



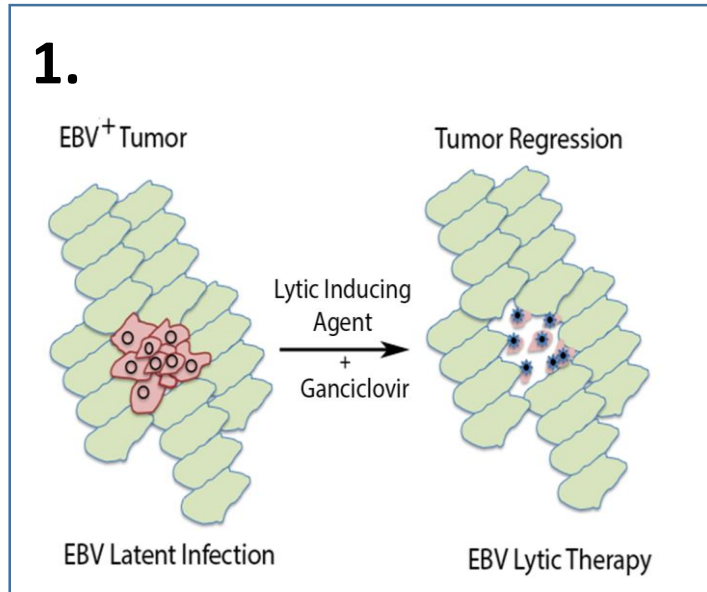
## A Seed-Stage Drug Discovery Company

Therapeutics Targeting Latent Herpesvirus Infection  
**Cancer and Autoimmunity**

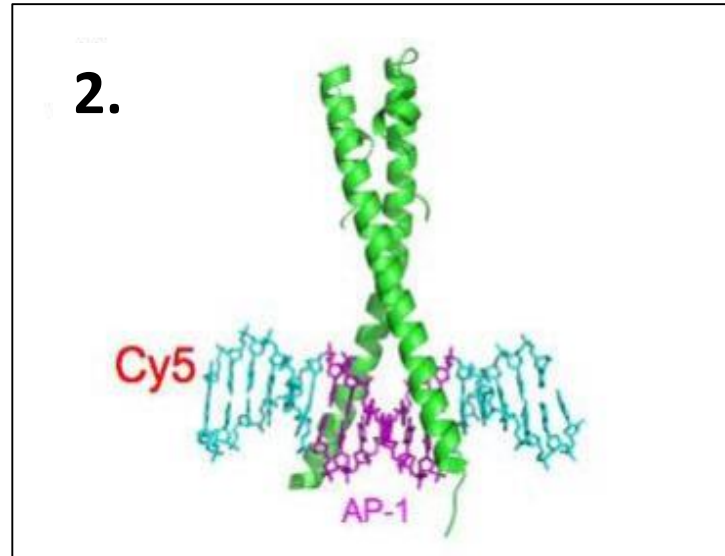
- Founded by Dr. Paul Lieberman, Ph.D. at The Wistar Institute
- Expertise: Epstein Barr Virus (EBV) and latent infection that can lead to cancer (e.g Lymphoma, Gastric) and autoimmune disease (e.g. Multiple Sclerosis)
- Vironika offers a platform of therapeutic and diagnostic development projects targeting EBV-related cancers and autoimmune diseases

# CURRENT PIPELINE

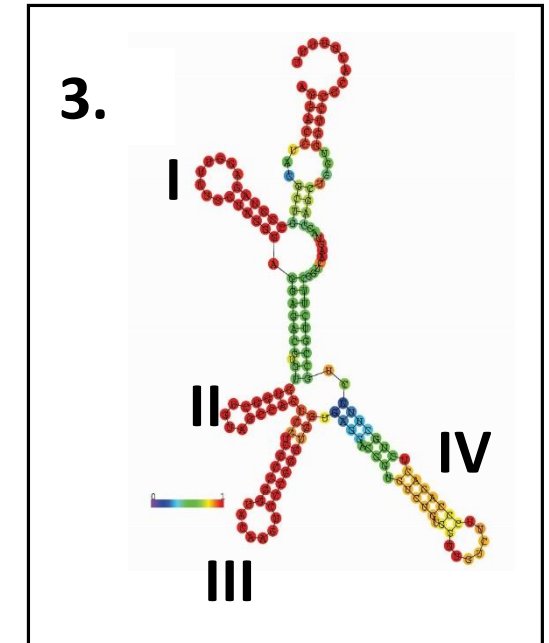
Pipeline targeting latent forms of EBV that cause EBV-related cancer and auto-immune diseases



