

## RGCC INTERNATIONAL NORTH AMERICA

### Pathway and mutation inhibitors/regulators

#### **Anti-Angiogenesis**

Mistletoe  
Curcumin  
Green tea EGCG  
Quercetin  
Ellagic acid  
Pomegranate  
Sea cucumber extract  
Beta carotene  
EPA oils  
Genistein  
Selenium  
Zinc  
Luteolin  
Modified citrus pectin  
Ginseng  
Wormwood  
Apigenin

#### **AP-1**

Curcumin  
Green Tea EGCG  
Anti-Ox SAP  
Quercetin  
Selenium  
Genistein  
Vitamin C

#### **Apoptosis switch to be reset**

##### **Promotors/Regulators:**

Chemotherapy and radiotherapy  
Mistletoe  
Green tea EGCG  
Curcumin  
Gamma Vitamin E  
Quercetin  
Grapeseed Extract OPCs  
Berberine  
Metformin prescribed  
R-Alpha Lipoic Acid  
Garlic  
Feverfew

Betulinic Acid  
Caffeine  
Ginger  
Genistein  
Catechin  
Cayenne  
Melatonin prescribed  
Ellagic Acid  
Indole 3 Carbinol 13C (DIM)  
Trans Resveratrol  
Taheebo  
Reishi  
EPA oils  
Vitamin D3  
Lemongrass  
Niclosamide prescribed

### **Aromatase**

Quercetin  
Grapeseed procyanidin B dimers  
White button mushrooms  
Agaricus bisporus,  
Melatonin  
Reishi  
Green tea EGCG  
Pomegranate  
Iodine

### **Autophagy**

Quercetin  
Curcumin  
Green Tea EGCG  
Berberine  
Sulforaphane  
Resveratrol  
Chloroquine/Hydroxychloroquine  
Niclosamide  
Oleandril  
Temozolamide  
Vitamin E (Not with Artemisinin)

BCL-1 linked to Cyclin D1

### **BCL-2**

Curcumin  
Delphinidins found in blueberries and bilberries

### **BETA CATENIN/WNT**

Quercetin  
Berberine  
Curcumin  
Metformin  
Vit A retinol  
Vit D3  
Omega 3 DHA  
Indole 3 Carbinol  
DIM  
Sulforaphane  
Scutellaria Bicalectin  
Lithium  
Niclosamide  
Nitazoxanide

**BRAF**

Melatonin  
Metformin  
Berberine  
Quercetin  
Curcumin  
Exercise

**BRCA-1**

**BRCA-2**

Selenium  
Indole -3 Carbinol and DIM

**CCND1**

Activates CDK4/6 Kinases  
Artemisinin

**CD-44** Responsible for chemo resistance

Bromelain  
Reishi

**CD8** (T Cell Signalling)

LDN activates this

**CMV**

Valgancyclovir (Glioblastomas)

**COX-2**

Curcumin  
Grapeseed OPGs  
Green Tea EGCG  
Quercetin  
Boswelina

Ginger  
Resveratrol  
Bilberry  
Reishi  
Licorice  
Garlic  
Feverfew  
Rosemary  
Green-lipid mussel extract  
Bromelain  
Omega 3 oils EPA/DHA  
Aloe Vera  
Zeel  
Propolis  
Black Seed Thymoquinone

### **CYCLIN INHIBITORS**

Curcumin  
Indole 3 Carbinol  
DIM  
Milk Thistle  
Resveratrol  
Metformin  
Also inhibit akt (separate list)  
Promote P21 with: green tea, butyrates, vitamin D, zinc and zeolite

### **DNA HYPOTHYLATION**

Vitamin D Functionstat

### **E-Cadherins**

Quercetin  
Metformin

### **EGFR**

Inhibitors include:  
Milk thistle  
Resveratrol  
Metformin Prescribed  
Curcumin  
Grapeseed Extract OPCs  
Quercetin  
Soy Genistein  
Berberine  
EGCG  
Chloroquine/Hydroxychloroquine  
This can overcome resistance to EGFR targeted treatments. Prescribed

