***Hemocompatibility of Polysulfone Hemodialyzers – Exploratory Study on Impact of Treatment Modality and Dialyzer Characteristics***

Running Head: ***Hemocompatibility of Polysulfone Dialyzers***

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**Supplemental Table 1:** Inclusion and exclusion criteria in Study A and Study B

## Study A:

## Inclusion criteria

* Minimum age of 18 years
* Informed consent signed and dated by study patient and investigator/authorised physician
* Ability to understand the nature and requirements of the study
* On maintenance high-flux hemodialysis or on-line hemodiafiltration (three times/week) for ≥ 3 months, at least 4 h treatment time
* Vascular access (fistula or graft) which enables suitable effective blood flow rate (≥ 300 mL/min)

## Exclusion criteria

* Any condition which could interfere with the patient’s ability to comply with the study
* Ongoing participation in an interventional clinical study or during the preceding 30 days
* Previous participation in this study
* (in case of female patients:) Pregnancy or lactation period
* Recurrent episodes of vascular access failure
* Single needle treatments
* Catheter as vascular access
* Instable patients (due to e.g. acute intercurrent disease like cardiovascular infarction, active malignant disease)
* Patients with NYHA ≥3, COPD, frequent intradialytic hypotension
* Patients with known or suspected allergy to trial product, related products or with other allergies, or on anti-allergic medication
* Planned absence from dialysis unit within the next 3 weeks e.g. due to scheduled hospitalisation/holidays
* Active HBV, HCV, HIV infection

## Study B:

## Inclusion criteria

* Minimum age of 18 years
* Informed consent signed and dated by study patient and investigator/authorised physician
* Ability to understand the nature and requirements of the study
* On maintenance on-line postdilution hemodiafiltration (three times/week) for ≥ 3 months, at least 4 h treatment time
* Vascular access (fistula or graft) which enables suitable effective blood flow rate (≥ 300 mL/min)

## Exclusion criteria

* Any condition which could interfere with the patient’s ability to comply with the study
* Ongoing participation in an interventional clinical study or during the preceding 30 days
* Previous participation in this study
* (In case of female patients aged < 50 years:) Pregnancy (proven by β-HCG-pregnancy test) or lactation period
* Change of vascular access in the last four weeks before study
* Efficacy of dialysis treatment having been negatively influenced due to shunt problems in the last four weeks before study
* Last pre-study Kt/VOCM<1.2
* Single needle treatments
* Catheter as vascular access
* Instable patients (due to e.g. acute intercurrent disease like cardiovascular infarction, active malignant disease)
* Patients with NYHA ≥3, COPD, frequent intradialytic hypotension according to centre definition
* Patients with known or suspected allergy to trial product or related products
* Patients with known systemic allergic disposition causing chronic drug treatment
* Hb <10g/dL
* Planned absence from dialysis unit within the next 5 weeks (week -1 included) e.g. due to scheduled hospitalisation/holidays
* Active HBV, HCV, HIV infection

**Supplemental Table 2:** Molecular mass of investigated markers of hemocompatibility

Parameter Molecular mass (kDa) Reference

C3a 9 (1)

C5a 11.2 (as glycoprotein) (2)

sC5b-9 ~1,000 (3)

PMN Elastase ~30 (4)

Thrombin-antithrombin III ~96 (5, 6)

IgE ~190 (7)

CRP ~115 (8)

Interleukin-8 8.4 (9)

C3a: Complement factor 3a; C5a: Complement factor 5a; sC5b-9: Soluble complement complex 5b-9; PMN Elastase: Polymorphonuclear elastase; IgE: Immunoglobulin E; CRP: C-reactive protein.

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