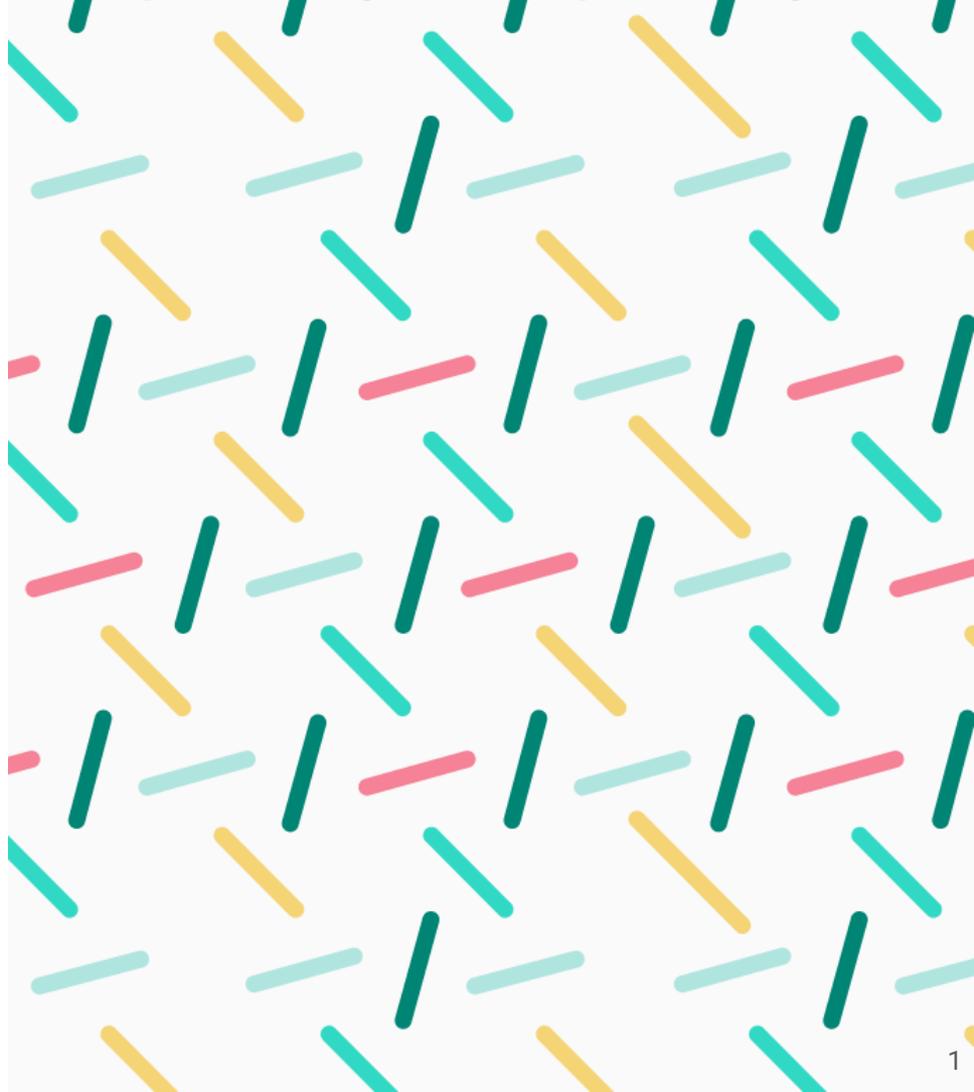


UL FFA

dr. Nina Franko
prof. dr. Marija Sollner Dolenc

predstavitev dela na projektu PARC
december 2023

PARC



Kje smo udeleženi?

