

# Regenerative Science in Practice

Not Mysterious

Not Futuristic

Not Out of Reach

Stem Cells are one thing . . .

What they do is another . . .





*Click image to launch video*

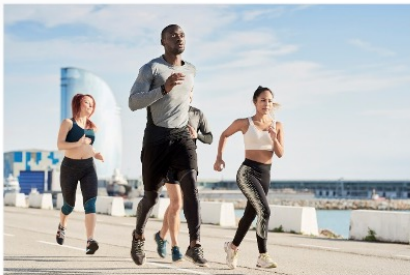
## RESPONSIVE REGENERATION

Don't needlessly live with chronic pain and debilitation



## PROACTIVE REGENERATION

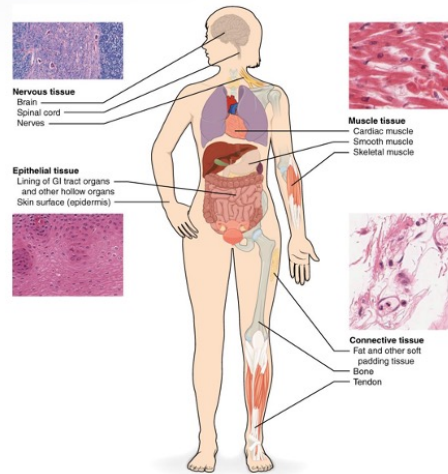
Don't wait until you lose mobility or peak performance



## Understand the science

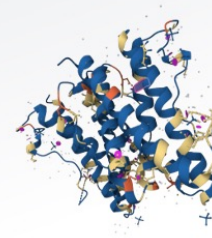
*We only have 4 types of tissue in our bodies.*

