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RESEARCH ARTICLE

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## HUMAN GENOME RESPONSE OR IMMUNE RESPONSE: HUMAN GENOME & ITS DISCRIMINATION OF SELF FROM NONSELF

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### ABSTRACT

**Genome** is the only molecule capable of self-reproducing, self-replicating, or self-synthesizing in each & every species of all genomic-things from genomological viruses up to humans. It is only this molecule which synthesizes the whole body of every individual in each species of all genomic-things. In *Homo sapiens*, the whole body of each person among the current 7.8 billion people of the world is synthesized only by the human **Genome** using his/her nutritive substances as raw materials in his/her compatible environment. The key objective of this paper is to make known the fact that the 11 systems in a person's body are the spectacular functional arms of the human **Genome**. Each of these functional systems is synthesized for its specific function by the coded & regulated information in the human **Genome**. In the body of a person, the **Genome** is the only self-synthesizing molecule and capable of synthesizing the rest of the body, i.e., the 11 systems of the person.

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## INTRODUCTION

It is known that humans and other mammals reside in a world populated with both pathogenic and non-pathogenic microbes, and that contains a vast array of toxic or allergenic substances which threaten normal homeostasis. The community of microbes includes both obligate pathogens, and beneficial as well as commensal organisms, which the host must tolerate and hold in check in order to support normal tissue and organ function. Pathogenic microbes possess a diverse collection of mechanisms by which they replicate, spread and threaten normal host functions. At the same time that the immune system does eliminate pathological microbes and toxic or allergenic proteins; however, it must avoid responses that produce excessive damage of self-tissues or that might eliminate beneficial microbes. As mentioned above, our environment contains a huge range of pathogenic microbes and toxic substances that challenge the host by a very broad selection of pathogenic mechanisms. On the other hand, the immune system uses a complex array of protective mechanisms to control and usually eliminate these pathogenic organisms and toxins. A general characteristic of the immune system is that these mechanisms rely on detecting unique structural features of the pathogen or toxin that mark it as distinct from host cells. Such host-pathogen or host-toxin discrimination is essential to permit the host to eliminate the threat without damaging its own tissues [1].

The key objective of this paper is to impart the fact that human immune response is the deliberately devised, synthesized or pre-designed response of the human genome against nonself antigens. Spectacular evidences about the fact that immune responses are genome responses against nonself antigens in humans. The mechanisms permitting recognition of microbial, toxic, or allergenic structures can be put into two categories:

1<sup>st</sup>. Hard-wired responses encoded by genes that belong to the genome of the human host's germ line and that recognize molecular patterns shared both by many microbes and toxins which are not synthesized & not present in the human or mammalian host.

2<sup>nd</sup>. Responses that are encoded by recombinant genes of the human genome that somatically rearrange in B and T cells to assemble antigen-binding molecules with exquisite specificity for individual unique foreign structures that are not synthesized by the genome of the human host.

The first set of responses constitutes the innate genome response. Because the recognizing molecules of the innate system are expressed broadly on a large number of cells. This system is kept ready with adequate number of recognizing molecules or dose to act rapidly after an invading pathogen or toxin is encountered and thus constitutes the initial genome response. The second set of responses constitutes the adaptive genome response. Because the adaptive system is composed of small numbers of cells with genomic specificity for any individual

pathogen, toxin or allergen, the cells with the responsive genomes must proliferate/multiply after encountering the antigen in order to attain sufficient numbers to mount an effective genome response or immune response against the microbe or the toxin. Thus, the adaptive genome response generally expresses itself temporally after the innate genome response in host defense. A key feature of the adaptive genome response is that it produces long-lived cells each of which clonal type contains a specific genome for memory that persists in an apparently dormant state, but that can re-express effector functions rapidly after another encounter with their specific antigen. This gives the adaptive genome response with the ability to manifest genome memory, permitting it to contribute prominently to a more effective host response against specific pathogens or toxins when they are encountered a second time, even decades after the initial sensitizing encounter.