WP 5.1.1.b

Vpliv nadomestkov BPA
na imunski sistem

Poster EUROTOX, september 2023

WP 5.2.1.d

Razvoj metode za ocenitev
imunosupresivnega
delovanja učinkovin

Objavljen članek: *Archives of toxicology*. 2023, vol. 97, str. 1831-184
Članek v recenziji: *Front Toxicol*

WP 5.1.1.b

BPA
BPE
BPZ
BPP
BPAP
TCBPA
BPS-MAE

PARC

VPLIV NA T-CELICE

VPLIV NA VIABILNOST CELIC

bisphenol	Jurkat T cells IC ₅₀ [μM]
BPP	21.1 ± 1
BPAP	25.2 ± 1
BPZ	38.1 ± 1
TCBPA	41.5 ± 3
BPE	76.1 ± 4
BPA	99.4 ± 5
BPS-MAE	130.4 ± 5

WP 5.1.1.b

BPA
BPE
BPZ
BPP
BPAP
TCBPA
BPS-MAE

PARC

VPLIV NA T-CELICE

VPLIV NA AKTIVACIJO T CELIC

bisphenol	Jurkat T cells IC ₅₀ [μM]
BPAP	6.4 ± 2
BPZ	6.4 ± 5
BPP	6.5 ± 4
BPA	11.1 ± 3
BPE	11.5 ± 5
BPS-MAE	11.8 ± 1

WP 5.1.1.b

Screening analogov BPA, ki potencialno reagirajo z endokrinimi receptorji

Receptorji v analizi:
ER, AR, GR, MR, LXR α/β ,
PPAR $\alpha/\beta/\gamma$, PR, RXR, TR α/β



IN SILICO ANALIZA ENDOCRINE DISRUPTOME

RANK – GR agonist	BISFENOL
1	BisOPP-A (BPPH)
2	Pergafast 201
3	BPP
4	HBPX1-1
5	BPS-MAE
6	BPS-MPE
7	BPBP
8	BPG
8	BPCL2
10	D-90
11	TGSA
12	BPFL
13	DD-70
13	BPC
15	BTUM
15	D-8
15	TCBPA
18	BPE
19	BPAP
20	PHBB
20	BPZ
20	BPA
23	2,4-BPS
24	MBHA
24	TBBPA
26	BP-TMC

RANK – GR antagonist	BISFENOL
1	BTUM
2	BisOPP-A (BPPH)
3	BPFL
4	Pergafast 201
5	BPP
6	HBPX1-1
7	D-90
8	BP-TMC
9	BPS-MAE
9	BPS-MPE
11	BPAP
11	BPG
13	BPBP
14	DD-70
15	BPZ
16	TGSA
17	BPC
18	D-8
18	BPA
20	BPE
20	TCBPA
22	BPCL2
22	TBBPA
24	MBHA
25	2,4-BPS
26	PHBB

RANK - vsi receptorji	BISFENOL
1	BisOPP-A (BPPH)
2	Pergafast 201
3	BTUM
4	BPG
5	BPC
6	BPS-MPE
7	BPZ
8	BPS-MAE
9	BPAP
10	BPP
11	BP-TMC
12	TGSA
13	HBPX1-1
14	D-90
15	BPA
16	PHBB
17	BPE
18	BPCL2
19	D-8
20	TCBPA
21	2,4-BPS
22	MBHA
23	DD-70
24	BPFL
25	BPBP
26	TBBPA

WP 5.2.1.d

Metoda za določanje imunosupresivnega delovanja učinkovin

Standardizacija Whole Blood Cytokine Release Assay

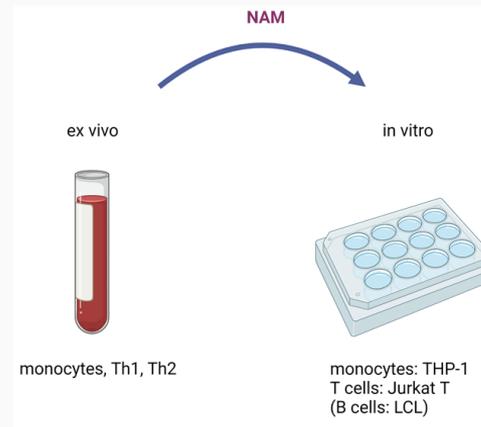
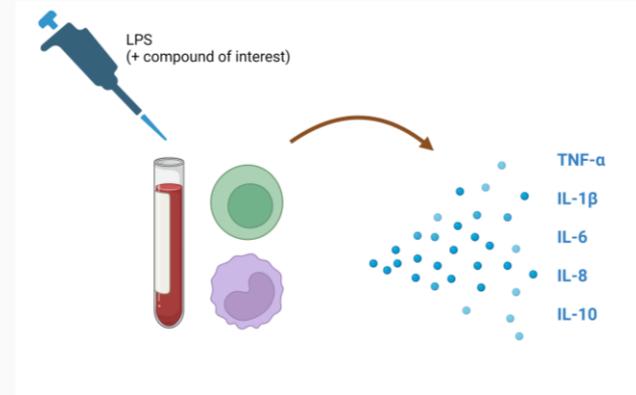
Modelne učinkovine:

takrolimus, hidrokortizon, doramapimod, dapson, rapamicin



NAM

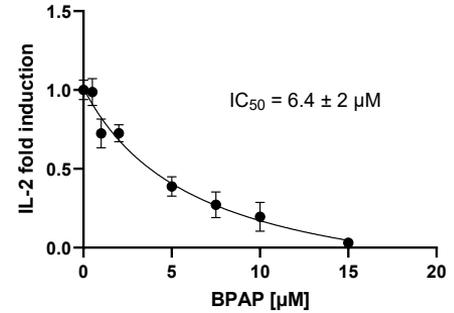
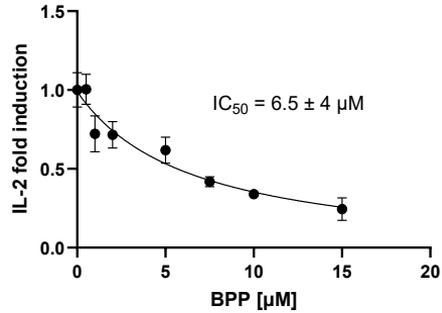
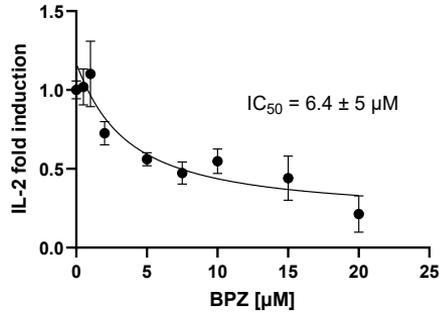
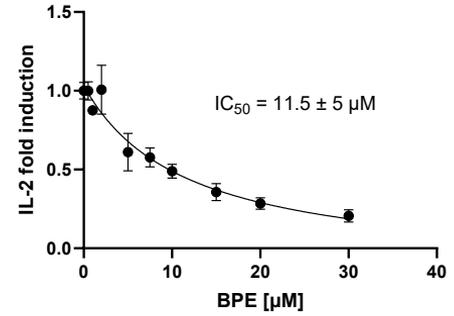
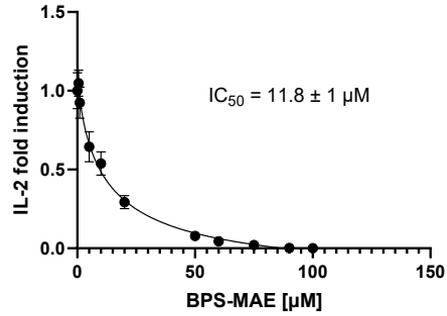
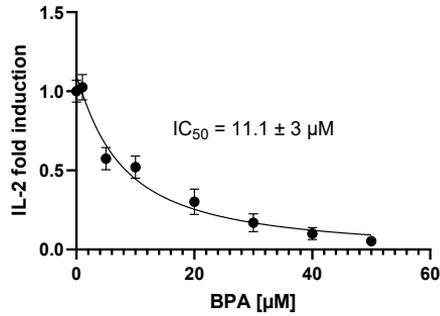
Metoda za ugotavljanje imunosupresije



IL-8
IL-2
TNF α

HVALA!

Jurkat: IL-2



viabilnost

bisphenol	Jurkat T cells IC ₅₀ [μM]	THP-1 derived M0 macrophages IC ₅₀ [μM]
BPP	21.1 ± 1	~ 19*
BPAP	25.2 ± 1	37.3 ± 1 *
BPZ	38.1 ± 1	42.8 ± 2 *
TCBPA	41.5 ± 3	69.8 ± 6
BPE	76.1 ± 4	220.2 ± 50
BPA	99.4 ± 5	122.6 ± 6
BPS-MAE	130.4 ± 5	137.5 ± 7