*An ideal solution heals and repairs all 4 tissue types.*



## Safety + Efficacy

Focus on regenerative messages



Interleukin 6

Regenerative  
Message  
Expression



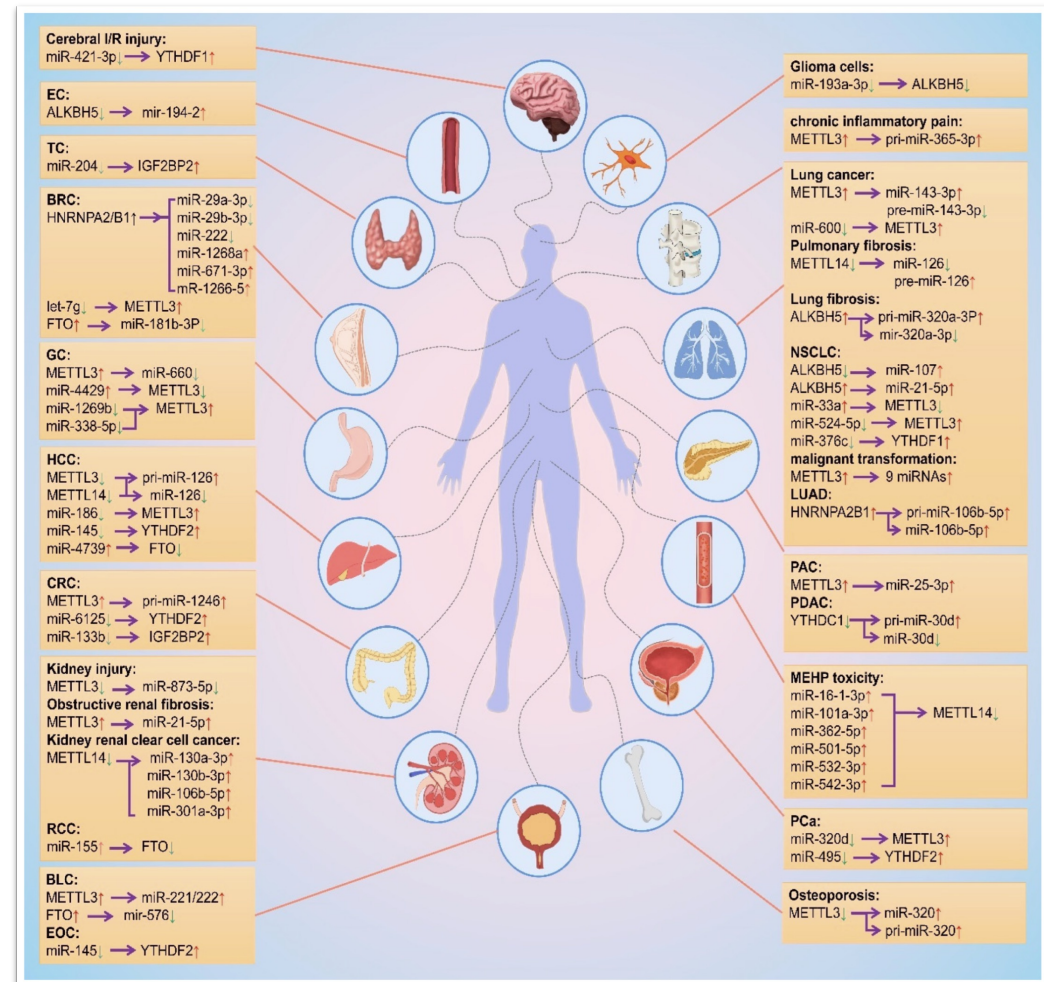
EGFR

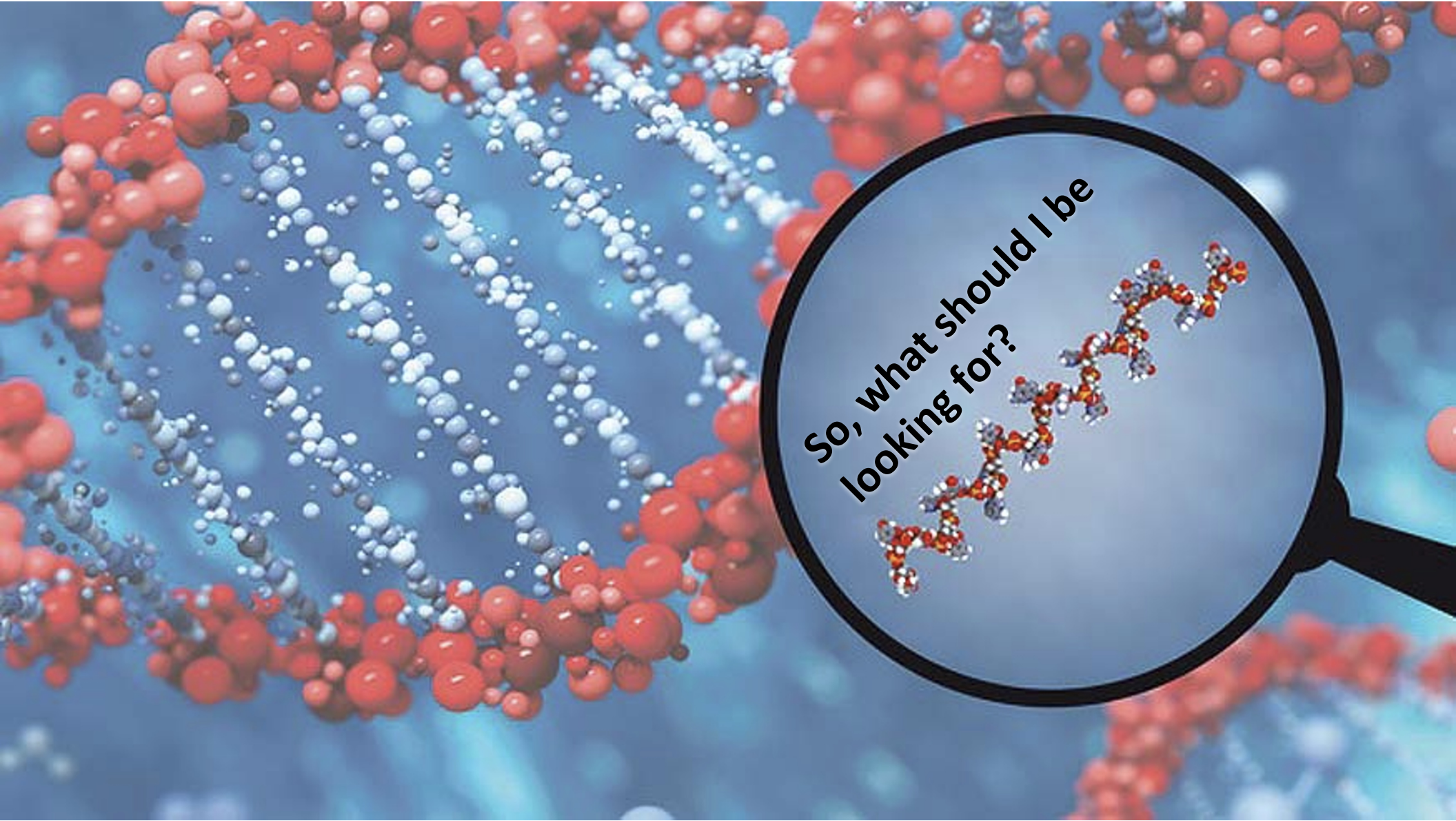
Regenerative  
Message  
Expression

Regenerative messages are not biologically idiosyncratic and they always perform specific natural functions within our bodies when they encounter areas that require healing or repair. Put nature back safely - in its entirety - and your body will do the rest.