## REVIEW

**Discrimination of Self from Nonself:** The immune system employs many potent effector mechanisms that have the ability to destroy a broad range of microbial cells as well as parasites and to clear a broad range of both toxic and allergenic substances. Therefore, it is critical for the immune response to be able to control or to leash these destructive immune mechanisms against the human host's own tissues/organs. The ability of the genome/immune response to avoid damaging self-tissues is referred to as self-tolerance. Because failure of self-tolerance underlies the broad class of autoimmune diseases. It is now clear that mechanisms to avoid reaction against self-antigens are expressed in many parts of both the innate and the adaptive genome/immune response. There is an important functional aspect of T cell arm in the immune system that recognizes foreign antigens on surfaces of host cells infected by viruses, intracellular bacteria or other intracellular parasites and such host cells infected by intracellular pathogens are destroyed by  $CD_8^+$  T cells or cytotoxic T cells. Uninfected host cells are recognized with self-antigens on their surfaces & are left/bypassed safe by way of self-tolerance [2].

**General Features of Innate and Adaptive Immunity:** Unlike the innate mechanisms of host defense, the adaptive immune/genome system manifests exquisite specificity for its target antigens. Adaptive responses are based primarily on the antigen-specific receptors expressed on the surfaces of T- and B-lymphocytes. Unlike the germ-line-encoded recognition molecules of the innate immune response, the antigen-specific receptors of the adaptive response are encoded by genes that are assembled by somatic rearrangement of germ-line gene elements to form intact T cell receptor (TCR) and immunoglobulin (B cell antigen receptor; Ig) genes. The assembly of antigen receptors from a collection of a few hundred germ-line-encoded gene elements permits the formation of millions of different antigen receptors, each with potentially unique specificity for a different antigen. The mechanisms governing the assembly of these B and T cell antigen receptors assures the selection of a properly functioning repertoire of receptor-bearing cells from the huge randomly generated potential repertoire [3].

Eosinophils are readily recognized by their prominent cytoplasmic granules that contain toxic molecules and enzymes that are particularly active against helminths and other parasites. The production of eosinophils from the bone marrow and their survival in peripheral tissues are enhanced by the cytokine IL-5, making them prominent cells in most allergic responses.<sup>10</sup> Basophils and mast cells are morphologically similar cells that represent distinct lineages. By virtue of the cell surface expression of high affinity receptors for IgE, they are key initiators of immediate hypersensitivity responses and the host response to helminthic parasites, releasing histamine and other preformed mediators from their granules and producing important quantities of lipid mediators that stimulate tissue inflammation, edema, and smooth muscle contraction. Recent studies have demonstrated that in addition to their role in immediate hypersensitivity responses, mast cells play prominent roles in the host response to bacterial infection as well. Importantly, mast cells and,

more prominently, basophils can release substantial amounts of IL-4, suggesting that they can play important roles in the induction of allergic immune responses [ 4].

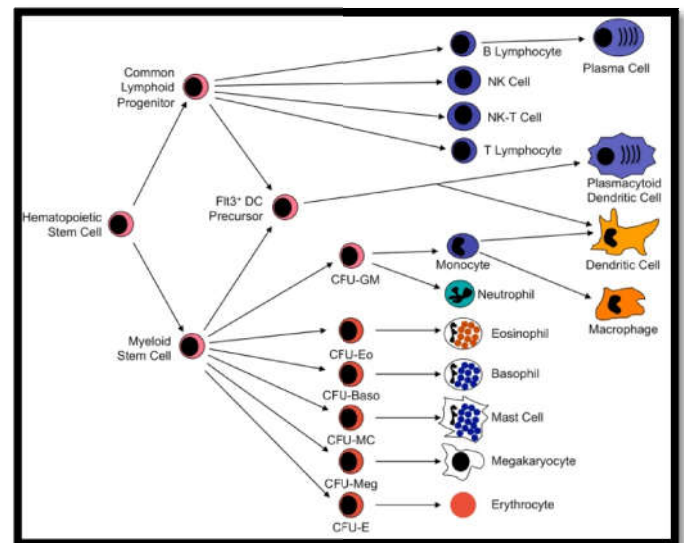


Figure 1. Hematopoietic Stem Cell-Derived Cell Lineages [1]

Phagocytic cells of the monocyte/macrophage lineage also play key roles in the adaptive immune response by taking up microbial antigens, processing them by proteolysis to peptide fragments, and presenting them in forms that can activate T responses. Additional cells in this lineage include Langerhans cells in the epidermis, Kupffer cells in the liver, and microglial cells in the central nervous system. The most potent types of APC are the broad class of dendritic cells that are present in most tissues of the body and concentrated in the secondary lymphoid tissues. All of these cells express both class I and class II major histocompatibility complex (MHC) molecules that are used to permit recognition of processed antigen by the TCR on T cells. All MHC bearing cells appear to have the potential to express APC function if stimulated appropriately [1].

