

# Analysis

Huang LiChuang of Wie-Biotech

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# 1 摘要

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## 2 附：分析流程

### 2.1 成分和靶点

#### 2.1.1 成分（白茅根和王不留行子）

Table 1为表格 Herbs information 概览。

(对应文件为 `Figure+Table/Herbs-information.xlsx`)

注：表格共有 2 行 18 列，以下预览的表格可能省略部分数据；表格含有 2 个唯一 ‘Herb\_’。

Table 1: Herbs information

Herb_	Herb_...	Herb_...	Herb_...	Herb_...	Prope...	Merid...	UsePart	Function	Indic...	Toxicity	...
HERB0...	BAI M...	白茅根	Lalan...	Rhizo...	Sweet...	Lung;...	NA	To ar...	1. It...	NA	...
HERB0...	WANG ...	王不留行	Vacar...	Semen...	Mild;...	Stoma...	seed	1. To...	Galac...	NA	...

Table 2为表格 Components of Herbs 概览。

(对应文件为 `Figure+Table/Components-of-Herbs.xlsx`)

注：表格共有 140 行 4 列，以下预览的表格可能省略部分数据；表格含有 137 个唯一 ‘Ingredient.name’。

Table 2: Components of Herbs

herb_id	Ingre.....2	Ingre.....3	Ingre.....4
HERB0...	HBIN0...	1-mon...	Glyce...
HERB0...	HBIN0...	20,23...	NA
HERB0...	HBIN0...	2,3-b...	(2R,3...
HERB0...	HBIN0...	23-hy...	NA
HERB0...	HBIN0...	23-hy...	NA
HERB0...	HBIN0...	3beta...	3beta...

herb_id	Ingre.....2	Ingre.....3	Ingre.....4
HERB0...	HBIN0...	3 ,23...	NA
HERB0...	HBIN0...	3 ,23...	NA
HERB0...	HBIN0...	3 -ac...	3 -ac...
HERB0...	HBIN0...	3-O-a...	3-o-a...
HERB0...	HBIN0...	3-o- ...	3-o- ...
HERB0...	HBIN0...	3-oxo...	NA
HERB0...	HBIN0...	4,5-D...	AIDS0...
HERB0...	HBIN0...	4-Met...	AI3-2...
HERB0...	HBIN0...	5alph...	5 ,9 ...
...	...	...	...

Figure 1为图 intersection of all compounds 概览。

(对应文件为 Figure+Table/intersection-of-all-compounds.pdf)