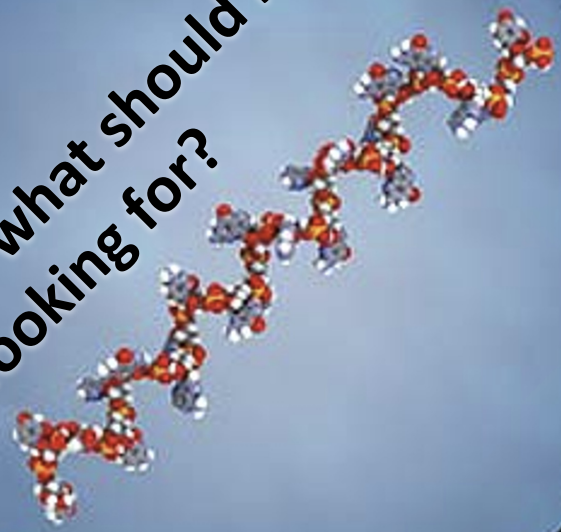
# Focus on the Science

Stem cells at peak youth produce **> 300 unique messages** that are responsible for healing and growth. These messages consist in **mRNA, miRNA, and proteins** (among other components), which actually “do the work” of healing and growth. Moreover, these components (e.g. miRNA) have been mapped to specific areas of our physiology. **We know where they fit and how they function.**