**Antigen Recognition by T Lymphocytes/Major Histocompatibility Molecules:** A major role of the T cell arm of the immune response is to identify and destroy infected cells. T cells can also recognize peptide fragments of antigens that have been taken up by APC through the process of phagocytosis or pinocytosis. The way the immune system has evolved to permit T cells to recognize infected host cells is to require that the T cell recognize both a self-component and a microbial structure. The elegant solution to the problem of recognizing both a self-structure and a microbial determinant is the family of MHC molecules. MHC molecules (also called the human leukocyte-associated [HLA] antigens) are cell surface glycoproteins that bind peptide fragments of proteins that either have been synthesized within the cell (class I MHC molecules) or that have been ingested by the cell and proteolytically processed (class II MHC molecules).

Hematopoietic stem cells which do not express CD3, CD4 or CD8 but which are committed to T cell differentiation move from the bone marrow to the thymic subcapsular zone. There they begin rearrangement of the TCR genes. Once a productive TCR  $\beta$  chain has been produced, they move to the thymic cortex where TCR  $\alpha$  chain rearrangement occurs and surface expression of the CD3, CD4 and CD8 proteins is induced. These  $CD4^+CD8^+$  ('double positive') cells are positively selected on cortical epithelial cells for their ability to recognize self Class I or Class II HLA proteins. If the developing T cell has adequate affinity to recognize a self Class I protein, then it retains expression of CD8 and extinguishes expression of CD4. If the cell recognizes a self Class II protein, then it retains expression of CD4 and extinguishes expression of CD8. Selected  $CD4/CD8$  single positive (SP) cells then move to the thymic medulla where they are negatively selected on medullary epithelial cells to remove cells with excessive affinity for self-antigens presented in HLA molecules. Cells

emerge from positive selection SP for CD4 or CD8 expression and then are exported to the periphery. Cells that fail positive or negative selection are removed by apoptosis. A small fraction of cells differentiate from to rearrange their TCR  $\gamma$  and  $\delta$  chains, rather than their TCR  $\alpha$  and  $\beta$  chains.

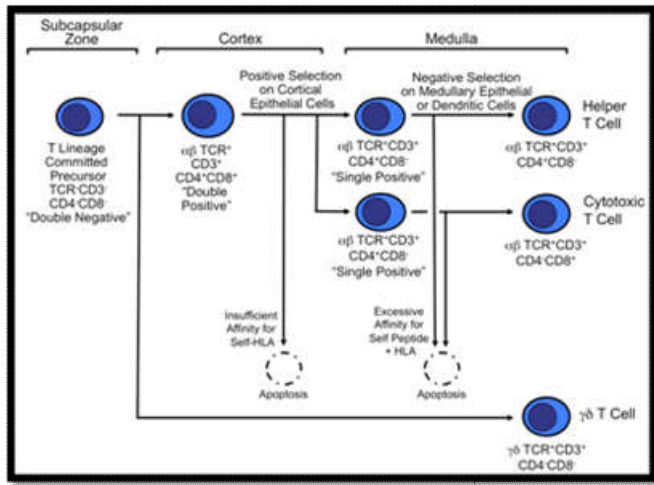


Figure 2. Differentiation and Maturation of T Cells in the Thymus[1]

**B Cell Development and the B Cell Antigen Receptor:** B cells constitute approximately 15% of peripheral blood leukocytes. They are defined by their production of Ig. The amino terminal portions of the heavy and light chains vary in amino acid sequence from one antibody molecule to another.

**T Cell Independent B Cell Responses:** B cells can also be activated successfully without T cell help. T cell independent B cell activation occurs without the assistance of T cell co-stimulatory proteins. In the absence of co-stimulators, monomeric antigens are unable to activate B cells. Polymeric antigens with a repeating structure, in contrast, are able to activate B cells. T cell independent antigens include bacterial lipopolysaccharide (LPS), certain other polymeric polysaccharides, and certain polymeric proteins.

**Effectors of Innate Immunity:** While the adaptive T and B cell genome responses provide important protection for the host and permit the development of immune memory, mutations in elements of the innate immune response demonstrate that innate immune effectors are critical for effective host defense. Initially, the innate and adaptive immune responses were thought to act independently, with the innate response providing the first line of defense against invading microbes, and the adaptive response being activated later to sterilize the infection. It is now apparent that the adaptive response has co-opted many of the innate effector mechanisms to enhance its effectiveness. Additionally, the adaptive immune system requires innate signals for its activation. By using innate signals to help initiate its responses, the adaptive immune system takes advantage of the innate system's ability to discriminate between contact with dangerous pathogens and innocuous or even beneficial microbes and environmental factors. The ability of the innate immune system to sense danger is essential for well-regulated immune responses. Thus, the innate and adaptive arms of the immune response should be viewed as complementary and cooperating.

