

Supplementary Information to

Detection of Intestinal Inflammation by Vascular Adhesion Protein-1-Targeted [⁶⁸Ga]Ga-DOTA-Siglec-9 Positron Emission Tomography in Murine Models of Inflammatory Bowel Disease

Achol A. Bhowmik¹, Taina R.H. Heikkilä^{2,3}, Lauri Polari^{2,3}, Jenni Virta¹, Heidi Liljenbäck^{1,4}, Olli Moisio¹, Xiang-Guo Li^{1,5,6}, Riikka Viitanen¹, Sirpa Jalkanen^{6,7}, Jukka Koffert^{1,6,8*}, Diana M. Toivola^{2,3,4*}, Anne Roivainen^{1,4,6,9*}

¹Turku PET Centre, University of Turku, Turku, Finland; ²Cell Biology, Biosciences, Faculty of Science and Engineering, Åbo Akademi University, Turku, Finland; ³InFLAMES Research Flagship, Åbo Akademi University, Turku, Finland; ⁴Turku Center for Disease Modeling, Turku, Finland; ⁵Department of Chemistry, University of Turku, Turku, Finland; ⁶InFLAMES Research Flagship, University of Turku, Turku, Finland; ⁷MediCity Research Laboratory, University of Turku, Turku, Finland; ⁸Department of Gastroenterology, Turku University Hospital, Turku, Finland; ⁹Turku PET Centre, Turku University Hospital, Turku, Finland.