**So, what should I be  
looking for?**



miRNA	Symbol	Gene Summary Regulation	National Library of Medicine Ref	Ideal Product	Wharton's Jelly	Amnion	PRP	Bone Marrow	~ ng/ml	~ µg/ml
miR-5011-5p	AR	Hormones	<a href="https://pubchem.ncbi.nlm.nih.gov/gene/367">https://pubchem.ncbi.nlm.nih.gov/gene/367</a>	☑	✗	✗	✗	✗	25-100+	1-100 <sup>3</sup>
miR-4531	BMP-2	Bone, cartilage	<a href="https://pubchem.ncbi.nlm.nih.gov/gene/650">https://pubchem.ncbi.nlm.nih.gov/gene/650</a>	☑	☑	✗	✗	✗	25-100+	1-100 <sup>3</sup>
miR-6867-5p	BMP-4	Heart	<a href="https://pubchem.ncbi.nlm.nih.gov/gene/652">https://pubchem.ncbi.nlm.nih.gov/gene/652</a>	☑	✗	✗	✗	✗	25-100+	1-100 <sup>3</sup>
miR-6867-5p	BMP-5	Metabolism	<a href="https://pubchem.ncbi.nlm.nih.gov/gene/653">https://pubchem.ncbi.nlm.nih.gov/gene/653</a>	☑	✗	✗	✗	✗	25-100+	1-100 <sup>3</sup>
miR-1185-2-3p	BMP-7	Bone, cartilage and muscle	<a href="https://pubchem.ncbi.nlm.nih.gov/gene/655">https://pubchem.ncbi.nlm.nih.gov/gene/655</a>	☑	☑	✗	✗	☑	25-100+	1-100 <sup>3</sup>
miR-302e	GDF-11	Nervous, organ systems, aging	<a href="https://pubchem.ncbi.nlm.nih.gov/gene/10220">https://pubchem.ncbi.nlm.nih.gov/gene/10220</a>	☑	✗	✗	✗	✗	25-100+	1-100 <sup>3</sup>
miR-499b-5p	GDF-15	Inflammation, cell repair, growth, oxid stress	<a href="https://pubchem.ncbi.nlm.nih.gov/gene/9518">https://pubchem.ncbi.nlm.nih.gov/gene/9518</a>	☑	☑	☑	✗	✗	25-100+	1-100 <sup>3</sup>
miR-32-3p	NTF-3	Central nervous system	<a href="https://pubchem.ncbi.nlm.nih.gov/gene/4908">https://pubchem.ncbi.nlm.nih.gov/gene/4908</a>	☑	✗	✗	✗	✗	25-100+	1-100 <sup>3</sup>
miR-8070	NTF-4	Peripheral nervous system	<a href="https://pubchem.ncbi.nlm.nih.gov/gene/4909">https://pubchem.ncbi.nlm.nih.gov/gene/4909</a>	☑	☑	✗	✗	✗	25-100+	1-100 <sup>3</sup>
miR-3942-3p	TGFα	Gastrointestinal	<a href="https://pubchem.ncbi.nlm.nih.gov/gene/7039">https://pubchem.ncbi.nlm.nih.gov/gene/7039</a>	☑	✗	✗	✗	✗	25-100+	1-100 <sup>3</sup>
miR-663a	TGF-β1	Growth regulation	<a href="https://pubchem.ncbi.nlm.nih.gov/gene/7040">https://pubchem.ncbi.nlm.nih.gov/gene/7040</a>	☑	✗	✗	✗	✗	25-100+	1-100 <sup>3</sup>
miR-6783-5p	TGF-β3	Inflammation and immune system	<a href="https://pubchem.ncbi.nlm.nih.gov/gene/7043">https://pubchem.ncbi.nlm.nih.gov/gene/7043</a>	☑	☑	☑	☑	☑	25-100+	1-100 <sup>3</sup>
miR-643	PIGF	Growth	<a href="https://pubchem.ncbi.nlm.nih.gov/gene/5228">https://pubchem.ncbi.nlm.nih.gov/gene/5228</a>	☑	☑	✗	✗	✗	25-100+	1-100 <sup>3</sup>
miR-1277-5p	VEGFA	Vasculature, inflammation regulation	<a href="https://pubchem.ncbi.nlm.nih.gov/gene/7422">https://pubchem.ncbi.nlm.nih.gov/gene/7422</a>	☑	✗	✗	✗	✗	25-100+	1-100 <sup>3</sup>
miR-410-3p	VEGF R2	Endothelial modulation	<a href="https://pubchem.ncbi.nlm.nih.gov/gene/3791">https://pubchem.ncbi.nlm.nih.gov/gene/3791</a>	☑	✗	✗	✗	✗	25-100+	1-100 <sup>3</sup>
miR-16-5p	VEGF R3	Vasculature, organ systems	<a href="https://pubchem.ncbi.nlm.nih.gov/gene/2324">https://pubchem.ncbi.nlm.nih.gov/gene/2324</a>	☑	☑	✗	✗	✗	25-100+	1-100 <sup>3</sup>
miR-5692a	IL-1RA	Auto-immune	<a href="https://pubchem.ncbi.nlm.nih.gov/gene/3552">https://pubchem.ncbi.nlm.nih.gov/gene/3552</a>	☑	☑	✗	✗	✗	25-100+	1-100 <sup>3</sup>
miR-11181-5p	IL-6	Auto-immune B cells	<a href="https://pubchem.ncbi.nlm.nih.gov/gene/3569">https://pubchem.ncbi.nlm.nih.gov/gene/3569</a>	☑	✗	✗	✗	✗	25-100+	1-100 <sup>3</sup>
miR-379-3p	IL-10	Immunoregulator intestinal tract	<a href="https://pubchem.ncbi.nlm.nih.gov/gene/3586">https://pubchem.ncbi.nlm.nih.gov/gene/3586</a>	☑	✗	✗	✗	✗	25-100+	1-100 <sup>3</sup>
miR-545-5p	IL-12	Inflammation and macrophage modulation	<a href="https://pubchem.ncbi.nlm.nih.gov/gene/3593">https://pubchem.ncbi.nlm.nih.gov/gene/3593</a>	☑	☑	✗	✗	✗	25-100+	1-100 <sup>3</sup>
miR-5692a	TNF-RI	Tumor suppressor	<a href="https://pubchem.ncbi.nlm.nih.gov/protein/Q15628">https://pubchem.ncbi.nlm.nih.gov/protein/Q15628</a>	☑	✗	✗	✗	✗	25-100+	1-100 <sup>3</sup>
miR-4263	TNF-RII	Apoptosis	<a href="https://pubchem.ncbi.nlm.nih.gov/gene/7133">https://pubchem.ncbi.nlm.nih.gov/gene/7133</a>	☑	✗	☑	☑	☑	25-100+	1-100 <sup>3</sup>

An ideal product will be sourced from regulated donor services – multivariate testing.

