

# Foresight Institute Longevity Tech Tree White Paper

Aaron King 11/12/21

## We want to answer a set of questions:

For newcomers

- What is happening in the field of longevity?
- I'm interested, what can I do to help?

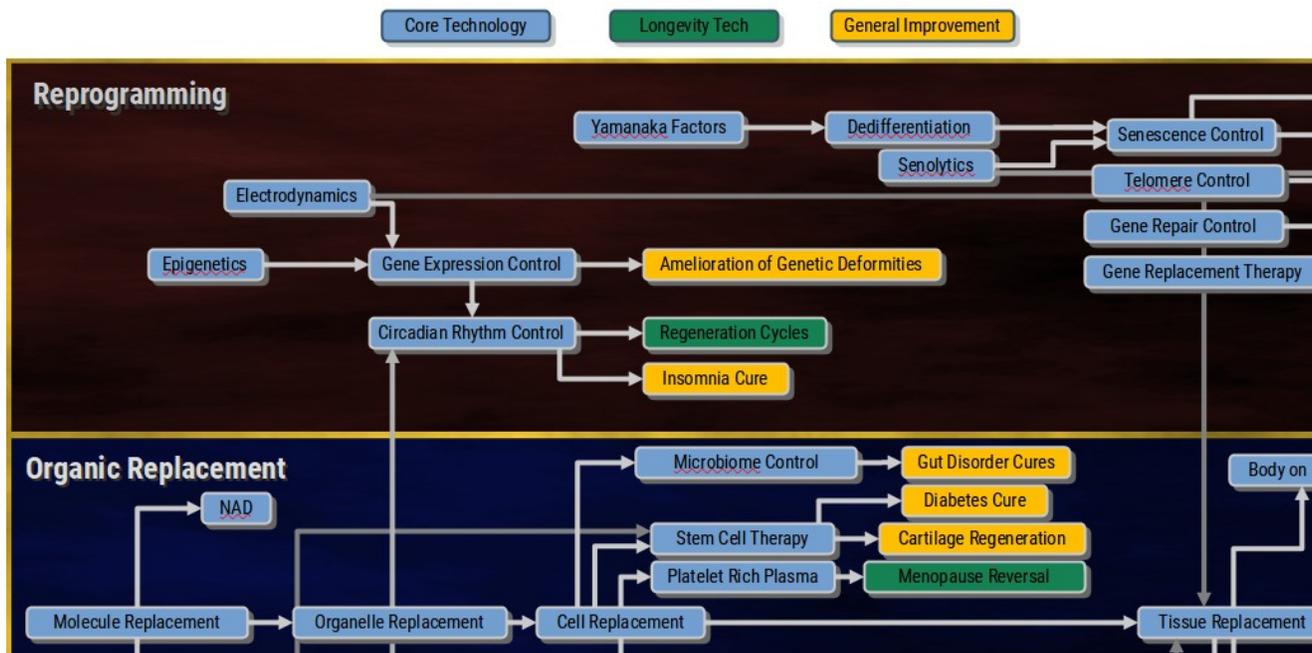
For capital

- What level of funding exists for each strategy?
- What future possible products or services are related to the portion I am investing in?

For academics

- Who else is working on something related to my idea? What about upstream/downstream ideas?
- What applications are being pursued for my work? How much funding is there?

In order to answer these questions, we need a quick and detailed view of the field of longevity. The concept is to build an interactive map of longevity science that contains information about efforts and open challenges in each domain.



Blue nodes are core technologies, which fit together to create a progression toward improvements. Yellow nodes are general improvements which will be appreciated by the larger healthcare community. Green nodes are longevity improvements – breakthroughs which have a more niche interest. I believe that the yellow breakthroughs will be more valuable to power this tree of technological progress, so that we can achieve the green breakthroughs faster.

This map will be digital and dynamic. Each node will be clickable. For instance, clicking on the Microbiome node should bring up a zoom-in page. This page contains standard information on groups, labs, companies, working on the node and zooms in on the core mechanism, including available tools, emerging interventions, and relations to other areas.