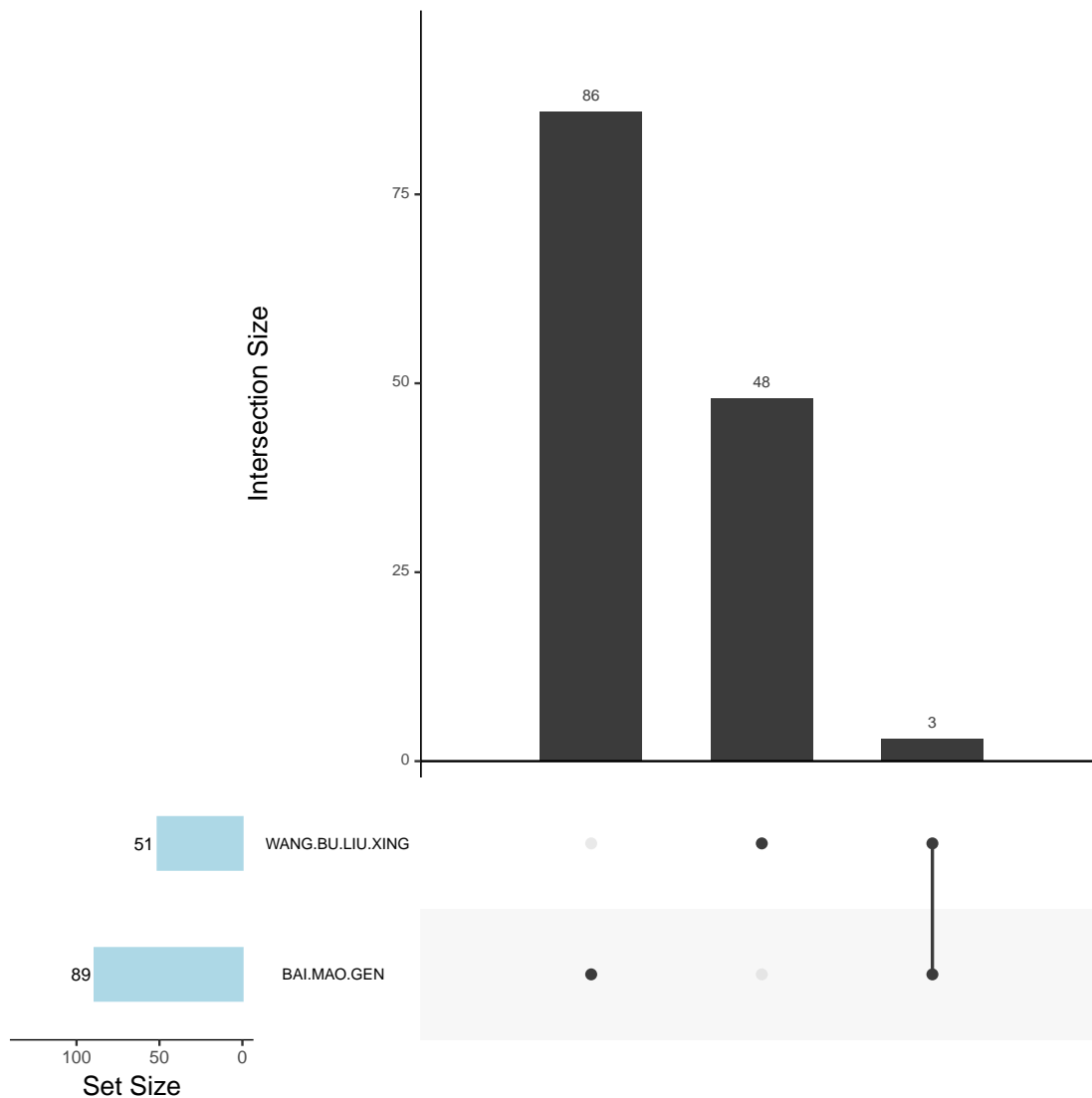


Figure 1: Intersection of all compounds

### 2.1.2 成分靶点

Table 3为表格 tables of Herbs compounds and targets 概览。

(对应文件为 **Figure+Table/tables-of-Herbs-compounds-and-targets.xlsx**)

注：表格共有 987 行 9 列，以下预览的表格可能省略部分数据；表格含有 137 个唯一 ‘Ingredient.id’。

Table 3: Tables of Herbs compounds and targets

Ingre.....1	Herb_...	Ingre.....3	Ingre.....4	Targe.....5	Targe.....6	Datab...	Paper.id	...
HBIN0...	WANG ...	1-[(2...	1-[(2...	NA	NA	NA	NA	...

Ingre.....1	Herb_...	Ingre.....3	Ingre.....4	Targe.....5	Targe.....6	Datab...	Paper.id	...
HBIN0...	BAI M...	1-mon...	Glyce...	NA	NA	NA	NA	...
HBIN0...	BAI M...	20,23...	NA	NA	NA	NA	NA	...
HBIN0...	BAI M...	2,3-b...	(2R,3...	HBTAR...	ANPEP	NA	NA	...
HBIN0...	BAI M...	2,3-b...	(2R,3...	HBTAR...	CDC34	NA	NA	...
HBIN0...	BAI M...	2,3-b...	(2R,3...	HBTAR...	COMT	NA	NA	...
HBIN0...	BAI M...	2,3-b...	(2R,3...	HBTAR...	ENPEP	NA	NA	...
HBIN0...	BAI M...	2,3-b...	(2R,3...	HBTAR...	GRK6	NA	NA	...
HBIN0...	BAI M...	2,3-b...	(2R,3...	HBTAR...	UBE2K	NA	NA	...
HBIN0...	BAI M...	2,3-b...	(2R,3...	HBTAR...	LNPEP	NA	NA	...
HBIN0...	BAI M...	2,3-b...	(2R,3...	HBTAR...	LTA4H	NA	NA	...
HBIN0...	BAI M...	2,3-b...	(2R,3...	HBTAR...	PRKACA	NA	NA	...
HBIN0...	BAI M...	2,3-b...	(2R,3...	HBTAR...	PRKACB	NA	NA	...
HBIN0...	BAI M...	2,3-b...	(2R,3...	HBTAR...	PRKACG	NA	NA	...
HBIN0...	BAI M...	2,3-b...	(2R,3...	HBTAR...	PRKG1	NA	NA	...
...	...	...	...	...	...	...	...	...