**Phagocytic Cells:** The major phagocytic cells are neutrophils, macrophages, and monocytes. These cells engulf pathogenic microbes and localize them in intracellular vacuoles where they are exposed to toxic effector molecules such as nitric oxide, superoxide, and degradative enzymes in an effort to destroy the organism. Phagocytic cells use a variety of Fc receptors and complement receptors to enhance uptake of particles that have been marked by the adaptive and innate genome systems for destruction.

**Natural Killer (NK) Cells and Complement:** are synthesized by the genome of the individual human host.

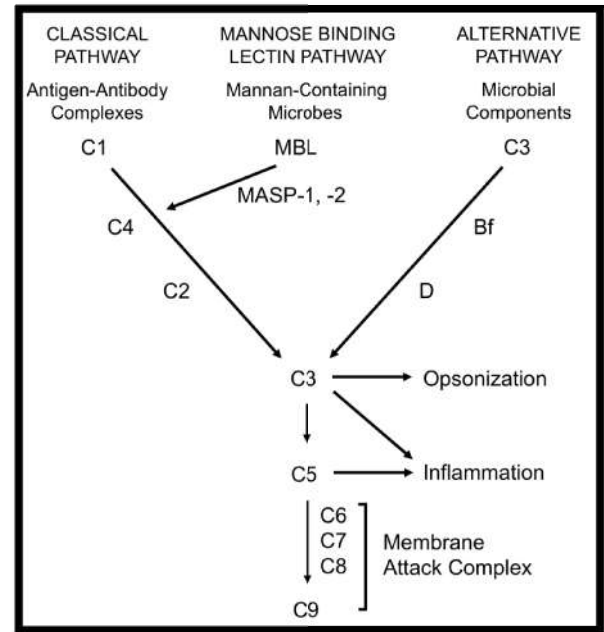


Figure 3. The Activation Pathways of Complement

The activation pathways of complement genome responses. Every type of human functional cell is absolutely synthesized by its genome and when a cell/pathogen or molecule synthesized by another genome is encountered in the body, the immune system synthesized by that human genome distinguishes self from nonself promptly.

#### Physical barriers

The first line of defense against invaders is mechanical or physical barriers and include:

- The skin, The cornea of the eyes, and Membranes lining the respiratory, digestive, urinary, and reproductive tracts.

**Lymphoid organs:** The immune system includes several organs in addition to cells dispersed throughout the body. These organs are classified as primary and secondary lymphoid organs.

1) The primary lymphoid organs: are the sites where white blood cells are produced and/or multiply:

- The bone marrow produces all the different types of white blood cells, including neutrophils, eosinophils, basophils, monocytes, B cells, and the cells that develop into T cells (T cell precursors).
- In the thymus, T cells multiply and are trained to recognize foreign antigens and to ignore the body's own antigens. T cells are critical for acquired immunity.

When needed to defend the body, the white blood cells are mobilized, mainly from the bone marrow. They then move into the bloodstream and travel to wherever they are needed.

2) The secondary lymphoid organs include:

- Spleen
- Lymph nodes
- Tonsils
- Appendix
- Peyer patches in the small intestine

These organs trap microorganisms and other foreign substances and provide a place for mature cells of the immune system to collect, interact with each other and with the foreign substances, and generate a specific immune response. The lymph nodes are strategically placed in the body and are connected by an extensive network of lymphatic vessels—the lymphatic system. The lymphatic system transports microorganisms, other foreign substances, cancered cells, and dead or damaged cells from the tissues to the lymph nodes, where these substances and cells are filtered out and destroyed. Then the filtered lymph is returned to the bloodstream. Lymph nodes are one of the first places that cancered cells can spread. Thus, doctors often evaluate lymph nodes to determine whether a cancer has spread. Cancered cells in a lymph node can cause the node to swell. Lymph nodes can also swell after an infection because acquired immune responses to infections are generated in lymph nodes. Sometimes lymph nodes swell because bacteria that are carried to a lymph node are not killed and cause an infection in the lymph node (lymphadenitis).