**Lytic Activators:** Small molecule therapeutic for combination with anti-virals (“oncolytic” cancer therapy)



**Lytic Cycle Inhibitors:** Small molecule inhibitor of viral DNA binding protein

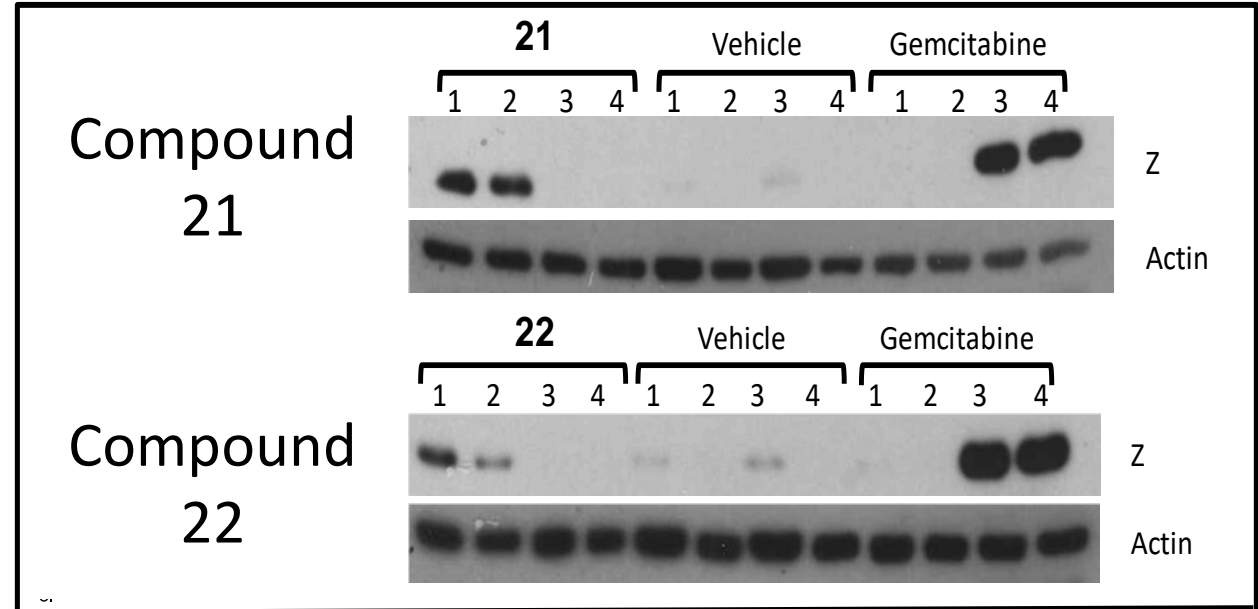
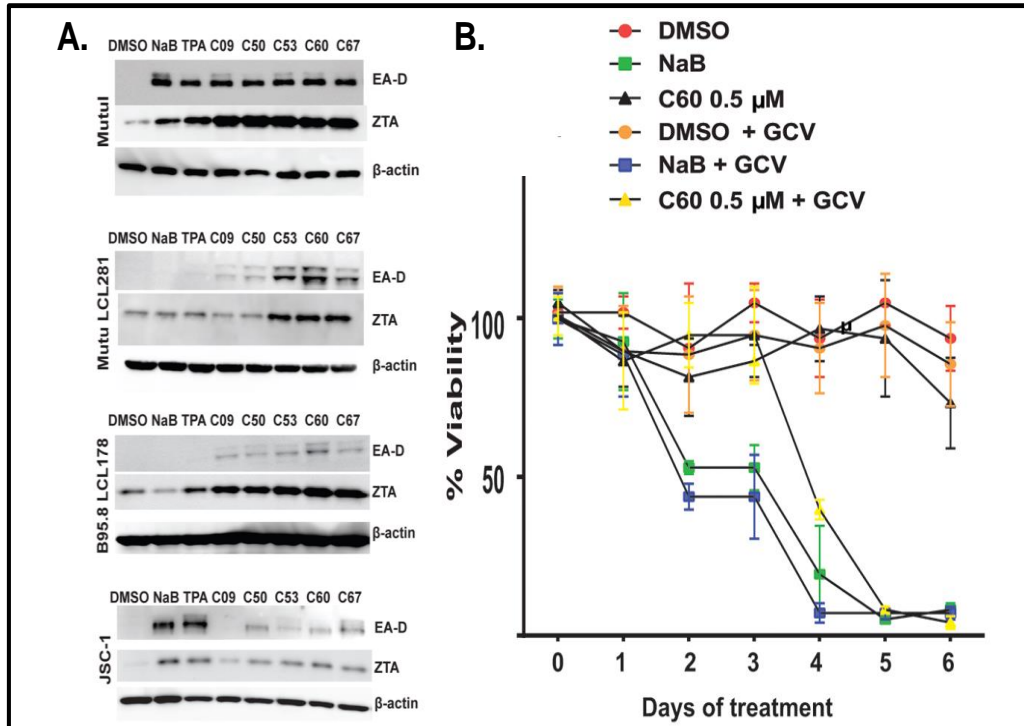


