Questionnaire on the Use of a Venous Stasis Thrombosis Model:

1. Name:
2. Institution:
3. Department:
4. Address:
5. City, state, zip:
6. Country:
7. E-mail:

General questions:

1. Do you use a Venous Stasis Thrombosis Model (e.g. Wessler Test) in your laboratory?
   a) Yes
   b) No
   c) Occasionally

2. Do you use the original Wessler test or a modified version?
   a) Original (according to Wessler S. et al., 1959)
   b) Modified version: (please specify and insert citation)

________________________________________________________________

3. Which species do you use for the Venous Stasis Thrombosis test?
   a) Rabbit
      Strain: ________________________________________________________
   b) Rat
      Strain: ________________________________________________________
   c) Others (please specify):

________________________________________________________________

4. Which weight range do you use?
   a) Rabbit:
      i) <2kg
      ii) 2-3kg
      iii) >3kg
      iv) other (please specify)________________________________________
   b) Rat:
      i) <200g
      ii) 200-300g
      iii) >300g
   c) Others: (please specify)________________________________________
5. Which sex do you use?
   a) [ ] Male
   b) [ ] Female
   c) [ ] Both indifferently
   d) [ ] It depends of the model selected

6. Age of the animals?
   e) Rabbit:
      i) [ ] <7 weeks
      ii) [ ] 7-9 weeks
      iii) [ ] 9-11 weeks
      iv) [ ] >11 weeks
   f) Rat:
      i) [ ] <7 weeks
      ii) [ ] 7-9 weeks
      iii) [ ] 9-11 weeks
      iv) [ ] >11 weeks
   g) Others: (please specify)

Method-specific Questions
1. Which anesthetic do you use?
   a) [ ] Ketamine hydrochloride/ Xylazine hydrochloride
   b) [ ] Isoflurane
   c) [ ] Pentobarbitone sodium
   d) [ ] Lidocaine hydrochloride
   e) [ ] Others: (please specify)

2. Are the animals kept at body temperature during surgery?
   a) [ ] Yes
      Please specify how: ________________________________________________
   b) [ ] No

3. Are the animals ventilated during surgery?
   a) [ ] Yes
   b) [ ] No

4. Do you monitor the animals during surgery?
   a) [ ] Body temperature
   b) [ ] Arterial blood pressure
   c) [ ] Respiratory rate
   d) [ ] Others: (please specify)
   e) [ ] No
5. Which vein segment do you use?
   a) Vena cava
   b) Vena femoralis
   c) Vena jugularis
   d) Other: (please specify)____________________________________________

6. Which vein do you prepare?
   a) Right
   b) Left
   c) Both
   d) Situation dependent

7. How long is the isolated vein segment?
   a) 0.5-1cm
   b) 1-1.5cm
   c) 1.5-2cm
   d) >2cm

8. Which is the standard injection volume you use?
   a) Rabbit (volume/kg):_______________________________________________
   b) Rat (volume/kg):__________________________________________________
   c) Others:___________ (volume/kg):____________________________________

9. Which is the highest injection volume you use?
   a) Rabbit (volume/kg):_______________________________________________
   b) Rat (volume/kg):__________________________________________________
   c) Others:___________ (volume/kg):____________________________________

10. Administration time of the test item?
    a) According to Wessler et al. (Bolus within 15sec)
    b) Others: (please specify)___________________________________________

11. How long is the time after injection of test item and before ligation of the vein segment?
    a) 25sec
    b) Individual, dependent on test item
    c) Others: (please specify)___________________________________________
12. How long is the stasis time of the ligated segment before it is removed?
   a) 10 min
   b) 15 min
   c) 20 min
   d) Others: (please specify) ________________________________

13. What type of ligation do you use?
   a) Clamps
   b) Flexible wire
   c) Surgical thread
   d) Balloon
   e) Other (please specify): ________________________________

14. Which system do you use to fix the thrombus?
   a) Filter
   b) Buffer Solution
   c) Others: (please specify) ________________________________

If the thrombus is fixed in a solution, please answer the following questions:

1. Which buffer-solution do you use?
   a) Sodium-Citrat 3.2%
   b) Sodium-Citrat 3.8%
   c) EDTA
   d) Heparin
   e) Others: (please specify) ________________________________