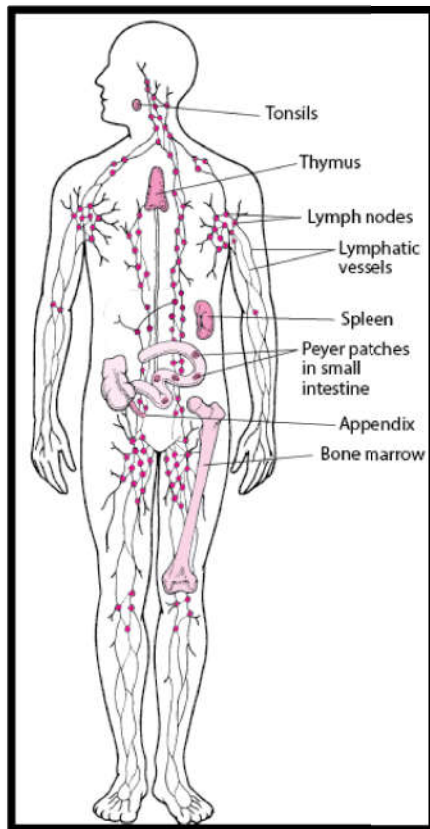


Figure 4. Human lymphatic system

#### Plan of Action

A successful immune response to invaders requires

- Recognition
- Activation and mobilization
- Regulation
- Resolution

**Recognition:** To be able to destroy invaders, the immune system must first recognize them. That is, the immune system must be able to distinguish what is nonself (foreign) from what is self. The immune system can make this distinction because all cells have identification molecules (antigens) on their surface. Microorganisms are recognized because the identification molecules on their surface are foreign. In people, the most important self-identification molecules are called Human leukocyte antigens (HLA), or the major histocompatibility complex (MHC). HLA molecules are called antigens because if transplanted, as in a kidney or skin graft, they can provoke an immune response in

another person (normally, they do provoke an immune response in the person who has them). Each person has an almost unique combination of HLAs. Look! The variation among human genomes is exactly equivalent/equal to the phenotypic variation among the individuals of human population of the entire world. This results in distinctive individuality among 8 billion people of the globe. Graft rejection or acceptance in transplantation between persons is the reflection of this truth. This is the reason for why autografts & isografts are usually accepted and allografts & xenografts are rejected in graft transplantation.

#### Regulation

The immune response must be regulated to prevent extensive damage to the body, as occurs in autoimmune disorders. Regulatory (suppressor) T cells help control the response by secreting cytokines (chemical messengers of the immune system) that inhibit immune responses. These cells prevent the immune response from continuing indefinitely. Resolution involves confining the invader and eliminating it from the body. After the invader is eliminated, most white blood cells self-destruct and are ingested. Those that are spared are called memory cells. The body retains memory cells, which are part of acquired immunity, to remember specific invaders and respond more vigorously to them at the next encounter.