Figure 2为图 Herbs compounds and targets 概览。

(对应文件为 Figure+Table/Herbs-compounds-and-targets.pdf)

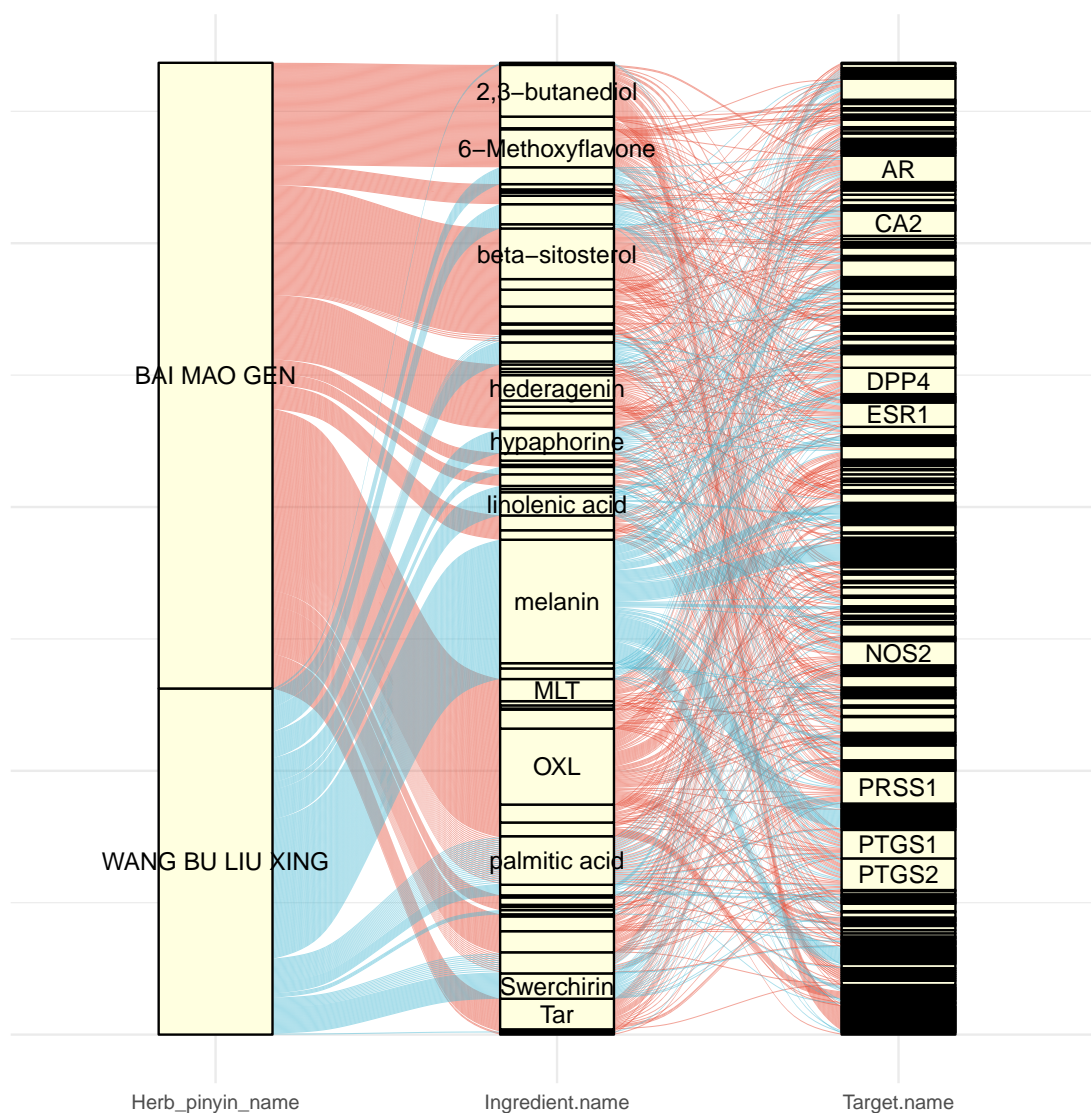


Figure 2: Herbs compounds and targets

## 2.2 IgA 肾炎 (IgA Nephropathy) 差异基因

### 2.2.1 GSE175759: RNA-seq profiling for manually microdissected tubulointerstitial tissue from 90 kidney samples.

Table 4为表格 metadata of used samples of GSE175759 概览。

(对应文件为 Figure+Table/metadata-of-used-samples-of-GSE175759.csv)

注：表格共有 65 行 9 列，以下预览的表格可能省略部分数据；表格含有 2 个唯一 ‘group’。

Table 4: Metadata of used samples of GSE175759

rownames	group	lib.size	norm....	sample	title	estim...	techn...	tissu...
GSM53...	IgAN	40893...	1.057...	GSM53...	IgAN_...	76.6	No	Kidne...
GSM53...	IgAN	49316...	1.331...	GSM53...	IgAN_...	68.8	No	Kidne...
GSM53...	IgAN	35208...	1.009...	GSM53...	IgAN_...	70.5	No	Kidne...
GSM53...	IgAN	41500...	1.271...	GSM53...	IgAN_...	46.8	No	Kidne...
