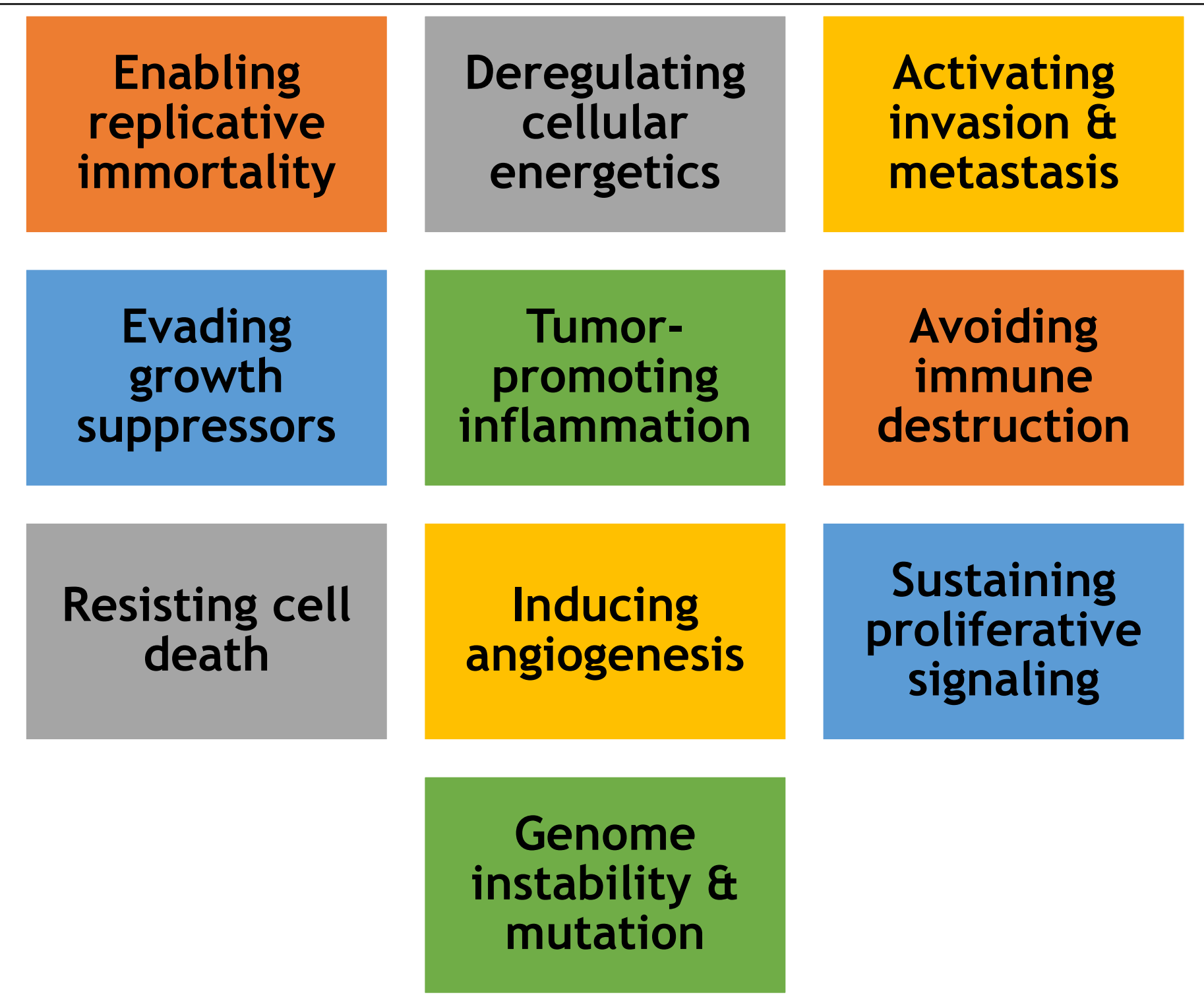


Cancer hallmarks orthologues in *Arabidopsis thaliana* suggests partial overlap and potentiality as a research model for the disease

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Introduction

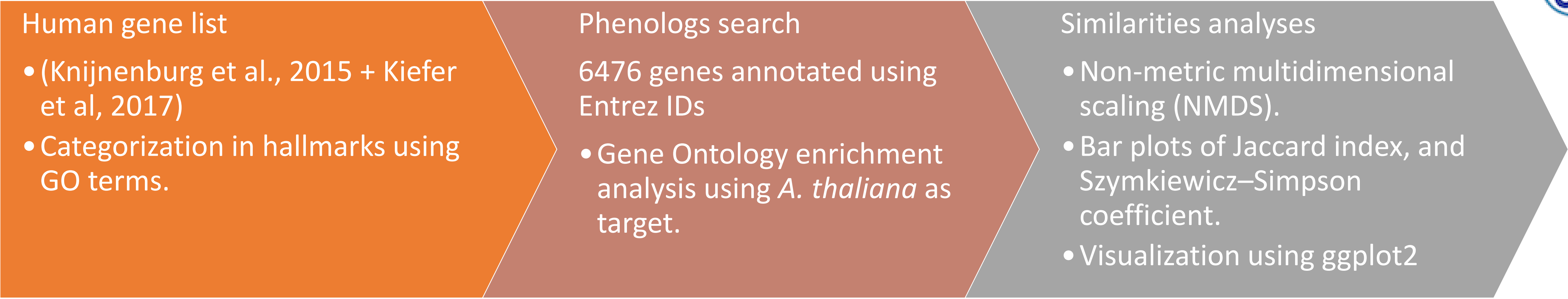
- Cancer is a prevalent disease worldwide.
- Cancer hallmarks were described as common traits for rational drug design for the disease.
- Although cancer study is important, animal model organism are expensive.
- Phenologs (phenotypes based on orthologs) has been poorly used to find alternatives to animal models.
- Plant models are cheap and they are not limited by informed consent or bioethics rules applied to animals.



