Therefore accurate measurements of the DOACs is essential. So far, not much is known about the performance of these tests. Since the ECAT Foundation is offering a survey to assess the performance of the DOACs tests now for many years, we studied the inter-laboratory variation of these tests to get more insight in the accuracy of the various methods.

*Materials and Methods:* Laboratory tests were evaluated for rivaroxaban, apixaban, argatroban and dabigatran using spiked plasma samples. External quality assessment data of 2013 till 2017 is used of more than 200 laboratories.

*Results and Conclusions:* The coefficients of variation varied on average between 5 and 15% depending on the concentration of the DOAC and depending on the method used. No large differences between the methods were demonstrated for dabigatran. Only a restricted number of participant measured argatroban, showing only results of one main methods. For apixaban significant differences were observed between the coefficients of variation of the four main methods used. On the other hand, no large differences between measured values were observed for apixaban in contrast to rivaroxaban. Comparison of the four main methods used to measure rivaroxaban showed difference up to 20% in particularly in the lower range. In conclusion, the results of the survey demonstrated a reasonably well performance of the DOACs assays. Our results could be of help to clinical laboratories making a conscious choice when measuring DOACs.