Supplementary material

Al-Sadoon I, Wittmann I, Molnár GA, et al. Serum concentrations of phenylalanine and tyrosine isomers in patients with acute coronary syndrome. Pol Arch Intern Med. 2021; 131: 16107. doi:10.20452/pamw.16107

Laboratory analysis

Serum *m*-Tyr, *o*-Tyr, *p*-Tyr, and Phe levels were determined using reversed-phase-high performance liquid chromatography (rp-HPLC), using a C18 silica column (250 × 4 mm) with isocratic sodium acetate/acetic acid as the mobile phase, on a Shimadzu LC-20 system (Shimadzu USA Manufacturing Inc., Canby, OR, USA) with fluorescence detection (Shimadzu, RF-10Axl; λ_{ex} = 275 nm/λ_{em} = 305 nm for Tyr, λ_{ex} = 258 nm/ λ_{em} = 288 nm for Phe), as described in more detail previously[9]. Concentrations of the compounds were calculated using an external standard, and in some cases, ratios of the individual amino acids were also used. A representative HPLC chromatogram is depicted in Figure S1.

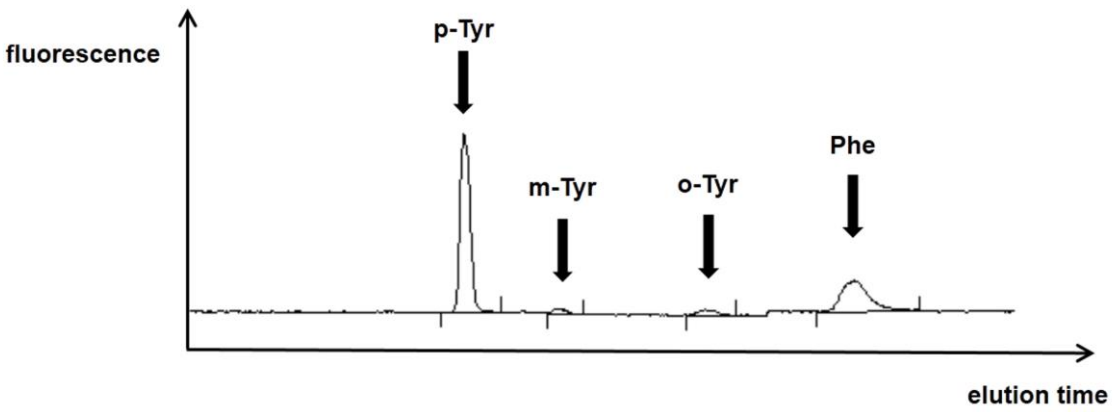

Figure S1. Original registrate showing HPLC separation of *p*-, *m*-, *o*-Tyr, and Phe