### Microbiome (zoom-in page prototype)

Tags:  
Organic Replacement  
Reprogramming

**Advocacy**

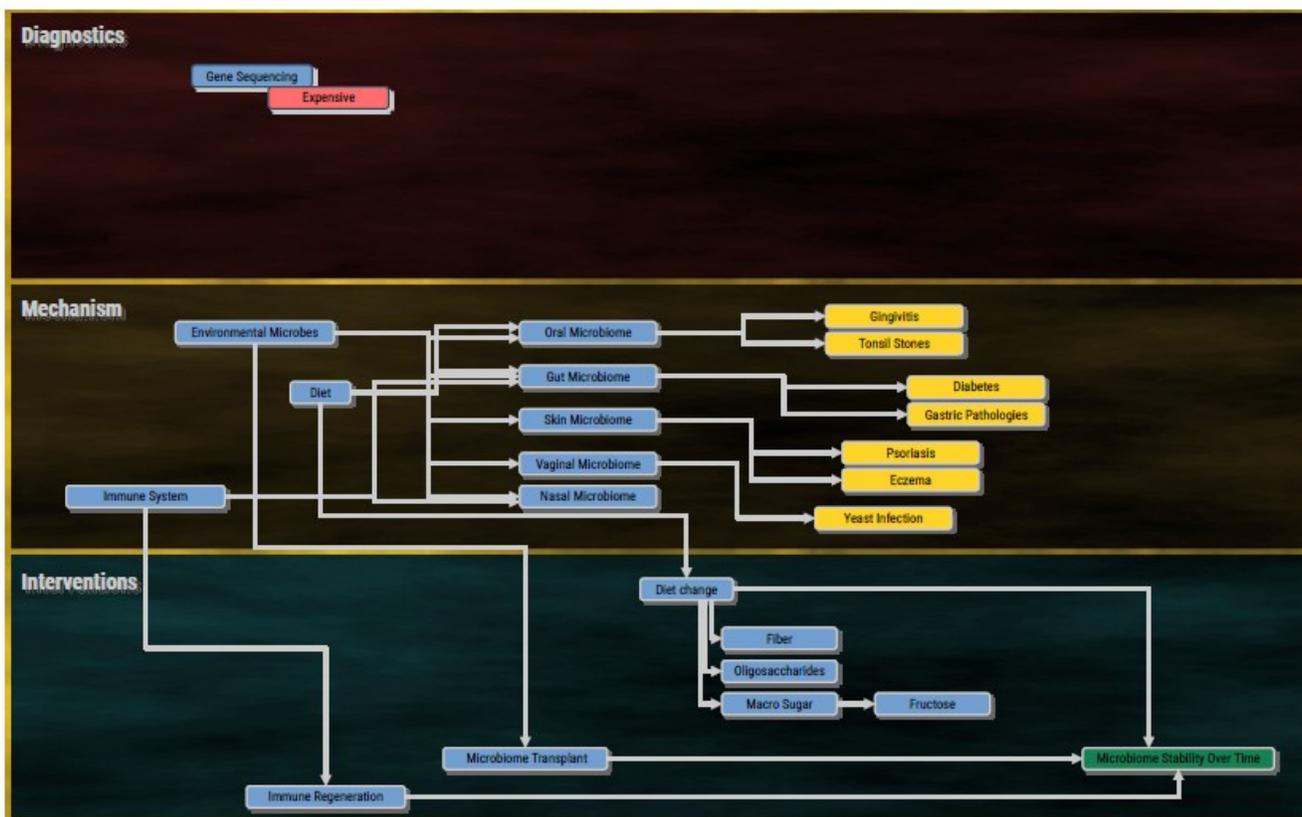
- International Human Microbiome Consortium Congress
- American Society for Microbiology
- American Gastroenterological Association
- American Microbiome Institute

**Labs**

- Snyder Lab
- Giniger Lab
- Pan-Jun Kim Lab
- Goodman Lab
- Chang Lab
- Jackson Lab
- University of Texas
- Yale
- Gilbert Lab
- Turnbaugh Lab
- Sonnenburg Lab
- Cedars Sinai

**Companies**

- uBiome
- Viome
- Cosmos ID
- Microba



**Development process:**

- Construct an initial scaffold of the tech tree
- Contact domain experts for feedback
- Continuously revise the tree

**Resources:**

- Personal excel database of companies, advocacy groups, and labs
- Personal map of organizations in longevity ([old version](#)), and industry overview ([current version](#))
- Interested and motivated members of the longevity community

**Goals:**

- Create a continuously maintained interactive online map of longevity progress
- Duplicate data in excel database and expand features to more granular analyses
- Integrate tree with other disciplines, such as Molecular Machines and Neurotech

**Next steps:**

This is a prototype. For the initial tech tree, we are constraining ourselves to working with public-facing data. Private data is more valuable, but it is going to be a monumental effort to organize all of the public data so we might as well start there. If you're a domain expert or otherwise interested in improving the map, contact Aaron King at [aaron@foresight.org](mailto:aaron@foresight.org).