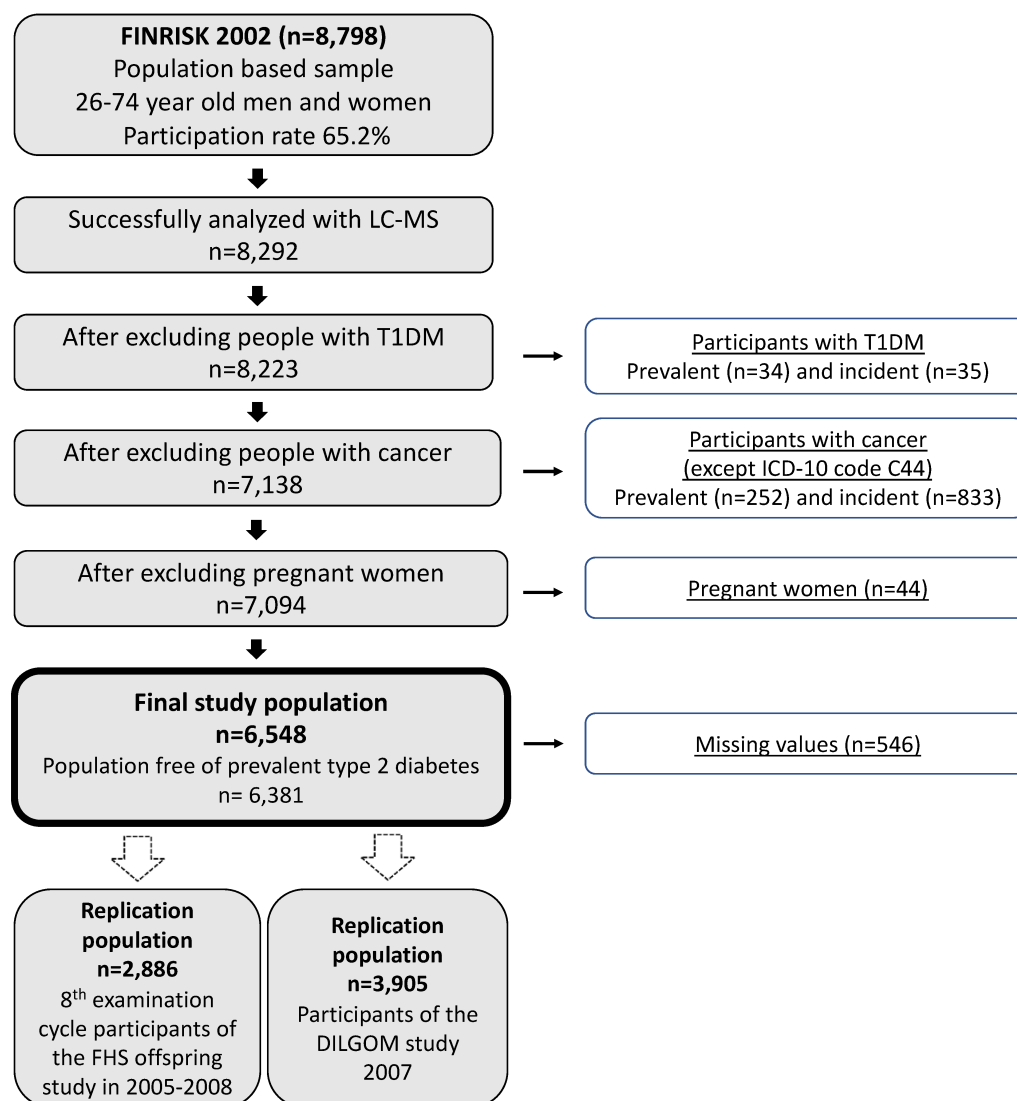
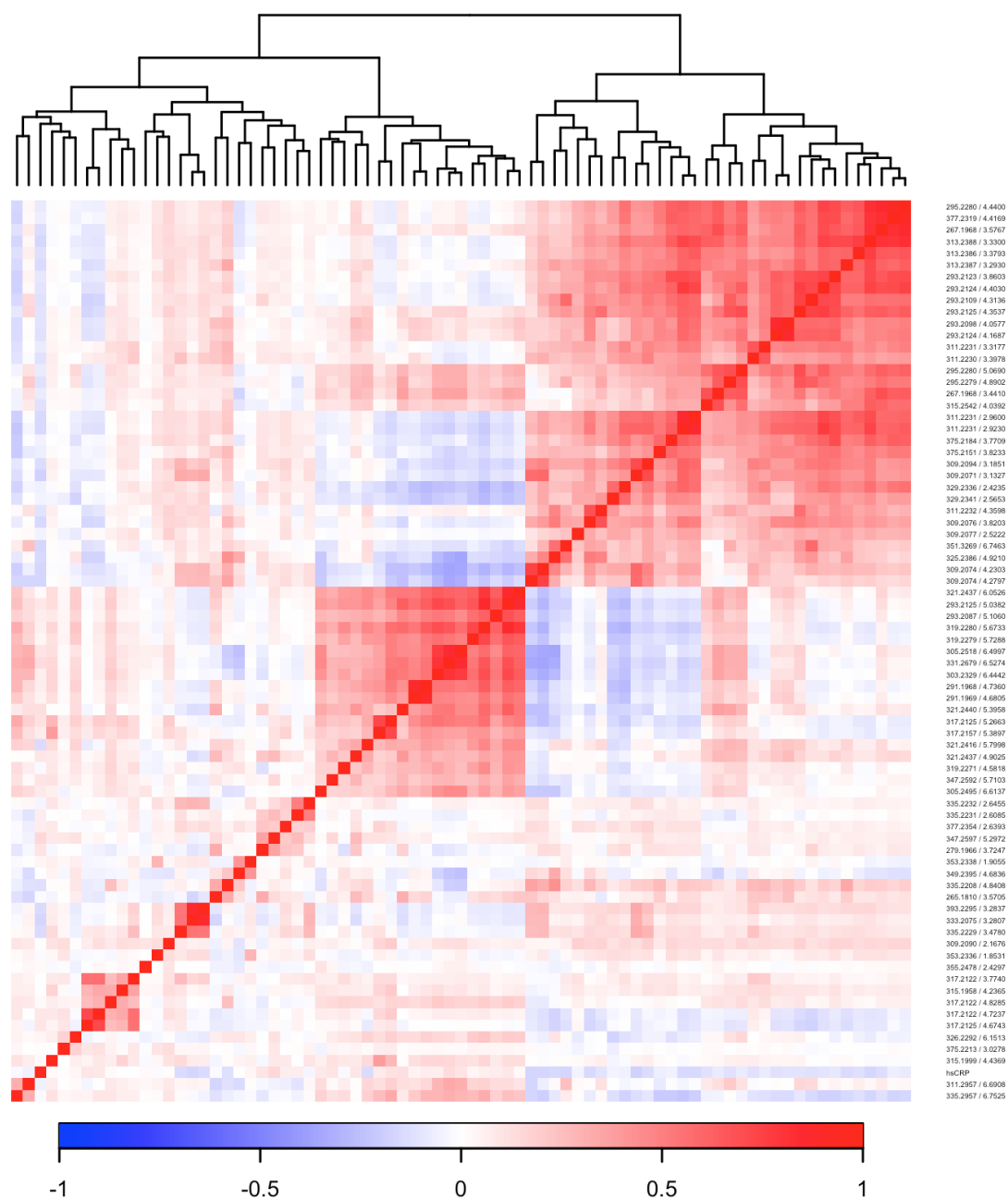


