

# **ANNEXURE-2**

**Annexure 2: Hubba Table Result for NNK affected interactome using CytoHubba**

**plug-in of Cytoscape software**

Name	Betweenness	BottleNeck	Closeness	ClusteringCoefficient	Degree
TNFRSF10C	0	1	119.4833	0	1
ID1	0	1	102.6095	0	1
CTSD	0	1	119.4833	0	1
ADAMTSL4	0	1	1	0	1
ADAMTS1	0	1	1	0	1
CCL2	0	1	108.0167	0	1
QSOX1	0	1	81.2	1	3
BEX1	0	1	96.79286	0	1
SRA1	0	1	85.68333	0	1
MAGED1	0	1	87.15	0	1
STARD13	0	1	81.62619	1	2
NDRG1	0	1	119.4833	0	1
ALOX15B	0	1	83.31667	0	1
EFNA1	0	1	85.43333	0	1
NEK6	0	1	98.1	0	1
NTPCR	0	1	103.2	1	5
BIN1	0	1	70.57857	1	2
PTP4A1	251.1695	5	119.0833	0.33333	3
PTP4A2	0	1	111.9833	0	1
NEDD1	0	1	126.8667	1	7
WTAP	0	1	102.7	1	5
PTGS2	686.518	2	111.7	0	3
IFI27	0.5	1	94.58333	0.83333	4
DKK2	0	1	87.85952	0	1
DKK1	672	2	120.15	0	2
PHLDA1	0	1	104.2333	0	1
HMOX1	0	1	108.0167	0	1
DDIT4	0	1	119.4833	0	1
PLK2	0	1	121.15	1	2
TRIM35	0.5	1	94.08333	0.66667	3
SRGN	0	1	81.2	1	3
PLG	0	1	81.2	1	3
HIP1	0	1	70.57857	1	2

GPC6	0	1	1	0	1
EXT1	0	1	1	0	1
CEP70	0	1	126.8667	1	7
BTG2	0	1	119.4833	0	1
ARHGEF28	0	1	89.45	0	1
PRKCB	137.2028	1	93.5	0.5	4
TNFSF13	672	2	98.87619	0.33333	3
ANP32A	0	1	75.77024	0	1
RGCC	0	1	119.4833	0	1
IFNG	29.24943	1	123.9333	0.7	5
CHKA	0	1	83.4	0	1
ACHE	672	2	111.8833	0.33333	3
GLS2	0	1	119.4833	0	1
ANGPT2	159.6328	4	114.3667	0	2
SKA2	0	1	136.0667	1	25
KLHDC5	0	1	130.15	1	20
RBBP6	0	1	130.15	1	20
KNTC1	0	1	136.0667	1	25
DAPK1	203.3678	4	95.08333	0	2
MYLK	639.685	4	113.7667	0.16667	4
FAT1	0	1	109.0667	1	2
HIC1	2.37787	1	123.5333	0.83333	4
AIFM2	0	1	119.4833	0	1
NME3	36.73788	1	110.15	0.46429	8
MCF2L	0	1	81.62619	1	2
INO80B	0	1	102.8095	1	2
PRKACB	4090.192	24	150.4167	0.3004	23
WNT6	0	1	70.07857	0	1
WNT5A	2061.119	4	90.03333	0.13333	6
PRKCE	1969.572	8	130.1667	0.25	8
PERP	0	1	119.4833	0	1
KIF11	0	1	96.38333	1	3
CHN2	0	1	81.62619	1	2
RNF144B	594.6585	3	144.8833	0.90476	21
TRIAP1	0	1	119.4833	0	1
OAS1	1.33333	1	94.58333	0.66667	4
OAS2	1.33333	1	94.58333	0.66667	4
IFIT3	0.5	1	94.58333	0.83333	4
PHF17	0	1	1	0	1