### **erbB**

D3

**ERK-1 & 2**

Milk Thistle  
Metformin  
Chaga Mushrooms

**FGF**

Modified Citrus Pectin

**HDACI**

Green Tea  
Curcumin  
Grapeseed  
Sulforaphane

**HEDGEHOG**

Curcumin  
Berberine

**HER-2**

Quercetin  
Aloe Vera

**HER-3** SEE EGFR

**HIF-1 (alpha)**

Exercise

**HIPPO- TEAD/TAZ/YAP**

**Also linked to TGF-Beta**

YAP inhibitor- Curcumin  
TEAD inhibitors-Metformin and Melatonin

**HPV (P16)**

Plant Sterols and Sterolins  
Indole 3 Carbinol  
DIM

**HSP90**

EGCG and Quercetin synergize to regulate this Sulforaphanes

**IFGBP**

Sugar sensitivity. Low GI diet  
Grapeseed OPCs  
D3  
Lycopene Foods

### **IGF-1**

Stop sugar from feeding cells

EGCG

Exercise

Metformin

D3

Prilosec

Lypocene

### **IGFBP-7**

Zinc

### **IGFR**

Resveratrol

Low GI Diet

Milk Thistle

### **IL-6**

EGCG

Melatonin

Mushroom Extracts

R-ALA

Vit C

Resveratrol

Vit D3

### **IL-8**

Black seed Nigella (thymoquinone)

Sophora Flavescens root oxymatrine and matrine Hesperidin methyl chalcone

### **IL-10 and IL-16**

Regulated via PGE-2 pathway

PGE-2 regulators/inhibitors

Olive Oil is the primary inhibitor of PGE-2 Omega 3 fish oils with higher EPA (2000mg) than DHA(1000mg) Quercetin Melatonin Echinacea Curcumin Aloe Vera

### **Spices:**

Cinnamon

Clove

Bay leaf

Nutmeg

Basil

These all contain eugenol acid

### **Integrins**

Linked to BCL-2

P53

P13K/AKT

nfkB

### **JAK-2**

Acupuncture

### **JNK 1 & 2**

Quercetin

Milk thistle

Grapeseed Extract

Nigella Sativa or Blackseed extract containing thymoquinone Resveratrol

### **KRAS mutation**

This makes the cell more dependent on glucose and glutamine.

Benefit from a plant-based diet.

EGCG inhibits this.

D-Limonene down-regulates kRAS.

IV Vit C can down regulate this mutation.

Dipyridamole and Hydroxychloroquine inhibit the autophagy side. Mebendazole regulates the macrophages and can return them from TAMs (tumour supportive macrophages) to cancer fighting (Healthy M1 macrophages). The job of the macrophage is to clear dead cells and debris. TAMs will take dead cells to the tumour site for food.

Hydroxychloroquine Prescribed

Mebendazole Prescribed

Dipyridamole Prescribed

### **LOX**

Green-lipped muscle extract

Boswellia

Scutellaria

Quercetin

Curcumin

EPA Marine Oils

Onions

Apples

Curry

Seafood

### **MAPK**

Grapeseed OPCs

Vit C

Ellagic Acid

Pomegranate

Milk Thistle

Oleander

Metformin

### **MEK (Regulated by AMP Kinase)**

Metformin

Melatonin  
Berberine  
Quercetin  
Curcumin  
Exercise

Mitochondrial rescue approach is very supportive for this type of cancer.  
Dr McKinney's suggestion:

Niacinamide 500mg twice daily  
Omega 3 fish oils 4000mg daily  
Gamma tocopherol 10% in 400iu mixed with tocopherols vit E daily L-Glutamine (I know this conflicts with Jane's protocol unless being used with Glucosimine Sulphate to treat chemo leaky gut) Reishi extract 500mg-1000mg 2-3 times daily Turkey Tail Ellagic Acid 8 ounces of unsweetened pomegranate, grape or berry juice Betulinic acid from birch leaves 20-40mg/kg/day or chaga mushrooms 2 capsules, twice daily Riboflavin (vit B-2) 50-100mg taken 2-3 times daily Curcumin such as Curcumin H2O SAP from NFH, 1 capsule 2-3 times daily with food Melatonin Selenium SOD Superoxide dismutase Resverol Berberine Iodine Aerobic exercise  
Foods- olive oil, lemongrass, berries, pomegranate, apples, chilli peppers, onions, garlic, cabbage family and whole grains

#### **MMPs**

Scutellaria  
Baiccalein  
Green tea EGCG Polyphenols  
Curcumin  
Metformin  
Resveratrol  
Zeel  
Hormeel  
Digestive Enzymes  
Bovine Cartilage  
Heavy metals upregulate MMPs

#### **MYC**

Berberine  
Vitamin K3 (Prescribed)  
Curcumin

#### **NFkB**

Aspirin  
Reishi  
Green Tea EGCG  
Curcumin  
Indole-3 Carbinol 13C (DIM)  
DIM  
R-Alpha Lipoic Acid  
Quercetin