Aim

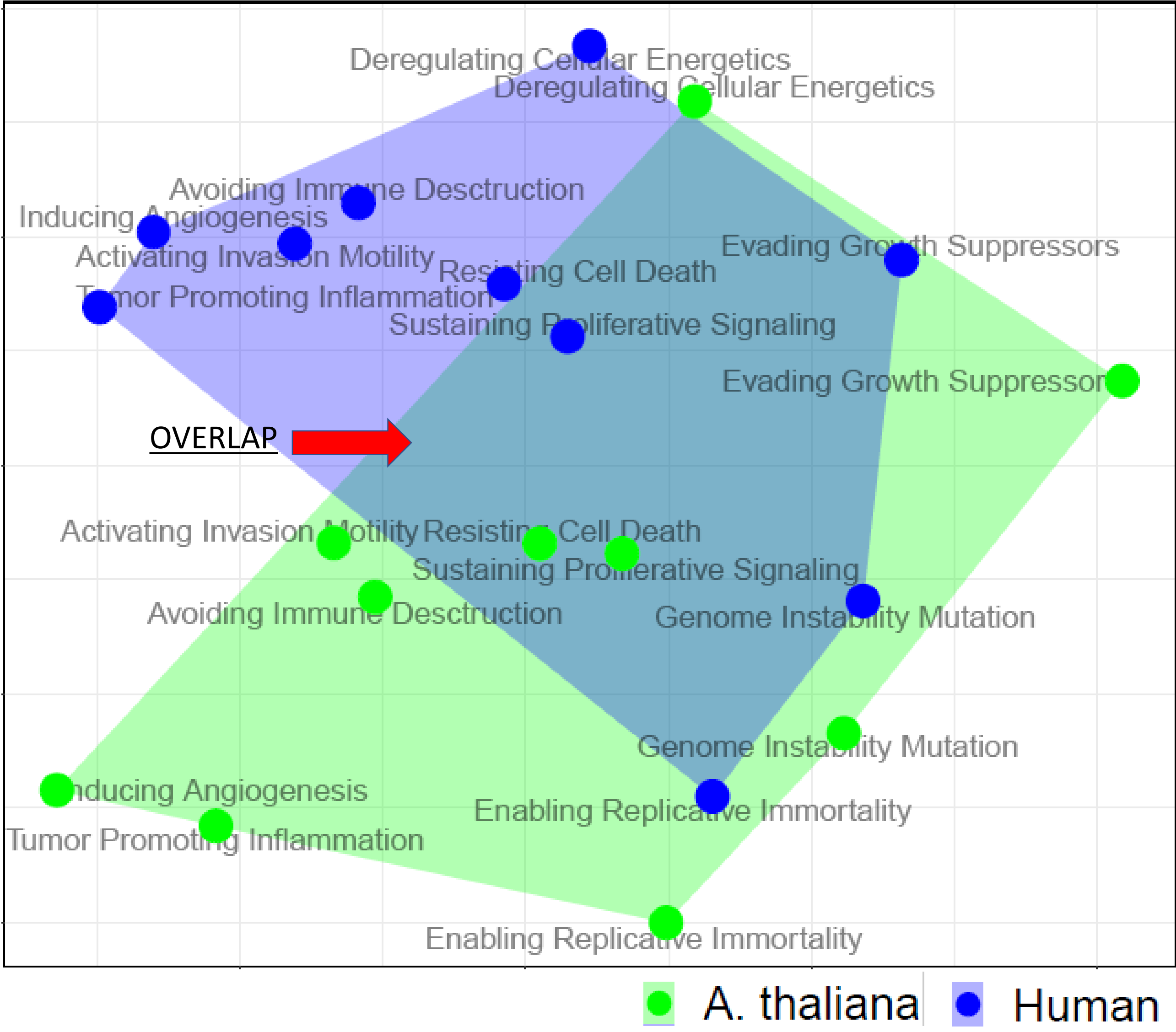
- To evaluate possible phenologs implied in cancer development in a plant model.
- To identify similarities among phenologs to cancer in a plant model.

Methods:



Results:

- 1793 orthologues were found in *A.thaliana* while 63% genes were unique in humans.
- A partial overlap between orthologues suggested a possible potential of *A. thaliana* as a study model (>23% shared genes) for the following hallmarks:
 1. Deregulating Cellular Energetics
 2. Enabling Replicative Immortality
 3. Genome Instability Mutation
 4. Sustaining Proliferative Signaling



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