ING4	0	1	1	0	1
ITPR1	604.2783	2	107.8333	0.16667	4
HUWE1	0	1	130.15	1	20
PPM1D	0	1	101.7095	0	1
TNFRSF12A	0	1	92.86667	1	6
FBXO31	0	1	130.15	1	20
H1FO	285.6621	1	126.7	0.6	5
DFFB	12.53593	1	102.1	0.33333	3
SKIL	0	1	106.2929	1	2
PRKD1	0	1	84.35	0	1
PPP1R15A	0	1	89.36667	0	1
PPP1CA	672	2	123.8333	0.6	5
IRF1	3458.822	6	132.85	0.36029	17
TP53I3	0	1	120.15	1	2
DTL	0.94896	1	120.5	0.66667	4
USP2	163.5349	2	118.1833	0.67857	8
CENPF	7.07643	1	136.5667	0.94154	26
GADD45B	0	1	100.35	0	1
EVI5	0	1	104.7833	1	2
S100A2	0	1	119.4833	0	1
KIF2C	405.3664	3	137.65	0.86895	27
MADD	3.40965	1	101.8167	0.66667	4
PIDD	467.498	4	129.6667	0.33333	4
RFFL	0	1	119.4833	0	1
PLD1	0	1	84.11667	0	1
PRKCA	3013.484	7	114.1167	0.19048	7
CDCA8	234.4125	2	137.65	0.8661	27
FANCC	13.45962	2	134.5833	0.92857	8
RACGAP1	250.2092	1	109.95	0.39286	8
BNIP3L	0	1	119.9833	1	2
STEAP3	0	1	119.9833	1	2
ECT2	84.0138	1	106.0333	0.5	4
FANCD2	33.06824	1	133.95	0.79221	22
RFWD2	0	1	124.25	1	2
DUSP1	120.7551	1	136.95	0.8	5
DPF3	0	1	99.95	1	7
PTPN13	0	1	103.5333	1	5
ARHGEF7	298.8779	1	112.9	0.2	5
FGF9	0	1	79.57381	1	2

GADD45A	755.7316	2	145.45	0.35714	8
PMAIP1	44.47911	1	125.0333	0.4	5
NPM1	495.361	6	135.55	0.33333	10
FKBP6	150.002	1	115	0.71429	7
PLK3	5.09314	1	128.7167	0.5	4
TNFRSF10A	135.0643	1	127.6167	0.71429	7
TNFSF9	0	1	81.69286	1	2
TNFRSF9	0	1	81.69286	1	2
HMGA2	0	1	125.7833	1	4
HIPK2	47.94017	2	122.5667	0.33333	3
TNFRSF10B	135.0643	1	127.6167	0.71429	7
TP73	47.10737	1	127.2	0.38095	7
TP53INP1	0	1	120.2333	1	2
CDKN2B	0	1	115.45	1	3
PYCARD	33.97863	1	123.0667	0	2
BCAR1	1129.949	4	117.5833	0.40909	12
CDK14	0	1	130.4667	1	11
CDC14B	0	1	105	1	2
FOXO1	46.98949	1	134.9	0.51282	13
BMF	0	1	94.95	0	1
CDC14A	0	1	105	1	2
DLGAP5	0	1	104.2333	0	1
CDK20	0	1	106.65	1	2
CHEK1	1150.508	24	158.4667	0.44251	42
TOPBP1	71.09104	1	140.8	0.5619	15
IGF1R	1433.334	3	114.5	0.13333	6
IRS4	0	1	84.35	0	1
ATM	1479.313	6	160.9667	0.41536	38
CENPE	405.3664	1	137.65	0.86895	27
TTC28	0	1	104.8833	1	2
TOP2A	13.24588	1	122.3667	0.71429	7
ZFP36	0	1	1	0	1
XRN1	0	1	1	0	1
MAP3K5	1380.719	3	109.6833	0.41667	9
CASP6	251.1428	1	128.7333	0.66667	7
BIK	0	1	100.15	1	3
HDAC4	1.46707	1	113.25	0.66667	4
CENPA	501.2921	1	141.5	0.69247	31
LIN54	24.55808	1	128.8667	0.6	10