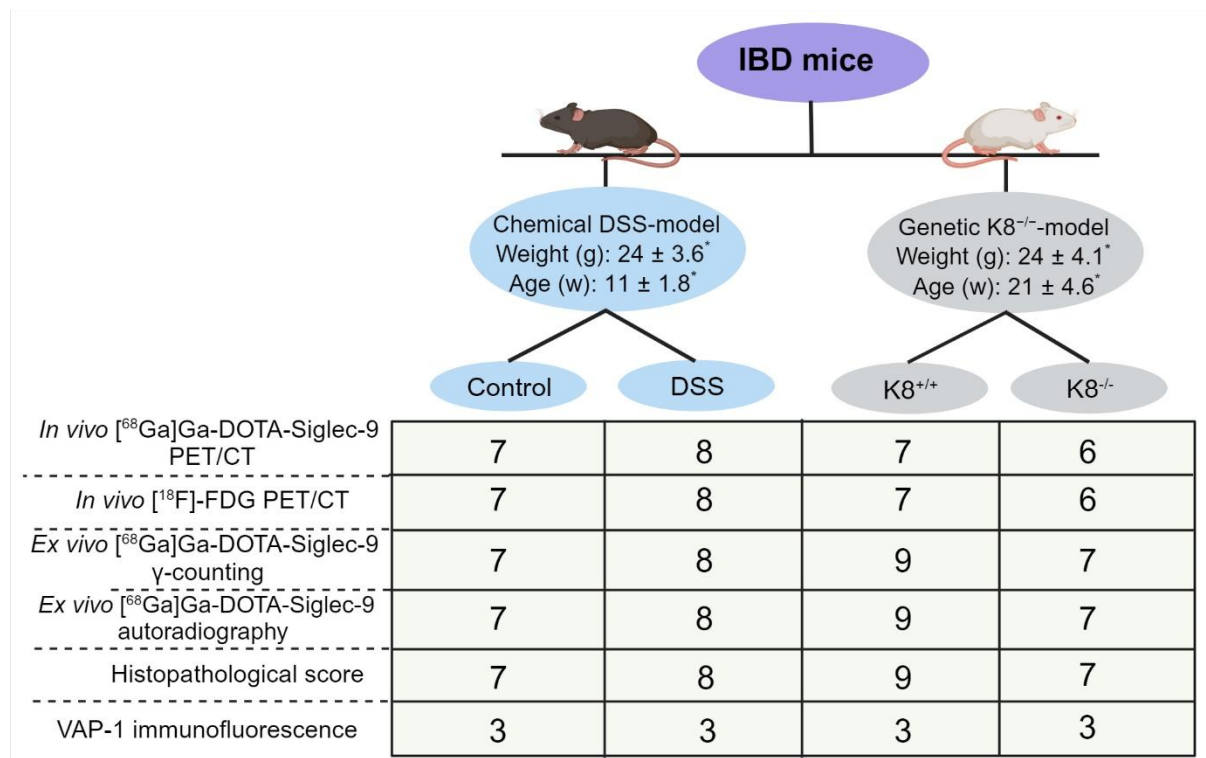
**Equal contribution*

Correspondence: Prof. Anne Roivainen, PhD, Turku PET Centre, Kiinamyllynkatu 4-8, FI-20520 Turku, Finland. Tel: +35823132862, E-mail: anne.roivainen@utu.fi

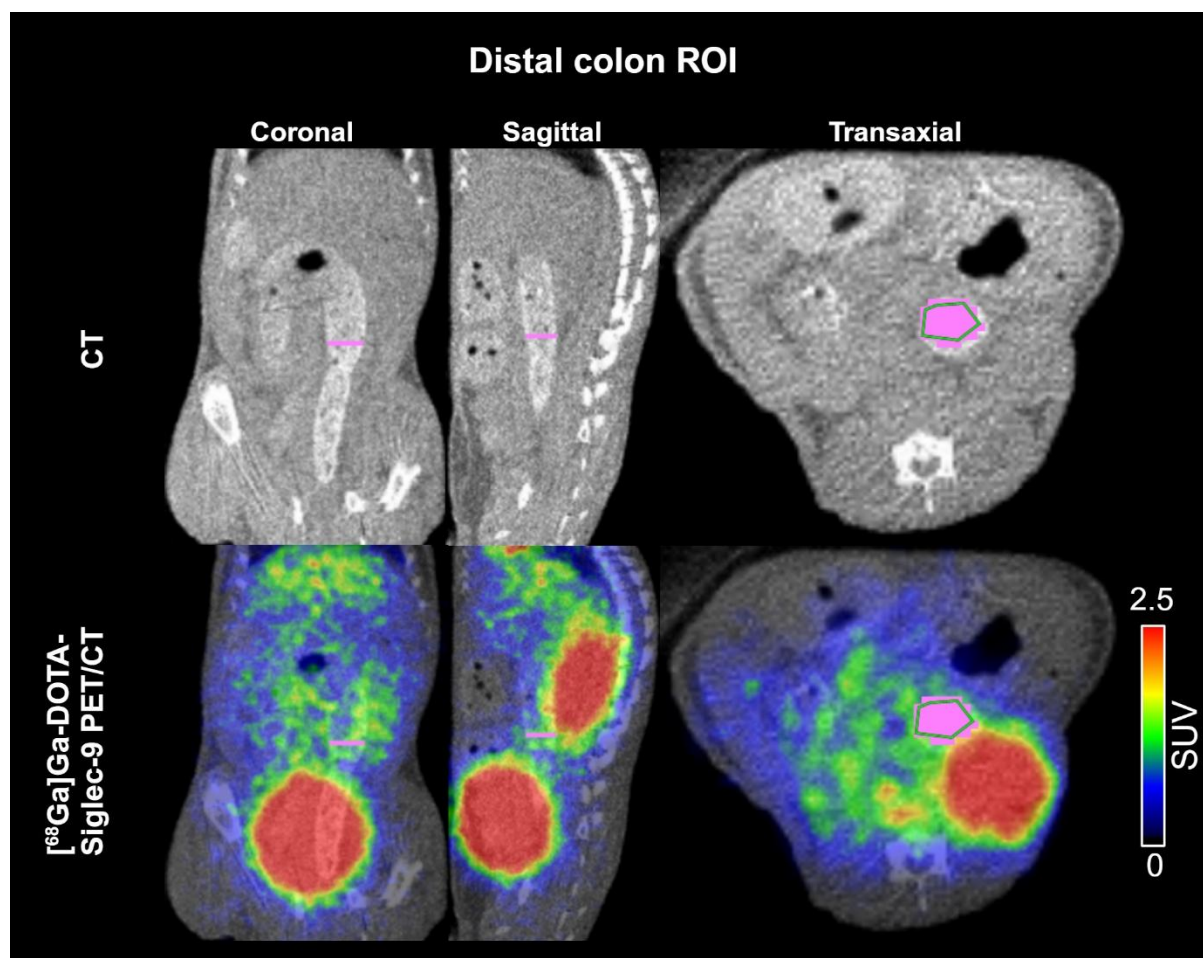
Assoc. Prof. Diana M. Toivola, PhD, E-mail: diana.toivola@abo.fi