**Supplement Figure S1. Flowcharts representing the exclusion criteria and final study population in discovery analyses and replication cohorts.**



### Supplement Figure S2. Correlation heatmap for the 76 eicosanoids associated with incident type 2 diabetes and hs-CRP



Links between eicosanoids significantly associated with incident T2D, and hs-CRP, were determined using Spearman rank correlation and ordered using the complete linkage clustering method.

**Supplement table S1. Hazard ratios and 95% confidence intervals by quartile of the eicosanoid risk score for incident type 2 diabetes in FINRISK 2002, FHS Offspring and DILGOM 2007.**

Risk quartile (Q)	FINRISK 2002			FHS Offspring			DILGOM 2007		
	HR	95% CI	p-value	HR	95% CI	p-value	HR	95% CI	p-value
Q1	1.00	Reference category		1.00	Reference category		1.00	Reference category	
Q2	1.31	0.99-1.63	0.098	1.11	0.81-1.53	0.500	1.14	0.75-1.54	0.512
Q3	1.88	1.59-2.17	<0.0001	1.38	1.03-1.85	0.030	1.30	0.93-1.67	0.165
Q4	2.80	2.53-3.07	<0.0001	1.74	1.31-2.31	0.0001	1.37	1.00-1.74	0.093

Risk quartiles based on three-eicosanoid risk score. Cox proportional hazards regression analyses for the FINRISK and DILGOM cohorts are adjusted for age, sex, BMI, physical activity, parental history of diabetes, prevalent CVD, systolic blood pressure, antihypertensive medication, triglycerides, lipid lowering medication, geographical area and mass spectrometry plate. For the FHS cohort, Cox proportional hazards regression analyses are adjusted for age, sex, BMI, systolic blood pressure, hypertension treatment, and triglycerides.

**Supplement Table S2.** Medians of fP-Gluc, fP-Insulin, HOMA-IR and HOMA-B in eicosanoid risk score quartiles and test of linear trend across the quartiles in FINRISK 2002.

	1 <sup>st</sup> risk quartile	2 <sup>nd</sup> risk quartile	3 <sup>rd</sup> risk quartile	4 <sup>th</sup> risk quartile	p-value for trend*
<b>fP-Gluc, mmol/l</b>	5.55	5.66	5.77	5.82	<0.0001
<b>fP-Insulin, mmol/l</b>	6.5	6.5	7.5	8.7	<0.0001
<b>HbA1c, mmol/mol</b>	36	36	36	37	<0.0001
<b>HOMA-IR</b>	1.61	1.60	1.87	2.26	<0.0001
<b>HOMA-B</b>	63.2	61.3	65.9	74.9	0.0140
<b>hs-CRP, mg/l</b>	0.8	0.94	1.15	1.28	0.0008

Adjusted for age, sex and BMI

**Supplement Table S3.** Spearman rank correlations of the three eicosanoids used for the risk score with glucose tolerance indicators and inflammation markers in FINRISK 2002.

	<b>311.223100_2.9230 Unknown eicosanoid</b>	<b>335.223200_2.6455 8-iso-PGA1</b>	<b>279.196600_3.7247 12-HHTrE</b>
<b>fP-Gluc</b>	-0.11*	0.03	0.15*
<b>fP-Insulin</b>	-0.07	0.10*	0.24*
<b>HbA1c</b>	-0.08	0.07	0.11*
<b>HOMA-IR</b>	-0.08	0.10*	0.25*
<b>HOMA-B</b>	-0.02	0.09*	0.18*
<b>hs-CRP</b>	-0.14*	-0.02	-0.09*
<b>IL-1RA</b>	0.00	-0.02	-0.01
<b>IL-6</b>	0.01	0.03	0.06
<b>TNF-alpha</b>	0.02	-0.01	0.01

\*p<0.0001