2. Is the buffer-solution after transfer of the thrombus rotated before evaluation?
   a) gently rotated
   b) roughly rotated
   c) shaked

3. Is the isolated vein segment kept in solution before evaluation?
   a) No, it is evaluated immediately
   b) Yes, for less than one hour
   c) Yes, for longer than one hour (please specify): ________________

4. Temperature of the solution
   a) Room temperature
   b) Body temperature (37°C)
   c) Others: (please specify) ________________________________
If the thrombus is fixed on a filter, please answer the following questions:

1. What kind of filter do you use
   Please specify: ______________________________________________________

2. Is the thrombus weighed on the filter paper
   a) ☐ Yes- when still wet
   b) ☐ Yes- after drying at room temperature
   c) ☐ Yes- after drying at 37°C
   d) ☐ No

3. Are there further examinations of the thrombus?
   a) Yes (please specify): _____________________________________________
   b) No

Scoring and further investigation

1. Which mode of scoring do you use?
   a) ☐ Semi Quantitative - Original Wessler scoring system
   b) ☐ Semi Quantitative – according to modified method

   Please specify: ___________________________________________________

   c) ☐ Others: (please describe your method briefly)

2. Do you evaluate the scoring by following parameters:
   a) Scaling
      i) ☐ Semi quantitative (e.g. small/medium/big thrombus)
      ii) ☐ Exact length measurement
   b) ☐ Counting
   c) ☐ Weight of the thrombus
   d) ☐ Others: (please specify)________________________________________
3. Do you evaluate Fibrin fibers as thrombus precursor?
   a) Yes
   b) No

4. Do you convert subjective (Semi quantitative) clot evaluation to numeric values?
   a) Yes
   b) No

5. Do you perform computer analysis of the data?
   a) Yes
   b) No

6. Do you perform statistical analysis of the data?
   a) Yes
   b) No

7. Do you perform Histo-Pathological evaluation of the Thrombus?
   a) Yes
   b) No

8. Do you label the thrombus in vivo?
   a) Yes
      i) Please briefly describe:
         (1) Dye:__________________________________________________________
         (2) Used marker:___________________________________________________
         (3) Method:_______________________________________________________
   b) No

9. Do you label the isolated thrombus?
   a) Yes
      i) Please briefly describe:
         (1) Dye:__________________________________________________________
         (2) Used marker:___________________________________________________
         (3) Method:_______________________________________________________
   b) No
10. Do you measure any of the listed blood parameters before or after the surgery?
   a) PT (Prothrombin) before ❑ after ❑
   b) aPTT (activated Partial Thromboplastin Time) before ❑ after ❑
   c) D-Dimere before ❑ after ❑
   d) TAT (Thrombin-Antithrombin-Komplex) before ❑ after ❑
   e) FDP (Fibrin degeneration protein) before ❑ after ❑
   f) Fibrinogen C before ❑ after ❑
   g) Nonactivated thrombin time before ❑ after ❑
   h) Thromboelastography before ❑ after ❑
   i) Clinical chemistry before ❑ after ❑
   j) Hematology before ❑ after ❑
   k) Others (please specify): _____________________________________________

Concluding Questions

1. Is the experimental skill of the operator a crucial determinant?
   a) ❑ Yes
   b) ❑ No

2. Do you observe that the outcome of the experiment is operator-dependent?
   a) ❑ Yes
   b) ❑ No

3. Did you identify any correlation of the venous stasis thrombosis model results with clinical results/adverse events?
   a) ❑ Yes
   b) ❑ No

4. Level of satisfaction with the method
   a) Are you satisfied with the chosen method?: ❑ yes / ❑ no
   b) In your experience, is the technique reproducible?: ❑ yes / ❑ no
   c) Do you feel that the model is easy to set up?: ❑ yes / ❑ no
   d) Does it require a high level of expertise?: ❑ yes / ❑ no
   e) Is there a high standardization of the Protocol?: ❑ yes / ❑ no
   f) The method has low costs. ❑ yes / ❑ no

5. In your opinion, what are the most important parameters affecting the outcome of the experiment and what would you suggest to improve reproducibility of the technique?

Thank you very much for taking the time to answer this questionnaire!

Please return to the SSC chair Susan Smyth susansmyth@uky.edu