RHOC	1165.691	4	109.6667	0.22222	10
RHOB	968.2947	1	108.35	0.27778	9
PKN1	456.9403	2	128.55	0.52381	7
FGF2	1379.663	3	105.9167	0.39286	8
FGFR3	0	1	79.57381	1	2
BCL2A1	50.7188	1	123.2833	0.8	5
BBC3	0	1	122.3667	1	4
JDP2	0	1	111.2167	1	2
WWTR1	0	1	1	0	1
TEAD1	0	1	1	0	1
CDCA5	0	1	136.0667	1	25
OIP5	0	1	110.1	1	4
MIS18A	0	1	110.1	1	4
CDC25C	2429.964	3	146.3	0.31667	16
FASLG	1540.771	3	127.05	0.4359	13
FBXO5	0	1	126.5667	1	9
TNF	195.6791	4	111	0.57576	12
CDK6	131.8107	1	142.5667	0.63235	17
DMC1	6.39485	1	124.6833	0.90476	7
MDM2	2252.093	4	149.6333	0.35833	16
STAG3	13.5567	1	119.9167	0.95238	7
CDC34	129.5198	1	133.35	0.90952	21
NEK2	240.2558	1	137.2833	0.67194	23
CHD3	43.27758	2	129.1333	0.9	5
CDKN1A	5239.461	14	175.9667	0.34761	53
SMARCE1	176.0281	2	122.8167	0.73077	13
CASP8	599.9561	1	123.5	0.35673	19
ATF2	5960.053	17	154.5833	0.2381	22
JUN	13206.32	23	164.5	0.15927	32
ARID1B	1.24086	1	101.45	0.96429	8
MND1	0	1	119.65	1	6
PSMC3IP	0	1	119.65	1	6
TNFSF11	26.09217	1	103.8	0.80952	7
TNFRSF11A	26.09217	1	103.8	0.80952	7
TP53	28860.44	95	194.6167	0.07298	76
BARD1	290.9975	1	149.05	0.55385	26
BRCA1	4378.837	22	173.3667	0.3026	56
PLK1	2078.807	3	157.3	0.4351	50
BCL2	1351.249	3	135.6	0.29487	13

CDC37L1	2004	4	106.8833	0.4	5
CCNE2	95.24667	1	150.6333	0.7076	19
AURKB	3127.784	15	159.5833	0.51057	44
PKMYT1	13.21592	1	130.9667	0.66667	10
TRAF1	13.90994	1	95.41667	0.64286	8
FAF1	286.9057	1	112.3	0.66667	7
APAF1	1153.81	3	135.3667	0.33333	15
TFDP2	1082.539	5	159.55	0.38851	30
CCNA1	1200.812	2	171.7167	0.40881	54
E2F2	141.277	1	146.25	0.68421	19
CASP9	1.39567	1	107.2833	0.90476	7
FADD	734.1781	5	124.9167	0.36842	20
FAS	1064.758	2	131.8667	0.47436	13
AURKA	2557.423	6	156.6333	0.46032	28
TPX2	565.1716	2	141.7167	0.53333	10
BAX	264.0625	1	133.9667	0.46429	8
YOD1	0	1	90.31667	0	1
STAG1	221.2384	2	142.8833	0.78079	29
RPA4	0	1	129.85	1	22
NOS3	712.2949	1	117.85	0.16667	4
NOS2	512.2514	1	113.65	0.33333	4
CALM1	1560.239	3	101.4	0	6
CCNB2	432.9236	1	151.2667	0.5746	36
ASF1A	0.9	1	126.45	0.9	5
HIRA	0.9	1	126.45	0.9	5
RBX1	2006.787	5	152.0833	0.42949	40
DBF4	0.90275	1	131	0.98419	23
BIRC3	1370.848	2	128.4667	0.30462	26
MCL1	183.0273	1	127.95	0.42222	10
ACAT1	1.5	1	87.68333	0.7	5
ACAT2	1.5	1	87.68333	0.7	5
HDAC1	2022.805	5	152.6333	0.37154	23
ACTL6A	188.9974	1	113	0.61111	9
MYD88	440.1253	1	121.9167	0.60714	8
NCKAP1L	0	1	111.35	1	7
UBE2N	3141.842	4	153.85	0.44669	39
CYFIP1	0	1	111.35	1	7
CASP7	1637.272	2	135.2	0.36029	17
ACAA1	0.4	1	87.18333	0.83333	4