Proanthocyanidins in blueberries  
Metformin Prescribed  
Ginger  
Silibinin (milk thistle)  
Selenium  
Zinc  
Vitamins C, D and K3  
Gamma Vitamin E  
Melatonin Prescribed  
Resveratrol  
Apigenin in celery  
Genistein  
Holy basil ursolic acid  
Melanin (echinacea, black cumin, tea)  
Black seed oil (Nigella)  
Niclosamide Prescribed

### **NOTCH**

Niclosamide

### **PARP**

Fermented wheat germ extract  
Red Wine  
R-Alpha Lipoic Acid

### **PDGF**

Green tea EGCG  
And tyrosine kinase inhibitors such as Vitamin K and milk thistle silymarin/silibinin

### **PDK1**

R-Alpha Lipoic Acid

### **PGE-2**

Curcumin  
Oleic Acid  
GLA Gamma Linolenic Acid (Primrose oil)  
Aloe Vera  
Eugenol found in clove, nutmeg, cinnamon, basil and bayleaf

### **PI3/Akt/mTOR**

Curcumin  
Soy  
Sulforaphanes  
Green Tea EGCG  
Indole 3 Carbinol 13C  
Metformin prescribe  
Itraconazole prescribed  
Niclosamide prescribed

**PIK3CA**

Aspirin  
Niclosamide  
Pyruvium Pamoate

**Proteasome regulation**

Green Tea EGCG  
Curcumin  
AntiOxSAP

**Protein kinase C/B**

Quercetin  
Apigenin  
Genistein  
Hypericin  
Catechins in tea

**PTEN**

Indole 3 carbinol  
Quercetin  
Isoflavones

**PTKs**

Resveratrol  
Milk Thistle  
Pomegranates  
Alkylglycerols

**P38**

Quercetin  
Curcumin  
Chaga mushrooms  
Milk thistle  
Solomon's Seal

**P53 Mutations**

EGCG  
Curcumin  
Quercetin  
Grapeseed OPCs  
Genistein  
Selenomethione  
Melatonin  
Catechin  
Trans Resveratrol  
Gamma Vitamin E  
Folate

Retenoic Acid  
Milk Thistle  
Garlic  
Vitamin C

**P63 (Linked to P53)**

**RPS6KB1**

Also known as P70S6K serine/threonine kinase Regulated by the P13K/mTOR pathway

Serine- threonine kinase  
Curcumin

SMAD-4 is linked to TGFB

SRC-3 can create resistance to Tamoxifen

**SRC Kinase**

Grapeseed Extract

**STAT-1**

EGCG  
Curcumin

**STAT-5A & 5B**

Chaste tree berry

**STAT-3**

Indole 3 Carbinol  
EGCG,  
Niclosamide Prescribed  
Doxycycline Prescribed  
Curcumin

**Survivin**

Indole 3 carbinol  
DIM  
Resveratrol  
DHA

**TGF alpha**

Milk Thistlesur

**TGF beta**

Soy isoflavones  
R Alpha Lipoic Acid  
Quercetin  
Curcumin

Berberine  
Metformin  
Green tea EGCG  
Taurine  
Lycopene  
Licorice Root  
Pokeroot  
Milk Thistle  
Omega 3 Fish oils with DHA and EPA  
Vitamin C (Liposomal 5000mg)  
Resveratrol (synergistic with Quercetin) Ginkgo Biloba Rehmannia

### **TNF**

Green tea EGCG  
Curcumin  
EPA oils  
Reishi  
Melatonin  
Black seed oil  
D3  
Soy Genistein  
Resveratrol  
luteolin

### **Topoisomerase**

1 and 11  
Green tea EGCG (1)  
Boswellia (1 and 11)  
Berberine (1 and 11)  
Camptothecin, etoposide scutellaria (11) DO NOT MIX ANY 11 inhibitors with glucosamine

TRH results in TSH  
Metformin can lower TSH

### **Tumour Antigens**

Ginseng  
Immune therapies

### **Tyrosine Kinase**

Genistein  
EGCG  
Soy  
Curcumin  
Pomegranates  
AntiOx SAP  
Gamma Vit E  
Shark Liver Alkylglycerols  
Scutellaria

Licorice  
Genistein  
Milk Thistle  
Reishi  
Resveratrol

UPA  
EGCG  
Indole 3 Carbinol  
DIM

**VEGFR inhibitors/regulators**

Curcumin  
Bilberry  
Grapeseed Extract OPCs  
EGCG Green Tea  
STAT-3  
Indole 3 Carbinol  
EGCG,  
Niclosamide Prescribed  
Doxycycline Prescribed  
Curcumin

**YB-1**

Curcumin  
Indole 3 Carbinol  
Green Tea EGCG