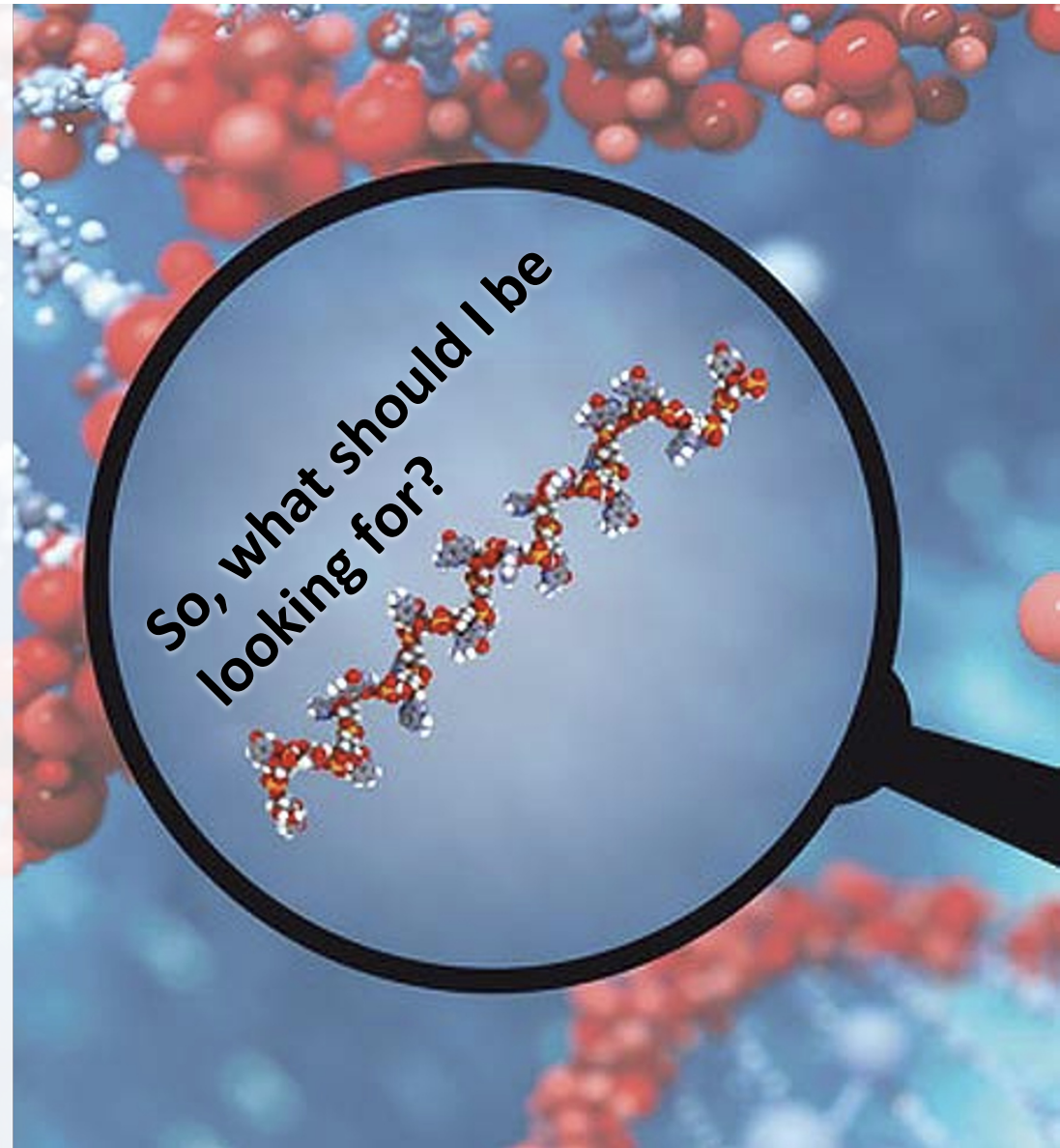
Serology conducted by FDA licensed, accredited labs.