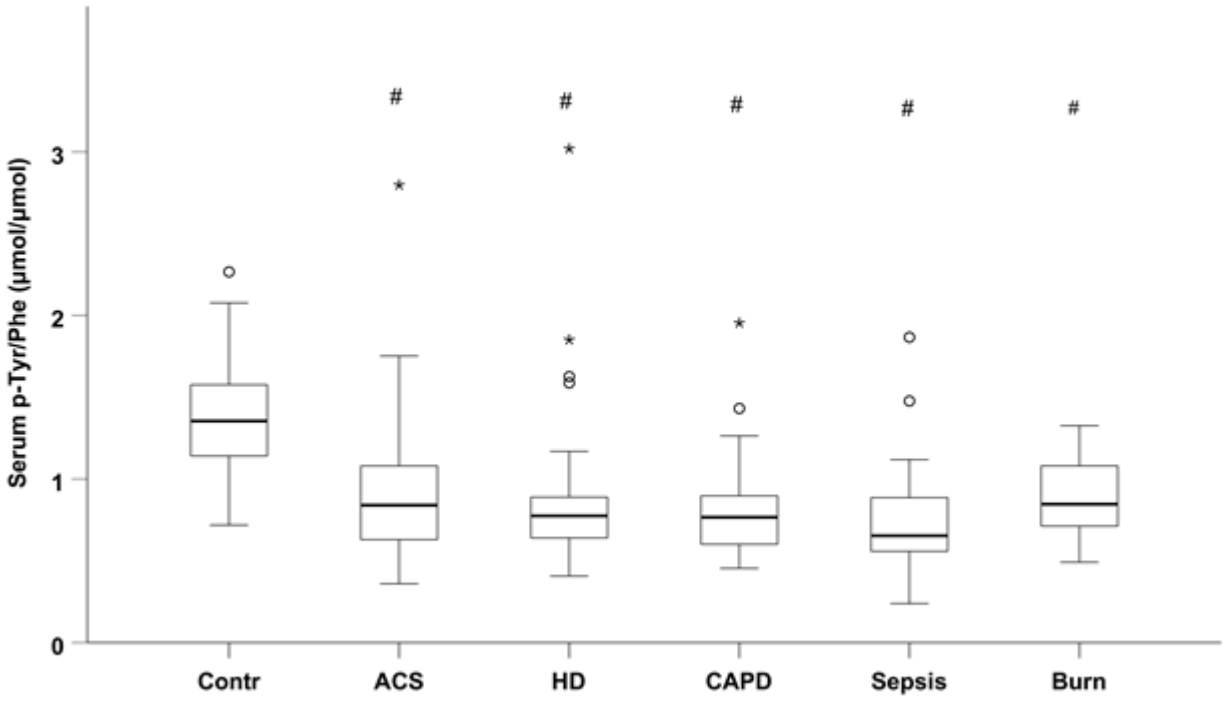

Figure S2. Serum *p*-Tyr/Phe ratios in different illnesses and in healthy controls

Note. The data for HD and CAPD patients are from Kun et al., Redox Rep, pp. 190-198, Sep, 2014 [10]. The data for septic patients are from L. Szélig et al., Redox Rep, pp. 180–189, Jul. 2016 [8]. The data for burned patients are from P. Kovacs et al., Immunobiology, p. 151917, May 2020 [7]. # P <0.001 vs. Contr.

Abbreviations: Contr= control; ACS= acute coronary syndrome; HD= hemodialysis; CAPD= continuous ambulatory peritoneal dialysis.