Jukka Koffert, MD, PhD, E-mail: jukka.koffert@tyks.fi

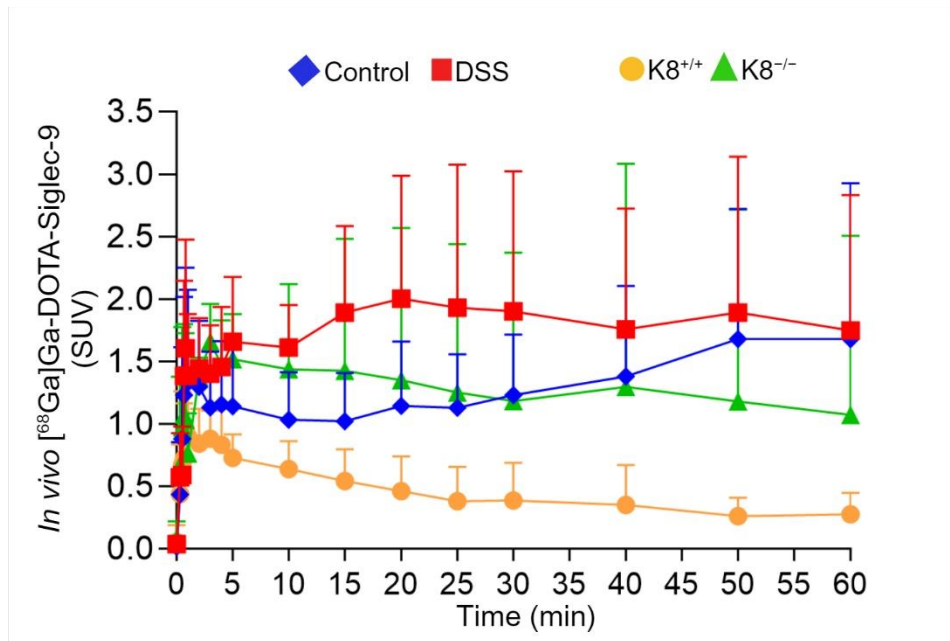
First author: Achol A. Bhowmik, PhD student, Turku PET Centre, Kiinamyllynkatu 4-8, FI-20520 Turku, Finland. Tel: +358449832346, E-mail: achol.a.bhowmik@utu.fi



Supplementary Fig. 1 Study flow chart and numbers of animals used. Male C57Bl/6Ncr1 mice were used in the chemically-induced dextran sodium sulphate (DSS) model, and female FVB/n mice were used in the genetic keratin-8 (K8^{-/-}) model. *Values are expressed as mean $\pm$ SD.



Supplementary Fig. 2 Representative contrast-enhanced CT images and fused [⁶⁸Ga]Ga-DOTA-Siglec-9 PET/CT images (time-weighted mean of PET frames from 0–60 min) of the same DSS male mouse as in Figure 3 showing region of interest (ROI) placement in the distal colon. ROI was manually defined on transaxial slice (pink region with green border) and the coronal and sagittal views (pink lines) were used to ensure the correct ROI placement. The size of ROI depended on cross-sectional area of the distal colon. The slice thickness was 0.4 mm. All ROIs were defined in three dimensions as shown in this example for distal colon ROI. CT images were utilized as anatomical reference. Distal colon ROIs were drawn avoiding spillover signal from the urinary bladder and kidneys. Mean SUV was calculated based on three consecutive transaxial slices.



Supplementary Fig. 3 The decay-corrected time-activity curves of [⁶⁸Ga]Ga-DOTA-Siglec-9 uptake in the distal colon in different groups. Curves represent mean + SD (DSS $n = 8$, Control $n = 7$, K8^{-/-} $n = 6$, K8^{+/+} $n = 7$).