GSM53...	IgAN	50748...	1.286...	GSM53...	IgAN_...	63.0	No	Kidne...
GSM53...	IgAN	43491...	1.145...	GSM53...	IgAN_...	114.8	No	Kidne...
GSM53...	IgAN	31920...	0.885...	GSM53...	IgAN_...	77.0	No	Kidne...
GSM53...	IgAN	29243...	0.877...	GSM53...	IgAN_...	81.1	No	Kidne...
GSM53...	IgAN	33622...	0.941...	GSM53...	IgAN_...	70.5	No	Kidne...
GSM53...	IgAN	33555...	0.986...	GSM53...	IgAN_...	67.1	No	Kidne...
GSM53...	IgAN	33784...	1.044...	GSM53...	IgAN_...	77.7	No	Kidne...
GSM53...	IgAN	40344...	1.195...	GSM53...	IgAN_...	64.6	No	Kidne...
GSM53...	IgAN	59431...	1.175...	GSM53...	IgAN_...	74.8	No	Kidne...
GSM53...	IgAN	41323...	1.121...	GSM53...	IgAN_...	68.3	No	Kidne...
GSM53...	IgAN	35019...	0.890...	GSM53...	IgAN_...	104.5	No	Kidne...
...	...	...	...	...	...	...	...	...

Figure 3为图 DEGs of GSE175759 概览。

(对应文件为 Figure+Table/DEGs-of-GSE175759.pdf)

