Cure for HIV and Hepatitis from innate resistance using T-cell receptor

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Abstract

A HIV cure could be searched in the antigens of the immune individual

The immune story of an individual is a memory of induced, and innate, defence in the life: breast milk, wound and infection, allergen and vaccinations.

The T-cell contain the antigens for the defence against the diseases, and there is a continuous mutation (T cell receptor development with positive and negative selection).

I hyphothesize that there is not an innate resistance to HIV and Hepatitis (which is not encoded in the individual's DNA), but a memory induced resistance from the immunological history of an individual that can be studied in the T-cell of the immune individual.

If the T-cell antigens are discovered, then a vaccination with the T-cell antigens of the immune individual could lead to the successful treatment.

The complexity of individual's life should lead to a specific cure for common disease (virus, bacteria, cancer), using low cost testing for huge population with widespread diseases, the natural selection should induce a natural cure with vaccination using multiple antigens.

Artificial intelligence could identify virus structural protein that match the antigens, or that are structurally close (like the Coronavirus spike protein): it is necessary only the primary structure of the virus protein and antigen, because of the tertiary structure has the same folding using the same primary structure (or at least it could be a method to eliminating different proteins).

A method to obtain the cure for virus and bacteria could be:

- lymphocites isolation from immune individual with apheresis (centrifugation)
- separation of the lymphocites population with buoyancy activated cell sorting, fluorescence activate cell sorting, magnetic bead-based cell sorting, or other methods
- sequencing the lymphocites receptor
- build a database of the antigen of the immune population
- measure the minimum distance between antigens and virus rna (or bacteria dna) frame of the sequence
- build a database of the minimum distance alignment between virus (or bacteria) frame and antigens $V_1, V_2, V_3, \cdots$ where $\|V_j, virus\ frame\| \leq \|V_{j+1}, virus\ frame\|$ and $\|V_j, V_i\|$ is a distance between frames
- inoculate the antigens $V_1, V_2, V_3, \cdots$ (maximum overlap of the antigen to the virus frame like the spike protein) for the cure (vaccination to induce classical immune response), choosing the antigen set with $V_j \leq V_{max}$ threshold
- the treated individual will possess the antigens of the immune individual (lymphocites cloning of the immune individual) with the same immunological history

The only problem of the method is that a large infected population is needed to study a cure, and a rare disease is not eligible to a medical guideline.