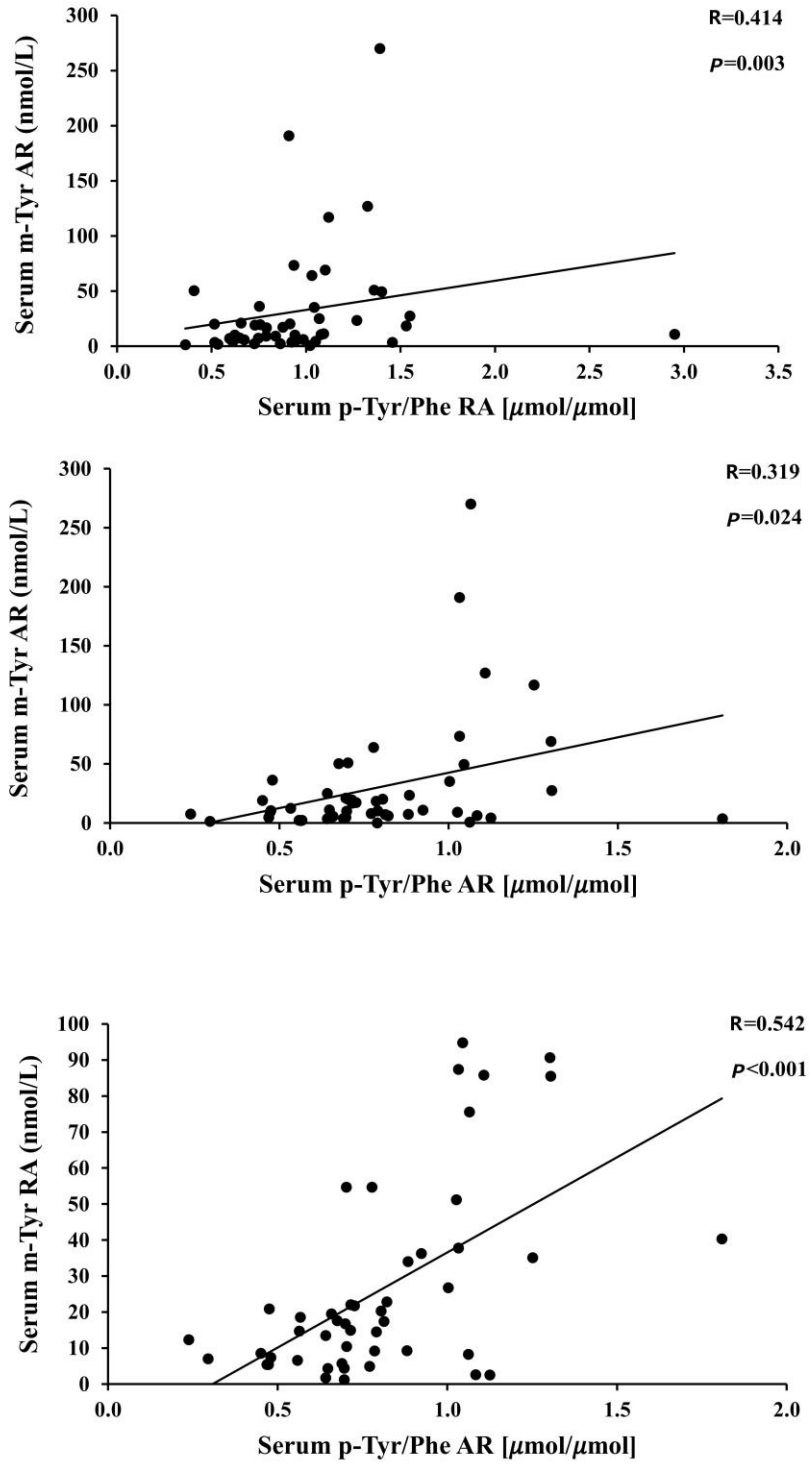

Figure S3. Correlation of *p*-Tyr/Phe ratios with *m*-Tyr in different vessel segments

Abbreviations: AR= aortic root; RA= radial artery. R= Spearman's rho test, *P*= 0.05.

Table S1. Baseline characteristics of study population.

Variables	**ACS patients (n=44)**	**Healthy controls (n=26)**	***P* value**
Age, y, mean (SD)	68.1 (9.4)	47.5 (12.7)	0.02
Male, n (%)	11 (25.0%)	11 (42.3%)	0.13
Female, n (%)	33 (75.0%)	15 (58.0%)	
Smoking, n (%)	17 (38.6%)	6 (23.1%)	0.14
Hypertension, n (%)	35 (79.5%)	7 (26.9%)	<0.001
Diabetes mellitus, n (%)	16 (36.4%)	0 (0.0%)	<0.001
Serum creatinine (μmol/L), mean (SD)	75.4 (25.3)	84.00 (18.0)	0.15
eGFR, median (IQR 25–75)	93.0 (75.7- 99.7)	97.0 (48.7- 110.7)	0.58
Diagnosis of ACS			
STEMI, n (%)	23 (52.3%)		NA
NSTEMI, n (%)	21 (47.7%)		NA
Extent of CAD			
Single vessel disease, n (%)	37 (84.1%)		NA
Double vessel disease, n (%)	6 (13.6%)		NA
Triple vessel disease, n (%)	1 (2.3%)		NA

Abbreviations: ACS, acute coronary syndrome; CAD, coronary artery disease; STEMI, ST-segment elevation myocardial infarction; NSTEMI, non-ST-segment elevation myocardial infarction; eGFR, estimated glomerular filtration.