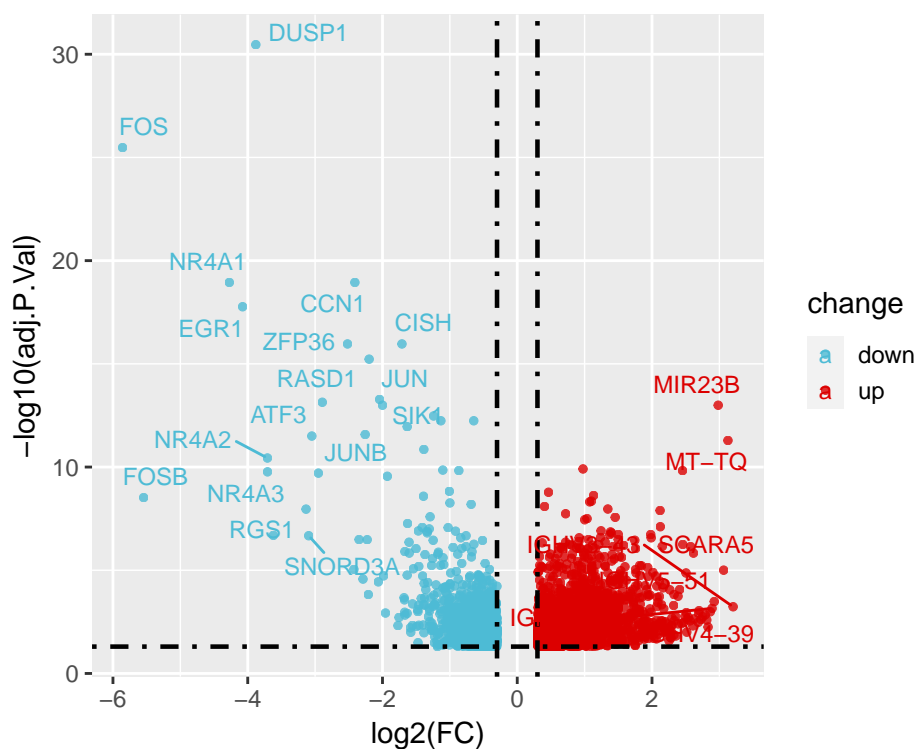


Figure 3: DEGs of GSE175759

Table 5为表格 tables of DEGs of GSE175759 概览。

(对应文件为 Figure+Table/tables-of-DEGs-of-GSE175759.xlsx)

注：表格共有 4526 行 14 列，以下预览的表格可能省略部分数据；表格含有 4526 个唯一 ‘ensembl\_gene\_id’。

Table 5: Tables of DEGs of GSE175759

ensem...	hgnc_...	entre...	refse...	chrom...	start...	end_p...	descr...	logFC	AveExpr	t	P.
ENSG0...	DUSP1	1843	NM_00...	5	17276...	17277...	dual ...	-3.87...	4.749...	-24.7...	1.8
ENSG0...	FOS	2353	NM_00...	14	75278826	75282230	Fos p...	-5.85...	3.598...	-20.1...	3.8
ENSG0...	CCN1	3491	NM_00...	1	85580761	85584589	cellu...	-2.40...	5.149...	-15.2...	1.9
ENSG0...	NR4A1	3164		12	52022832	52059507	nucle...	-4.27...	3.962...	-15.1...	2.4
ENSG0...	EGR1	1958	NM_00...	5	13846...	13846...	early...	-4.07...	4.275...	-14.3...	4.8
ENSG0...	ZFP36	7538	NM_00...	19	39406847	39409412	ZFP36...	-2.51...	4.920...	-13.1...	3.8
ENSG0...	CISH	1154		3	50606489	50611774	cytok...	-1.71...	5.212...	-13.0...	4.0
ENSG0...	JUN	3725		1	58776845	58784048	Jun p...	-2.19...	5.232...	-12.5...	2.8
ENSG0...	SIK1	150094	NM_17...	21	43414483	43427131	salt ...	-2.04...	3.794...	-11.3...	2.8
ENSG0...	RASD1	51655	NM_01...	17	17494437	17496395	ras r...	-2.89...	3.520...	-11.2...	3.8
ENSG0...	BTG2	7832		1	20330...	20330...	BTG a...	-1.99...	5.834...	-11.1...	6.4
ENSG0...	DUSP6	1848	NM_00...	12	89347235	89352501	dual ...	-1.24...	5.303...	-10.8...	2.8
ENSG0...	PPP1R10	5514	NM_00...	6	30600413	30618612	prote...	-0.64...	6.059...	-10.6...	4.8
ENSG0...	SLC25A25	114789	NM_00...	9	12806...	12810...	solut...	-1.13...	4.404...	-10.6...	4.8
ENSG0...	IER2	9592	NM_00...	19	13150411	13154911	immed...	-1.63...	5.122...	-10.4...	9.4
...	...	...	...	...	...	...	...	...	...	...	...