miRNA	Symbol	Gene Summary Regulation	National Library of Medicine Ref	Ideal Product	Wharton's Jelly	Amnion	PRP	Bone Marrow	~ ng/ml	~ µg/ml
miR-6835-3p	PDGF-A	Platelet and vasculature growth	<a href="https://pubchem.ncbi.nlm.nih.gov/gene/5154">https://pubchem.ncbi.nlm.nih.gov/gene/5154</a>	☑	☑	✗	✗	☑	25-100+	1-100 <sup>3</sup>
miR-6867-5p	PDGF-B	Modulates soft and hard tissues	<a href="https://pubchem.ncbi.nlm.nih.gov/gene/5155">https://pubchem.ncbi.nlm.nih.gov/gene/5155</a>	☑	☑	✗	✗	✗	25-100+	1-100 <sup>3</sup>
miR-1293	TIMP-1	Cell health, cytokine activity	<a href="https://pubchem.ncbi.nlm.nih.gov/gene/7076">https://pubchem.ncbi.nlm.nih.gov/gene/7076</a>	☑	✗	✗	✗	✗	25-100+	1-100 <sup>3</sup>
miR-544a	TIMP-2	Cartilage and extracellular matrix	<a href="https://pubchem.ncbi.nlm.nih.gov/gene/7077">https://pubchem.ncbi.nlm.nih.gov/gene/7077</a>	☑	☑	☑	☑	☑	25-100+	1-100 <sup>3</sup>
miR-4714-3p	HGF	Liver	<a href="https://pubchem.ncbi.nlm.nih.gov/gene/3082">https://pubchem.ncbi.nlm.nih.gov/gene/3082</a>	☑	☑	✗	✗	✗	25-100+	1-100 <sup>3</sup>
miR-6832-3p	GDNF	Nerve survival	<a href="https://pubchem.ncbi.nlm.nih.gov/gene/2668">https://pubchem.ncbi.nlm.nih.gov/gene/2668</a>	☑	✗	✗	✗	✗	25-100+	1-100 <sup>3</sup>
miR-3121-3p	BDNF	Central nervous system	<a href="https://pubchem.ncbi.nlm.nih.gov/gene/627">https://pubchem.ncbi.nlm.nih.gov/gene/627</a>	☑	✗	✗	✗	✗	25-100+	1-100 <sup>3</sup>
miR-5692a	FGF-4	Soft tissue repair	<a href="https://pubchem.ncbi.nlm.nih.gov/gene/2249">https://pubchem.ncbi.nlm.nih.gov/gene/2249</a>	☑	✗	✗	✗	✗	25-100+	1-100 <sup>3</sup>
miR-126-5p	FGF-7	Collagen and connective tissue	<a href="https://pubchem.ncbi.nlm.nih.gov/gene/2252">https://pubchem.ncbi.nlm.nih.gov/gene/2252</a>	☑	☑	☑	☑	✗	25-100+	1-100 <sup>3</sup>
miR-190a-3p	IGFBP-1	IGF binding protein	<a href="https://pubchem.ncbi.nlm.nih.gov/gene/3484">https://pubchem.ncbi.nlm.nih.gov/gene/3484</a>	☑	☑	✗	✗	✗	25-100+	1-100 <sup>3</sup>
miR-3667-3p	IGFBP-2	T-cell	<a href="https://pubchem.ncbi.nlm.nih.gov/gene/3485">https://pubchem.ncbi.nlm.nih.gov/gene/3485</a>	☑	✗	✗	✗	✗	25-100+	1-100 <sup>3</sup>
miR-374a-5p	IGFBP-3	Smooth muscle	<a href="https://pubchem.ncbi.nlm.nih.gov/gene/3486">https://pubchem.ncbi.nlm.nih.gov/gene/3486</a>	☑	✗	✗	✗	✗	25-100+	1-100 <sup>3</sup>
miR-4271	IGFBP-4	B-cell pancreas	<a href="https://pubchem.ncbi.nlm.nih.gov/gene/3487">https://pubchem.ncbi.nlm.nih.gov/gene/3487</a>	☑	✗	✗	✗	✗	25-100+	1-100 <sup>3</sup>
miR-1226-5p	IGFBP-6	Anti-tumorigenic	<a href="https://pubchem.ncbi.nlm.nih.gov/gene/3489">https://pubchem.ncbi.nlm.nih.gov/gene/3489</a>	☑	✗	✗	✗	✗	25-100+	1-100 <sup>3</sup>
miR-1297	PTEN	Tumor suppressor	<a href="https://pubchem.ncbi.nlm.nih.gov/gene/5728">https://pubchem.ncbi.nlm.nih.gov/gene/5728</a>	☑	✗	✗	✗	✗	25-100+	1-100 <sup>3</sup>
miR-3121-3p	CSF3	Bone marrow and stem cells	<a href="https://pubchem.ncbi.nlm.nih.gov/gene/1440">https://pubchem.ncbi.nlm.nih.gov/gene/1440</a>	☑	✗	✗	✗	☑	25-100+	1-100 <sup>3</sup>
miR-4795-3p	CCR1	White blood cells	<a href="https://pubchem.ncbi.nlm.nih.gov/gene/1230">https://pubchem.ncbi.nlm.nih.gov/gene/1230</a>	☑	☑	✗	✗	☑	25-100+	1-100 <sup>3</sup>
miR-3671	MIGA1	Mitochondria	<a href="https://pubchem.ncbi.nlm.nih.gov/gene/374986">https://pubchem.ncbi.nlm.nih.gov/gene/374986</a>	☑	☑	✗	✗	✗	25-100+	1-100 <sup>3</sup>
miR-6825-5p	NGFR	Nerve growth	<a href="https://pubchem.ncbi.nlm.nih.gov/gene/4804">https://pubchem.ncbi.nlm.nih.gov/gene/4804</a>	☑	✗	✗	✗	✗	25-100+	1-100 <sup>3</sup>
miR-141-5p	EGFR	Skin collagen	<a href="https://pubchem.ncbi.nlm.nih.gov/gene/1956">https://pubchem.ncbi.nlm.nih.gov/gene/1956</a>	☑	☑	☑	☑	☑	25-100+	1-100 <sup>3</sup>
miR-374a-5p	GH	Multi-tissue growth and metabolism	<a href="https://pubchem.ncbi.nlm.nih.gov/gene/2688">https://pubchem.ncbi.nlm.nih.gov/gene/2688</a>	☑	✗	✗	✗	✗	25-100+	1-100 <sup>3</sup>
miR-6867-5p	IGF-1	Cell growth	<a href="https://pubchem.ncbi.nlm.nih.gov/compound/16131429">https://pubchem.ncbi.nlm.nih.gov/compound/16131429</a>	☑	✗	✗	✗	✗	25-100+	1-100 <sup>3</sup>