CDKN1B	3309.083	10	167.8833	0.36735	49
GTF2H2C	0	1	101.6	1	3
SMARCC1	176.0281	2	122.8167	0.73077	13
SMARCB1	404.5602	1	132.0833	0.64835	14
PTGES3	638.6696	3	124.8833	0.28571	7
SMARCA2	547.7749	2	127.1833	0.62222	10
CYFIP2	0	1	111.35	1	7
NCKAP1	0	1	111.35	1	7
TRAF3	180.7443	1	107.2167	0.4697	12
IKBKG	3004.323	1	144.2667	0.36	25
TICAM1	139.2169	1	122.1333	0.68889	10
BIRC2	851.6203	2	125.7167	0.37662	22
TLR4	729.8426	1	124.9333	0.57576	12
SMARCC2	176.0281	1	122.8167	0.73077	13
SMARCA4	692.8851	1	134.3333	0.5619	15
EHHADH	4723.356	8	117.6167	0.26667	10
ACAA2	0.4	1	87.18333	0.83333	4
SMC1B	13.5567	1	119.9167	0.95238	7
PTK2	1476.757	4	125.2	0.34615	13
PARD3	0	1	81.24524	1	2
KPNB1	563.1887	3	119.2333	0.28571	8
CASP3	1689.878	3	130.85	0.28333	16
XIAP	160.9647	2	117.8333	0.58182	11
PXN	481.812	1	121.7667	0.43939	12
PTK2B	543.343	1	114.4167	0.42857	7
DERL1	0	1	90.31667	0	1
RCC1	0	1	93.57857	1	2
SMC1A	221.2384	1	142.8833	0.78079	29
ERCC3	308.9089	1	149.4833	0.72184	30
RANBP1	60.62515	1	117.7667	0.4	6
CACNA1C	672	2	77.67619	0	2
CACNA1D	0	1	62.85357	0	1
RPA1	3208.849	5	168.05	0.33701	56
RPA2	2487.643	9	164.9667	0.36139	53
BCL2L1	147.9467	1	116.6667	0.42857	8
BCL2L11	921.4586	2	119.9333	0.28571	8
BUB1	0	1	136.0667	1	25
BUB3	115.0416	1	144.8667	0.65047	39
TRAF6	5295.887	12	139.6833	0.2381	15