## 2.3 PPI 网络药理

Figure 4为图 intersection of IgAN DEGs with herbs targets 概览。

(对应文件为 Figure+Table/intersection-of-IgAN-DEGs-with-herbs-targets.pdf)



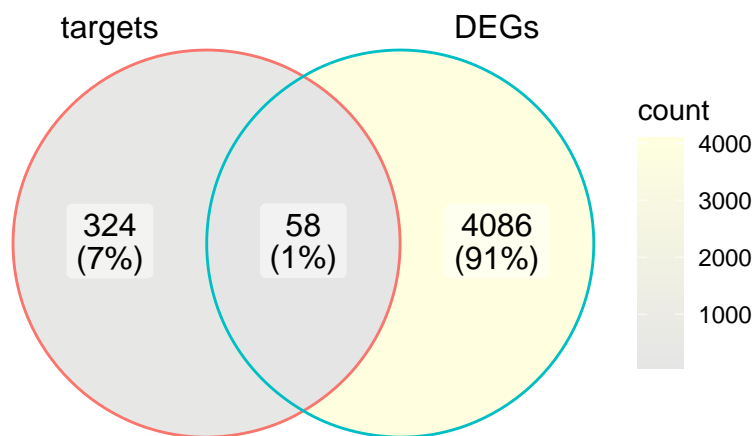


Figure 4: Intersection of IgAN DEGs with herbs targets

Figure 5为图 PPI networks 概览。

(对应文件为 `Figure+Table/PPI-networks.pdf`)

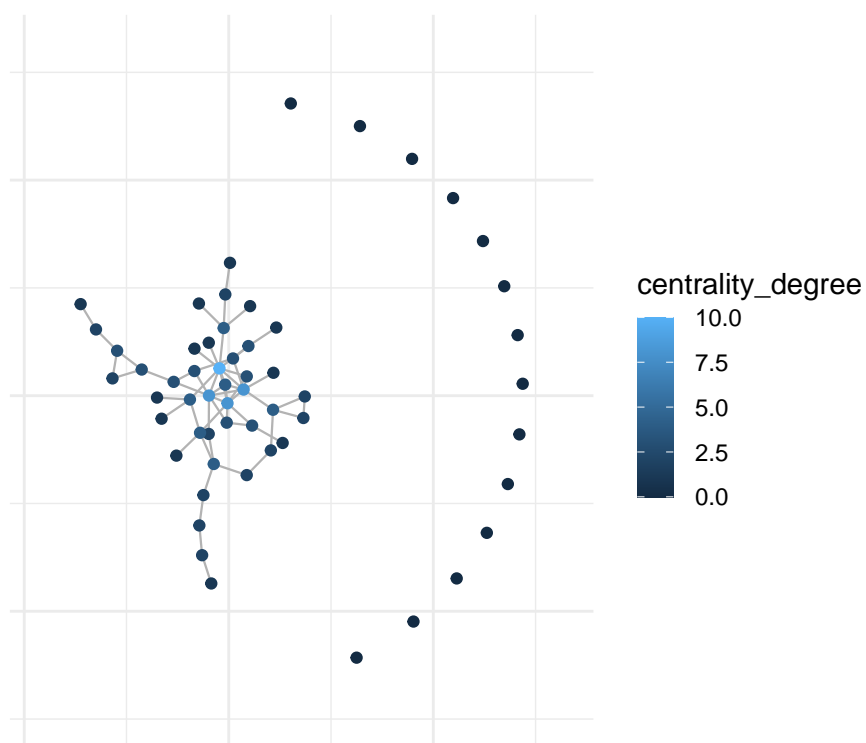


Figure 5: PPI networks

Figure 6为图 MCC top30 概览。

(对应文件为 `Figure+Table/MCC-top30.pdf`)