An ideal product will have DNA removed to ensure homologous use.

Third-party diagnostics can validate that the cell expressions (messages) are > 300, mimicking peak youth.

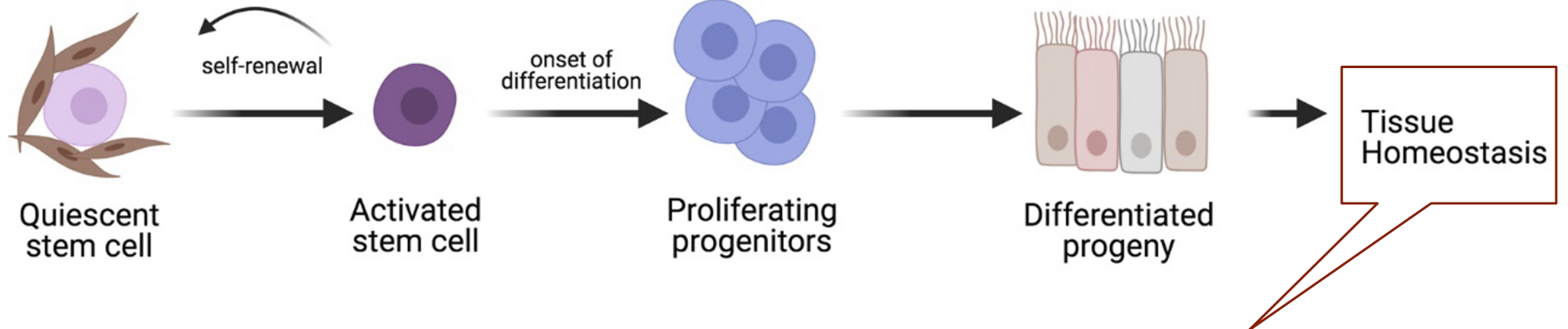
Safe  
Homologous  
Efficacious  
Messages (not Cells)





# What to expect?

Not miracles. Just nature.



**Tissue Homeostasis**  
(aka rejuvenation, regeneration,  
revitalization)  
is what the science has proven  
possible.