**Non-Coding RNA Inhibitor:** Non-invasive diagnostic (and therapeutic) for EBV carcinomas

# EBV Lytic Activators Current Development Data

NIH-SBIR Application – pending review

IP: Terms agreement for exclusive license of patents



## *In vitro* drug-like properties comparison of C60 and NP010

ID	EC <sub>50</sub> (nM)	Mol Wt	cLog P	% Plasma Protein Binding		Plasma Stability		Liver Microsomal Stability		water Solubility
				Mouse	Human	Mouse	Human	Mouse CLint/ t <sub>1/2</sub> min	Human CLint/ t <sub>1/2</sub> min	PBS buffer pH 7.4 ug/mL
<b>IDEAL PROBE</b>	<b>&lt;100</b>	<b>&lt;500</b>	<b>2.5-5.0</b>	<b>&lt;95%</b>	<b>&lt;95%</b>	<b>&gt;2h</b>	<b>&gt;2h</b>	<b>&lt;2/ &gt;60</b>	<b>&lt;2/ &gt;60</b>	<b>&gt;500</b>
<b>C60</b>	<b>157</b>	<b>489.95</b>	<b>5.3</b>	<b>NA</b>	<b>NA</b>	<b>&gt; 6h</b>	<b>&gt; 6h</b>	<b>&lt;0.5/ &gt;90</b>	<b>0.93/ 77.8</b>	<b>&lt;10 (poor)</b>
<b>12</b>	<b>168</b>	<b>446.93</b>	<b>4.7</b>	<b>NA</b>	<b>NA</b>	<b>&gt;6h</b>	<b>&gt;6h</b>	<b>2.3/31</b>	<b>0.67/&gt;90</b>	<b>166</b>

## Next Steps:

**C21 + GCV in mice**

**Finite improvement of eADME profile**

## MEDICAL NEED

Latent EBV:

~200,000 new cases of cancer per year

Lymphoproliferative disease in immunosuppressed populations (HIV, transplant recipients)

Links to autoimmune disorders such as Multiple Sclerosis

## CURRENT / COMPETITION

No FDA approved cure or preventative for latent EBV

Existing EBV-related cancer therapies have mean post-diagnosis survival <3 years for >30% of patients

Competing technologies, some in early clinical trials, but each has limitations and none will eliminate the need for our technologies nor are our technologies mutually limiting

## COMMERCIAL VALUE

Initial analysis at The Wharton School of Business suggests:

- Worldwide 2033 market size of **40-45 million** individuals with 2-3% annual growth rate
- Revenue est. **\$428 / patient**
- Total market: **~\$16-20 Billion**
- Potential EBV therapy profit for the first five years on the market **\$3.6 billion**

# **We seek industrial partnering and funding to accelerate our project development over the next 2 years**

1. Out-source in vivo testing and cell-based screening to CRO's already familiar with our technologies and decrease SBIR cycle lag time impacts on milestone achievement
2. In-Source Med-Chem and Target Validation
3. Invest in R&D Space and Equipment
4. Business Development

**Please visit [www.Vironika.com](http://www.Vironika.com) or email [uramirez@Vironika.com](mailto:uramirez@Vironika.com) for more details about our science and product development!**