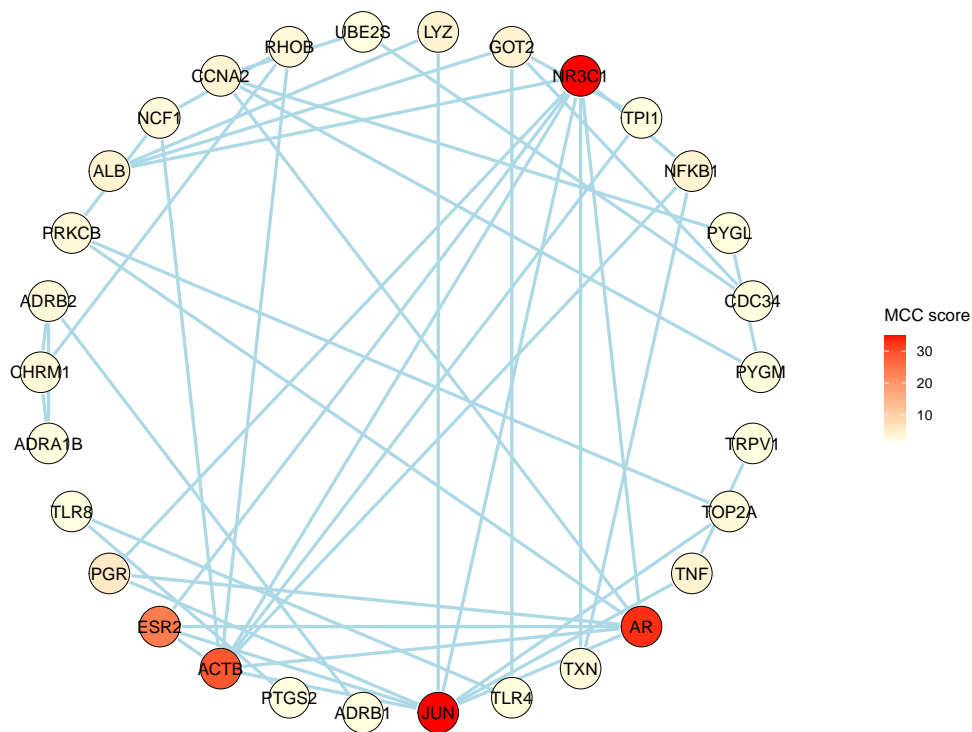


Figure 6: MCC top30

## 2.4 治疗 IgA 肾炎相关成分

Table 6为表格 relative compounds of Herbs that treating IgAN 概览。

(对应文件为 `Figure+Table/relative-compounds-of-Herbs-that-treating-IgAN.xlsx`)

注：表格共有 251 行 9 列，以下预览的表格可能省略部分数据；表格含有 58 个唯一 ‘Ingredient.name’。

Table 6: Relative compounds of Herbs that treating IgAN

Ingre.....1	Herb_...	Ingre.....3	Ingre.....4	Targe.....5	Targe.....6	Datab...	Paper.id	...
HBIN0...	BAI M...	2,3-b...	(2R,3...	HBTAR...	CDC34	NA	NA	...
HBIN0...	BAI M...	2,3-b...	(2R,3...	HBTAR...	UBE2S	NA	NA	...
HBIN0...	BAI M...	2,3-b...	(2R,3...	HBTAR...	TLR8	NA	NA	...
HBIN0...	BAI M...	2,3-b...	(2R,3...	HBTAR...	COMTD1	NA	NA	...
HBIN0...	WANG ...	(3S,6...	(3S,6...	HBTAR...	PTGS2	NA	NA	...
HBIN0...	BAI M...	4-Met...	AI3-2...	HBTAR...	ADRA2A	NA	NA	...
HBIN0...	BAI M...	4-Met...	AI3-2...	HBTAR...	ADRB2	NA	NA	...

Ingre.....1	Herb_...	Ingre.....3	Ingre.....4	Targe.....5	Targe.....6	Datab...	Paper.id	...
HBIN0...	BAI M...	4-Met...	AI3-2...	HBTAR...	PTGS2	NA	NA	...
HBIN0...	BAI M...	4-Met...	AI3-2...	HBTAR...	CA2	NA	NA	...
HBIN0...	BAI M...	4-Met...	AI3-2...	HBTAR...	NOS2	NA	NA	...
HBIN0...	BAI M...	4-Met...	AI3-2...	HBTAR...	PDE3A	NA	NA	...
HBIN0...	BAI M...	6-Met...	26964...	HBTAR...	ADRB1	NA	NA	...
HBIN0...	BAI M...	6-Met...	26964...	HBTAR...	ADRB2	NA	NA	...
HBIN0...	BAI M...	6-Met...	26964...	HBTAR...	AR	NA	NA	...
HBIN0...	BAI M...	6-Met...	26964...	HBTAR...	CHRM1	NA	NA	...
...	...	...	...	...	...	...	...	...