MAP3K7	850.7014	2	128.2	0.4359	13
CDC7	0.90275	1	131	0.98419	23
TFDP1	1496.639	5	163.2167	0.35873	36
MCM4	61.38707	1	144.1833	0.85222	29
PARD6A	992.1724	6	98.1	0.16667	4
PRKCI	564.834	2	99.80952	0.33333	3
GTF2H1	562.2145	2	149.9833	0.67957	31
CCNH	1281.354	1	162.55	0.48171	41
CDK7	961.9986	2	160.2167	0.50202	39
MNAT1	1129.312	3	160.2167	0.49798	39
NPLOC4	0	1	113.0167	1	4
ORC2	162.9029	1	150.2333	0.76815	32
MCM7	61.38707	1	144.1833	0.85222	29
ANAPC11	260.5161	1	153.4667	0.68769	37
CCNE1	264.9465	1	154.9667	0.52956	29
CDC45	0.90275	1	131	0.98419	23
ORC6	162.9029	2	150.2333	0.76815	32
ORC5	162.9029	1	150.2333	0.76815	32
ANAPC1	260.5161	1	153.4667	0.68769	37
SMC3	393.7756	1	144.15	0.73103	30
UFD1L	0	1	113.0167	1	4
VCP	1943.466	3	126.5667	0.2	10
PDS5A	0	1	136.0667	1	25
RB1	5118.902	8	175.2833	0.36329	46
E2F1	1114.417	1	156.9167	0.36174	33
CDC6	524.5005	1	155.9833	0.58839	39
ORC3	162.9029	1	150.2333	0.76815	32
RAD21	221.2384	2	142.8833	0.78079	29
PDS5B	0	1	136.0667	1	25
ORC4	162.9029	1	150.2333	0.76815	32
ORC1	209.7512	1	152.8167	0.69916	35
RANBP2	1787.482	2	145.7667	0.55615	34
RAN	815.627	2	127.4167	0.24242	12
CCNB1	3382.041	4	175.7167	0.34585	62
CDK1	10284.51	18	185.2333	0.27825	76
CDK2	4598.66	3	184.8	0.3261	73
CCNA2	2959.706	6	177.1167	0.35965	57
GTF2E2	0	1	124.4167	1	18
MCM5	61.38707	1	144.1833	0.85222	29

MCM3	108.0132	1	146.7667	0.75202	32
TBP	907.644	1	147.3833	0.52422	27
CDC20	1296.444	3	159.8833	0.51659	52
POLA2	77.63458	2	135.8667	0.90217	24
FZR1	2402.828	3	161.1333	0.45725	51
GTF2H3	562.2145	1	149.9833	0.67957	31
MCM6	61.38707	1	144.1833	0.85222	29
MCM2	78.51072	1	144.6833	0.8046	30
PRIM1	77.63458	1	135.8667	0.90217	24
POLA1	140.9121	1	138.4333	0.79385	26
ANAPC13	29.91434	1	135.8667	0.84667	25
GTF2E1	627.2424	1	135.1333	0.59385	26
MTA1	0	1	109.7929	1	4
RBBP4	2231.693	1	152.6333	0.2328	28
ERCC2	308.9089	1	149.4833	0.72184	30
HSP90AA1	10124.84	17	156.75	0.16667	28
ANAPC7	260.5161	1	153.4667	0.68769	37
CDC23	293.3891	1	153.9667	0.66287	38
SUGT1	0	1	104.8833	1	2
CDC37	0	1	104.8833	1	2
HSP90AB1	701.692	5	125.2667	0.25	9
MAD1L1	0	1	136.0667	1	25
MAD2L1	164.5805	1	146.2	0.62927	41
ANAPC5	260.5161	1	153.4667	0.68769	37
POLR2G	1295.192	2	150.5833	0.58669	32
GTF2B	627.2424	1	135.1333	0.59385	26
ANAPC10	279.607	1	153.9667	0.66714	38
ANAPC15	107.129	2	148.0667	0.77241	30
CDC27	260.5161	1	153.4667	0.68769	37
HADHB	0.4	1	87.18333	0.83333	4
HADHA	1.9	1	88.18333	0.73333	6
GTF2H5	72.74106	1	142.5167	0.84	26
GTF2F2	288.481	1	136.8167	0.80435	24
POLR2F	1295.192	1	150.5833	0.58669	32
GTF2H4	234.1299	1	143.0167	0.78348	27
GTF2H2	308.9089	1	149.4833	0.72184	30
CDC16	293.3891	1	153.9667	0.66287	38
ANAPC2	279.607	1	153.9667	0.66714	38
BUB1B	164.5805	1	146.2	0.62927	41
ANAPC4	293.3891	1	153.9667	0.66287	38
POLR2I	1295.192	6	150.5833	0.58669	32
POLR2D	1295.192	2	150.5833	0.58669	32