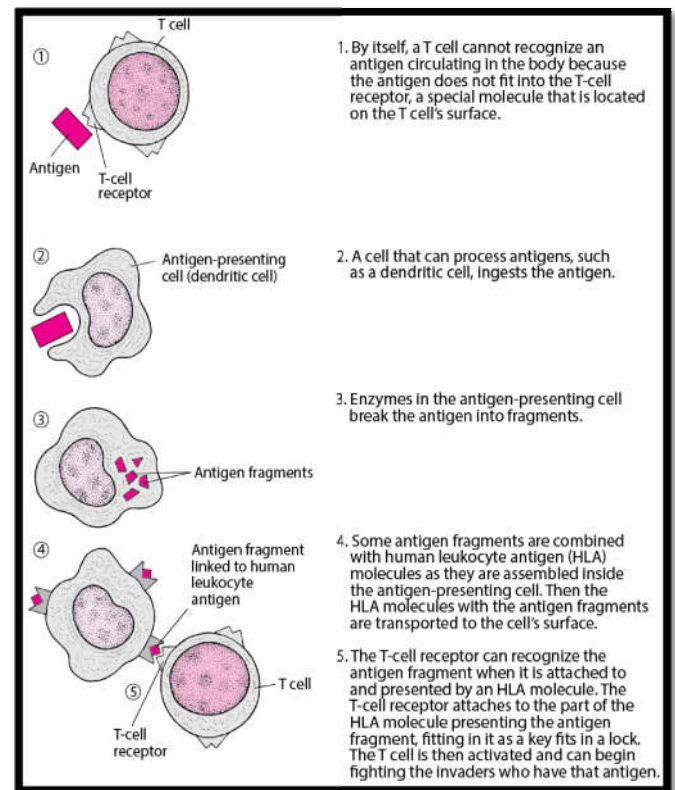


Figure 5. Activation and mobilization

Intrathymic deletion of high avidity T cell clones responding to the majority of self-antigens generates a truncated peripheral self-reactive repertoire composed of mainly intermediate and low but devoid of high avidity T cells compared with the foreign-reactive repertoire. The existence of intermediate avidity self-reactive T cells in the periphery represents a potential danger of pathogenic autoimmunity inherited in each individual because potentially pathogenic self-reactive T cells are included in the pool of intermediate avidity T cells and can often be functionally activated to elicit autoimmune diseases [4]. Also, an antigen is a molecule that binds to Ag-specific receptors, but cannot necessarily induce an immune response in the body by itself. Antigens are usually proteins, peptides (amino acid chains) and polysaccharides (chains of monosaccharides/simple sugars) but lipids and nucleic acids become antigens only when combined with proteins and polysaccharides.<sup>[4]</sup> In general, saccharides and lipids (as opposed to peptides) qualify as antigens but not

as immunogens since they cannot elicit an immune response on their own. Furthermore, for a peptide to induce an immune response (activation of T-cells by antigen-presenting cells) it must be a large enough size, since peptides too small will also not elicit an immune response. The antigen may originate from within the body ("self-antigen") or from the external environment ("non-self"). The immune system is supposed to identify and attack "non-self" invaders from the outside world or modified/harmful substances present in the body and usually does not react to self-antigens under normal homeostatic conditions due to negative selection of T cells in the thymus. Vaccines are examples of antigens in an immunogenic form, which are intentionally administered to a recipient to induce the memory function of adaptive immune system toward the antigens of the pathogen invading that recipient. Epitope – The distinct surface features of an antigen, its *antigenic determinant*. Antigenic molecules, normally "large" genomological polymers, usually present surface features that can act as points of interaction for specific antibodies. Any such feature constitutes an epitope. Most antigens have the potential to be bound by multiple antibodies, each of which is specific to one of the antigen's epitopes. Using the "lock and key" metaphor, the antigen can be seen as a string of keys (epitopes) each of which matches a different lock (antibody). Different antibody idiotypes, each have distinctly formed complementarity-determining regions. Antigen-presenting cells present antigens in the form of peptides on histocompatibility molecules. The T cell selectively recognize the antigens; depending on the antigen and the type of the histocompatibility molecule, different types of T cells will be activated. For T Cell Receptor (TCR) recognition, the peptide must be processed into small fragments inside the cell and presented by a major histocompatibility complex (MHC). The antigen cannot elicit the immune response without the help of an immunologic adjuvant. Similarly, the adjuvant component of vaccines plays an essential role in the activation of the innate immune system.

**Exogenous antigens:** Exogenous antigens are antigens that have entered the body from the outside, for example, by inhalation, ingestion or injection. The immune system's response to exogenous antigens is often subclinical. By endocytosis or phagocytosis, exogenous antigens are taken into the antigen-presenting cells (APCs) and processed into fragments. APCs then present the fragments to T helper cells ( $CD4^+$ ) by the use of class II histocompatibility molecules on their surface. Some T cells are specific for the peptide: MHC complex. They become activated and start to secrete cytokines, substances that activate cytotoxic T lymphocytes (CTL), antibody-secreting B cells, macrophages and other particles. Some antigens start out as exogenous and later become endogenous (for example, intracellular viruses). Intracellular antigens can be returned to circulation upon the destruction of the infected cell.

**Endogenous antigens:** Endogenous antigens are generated within normal cells as a result of normal cell metabolism, or because of viral or intracellular bacterial infection. The fragments are then presented on the cell surface in the complex with MHC class I molecules. If activated cytotoxic  $CD8^+$  T cells recognize them, the T cells secrete various toxins that cause the lysis or apoptosis of the infected cell. In order to keep the cytotoxic cells from killing cells just for presenting self-proteins, the cytotoxic cells (self-reactive T cells) are deleted as a result of tolerance (negative selection). Endogenous antigens:

include xenogenic (heterologous), autologous and idiotype or allogenic (homologous) antigens. Sometimes antigens are part of the host itself in an autoimmune disease.

**Autoantigens:** An autoantigen is usually a normal protein or protein complex (and sometimes DNA or RNA) that is recognized by the immune system of patients suffering from a specific autoimmune disease. Under normal conditions, these antigens should not be the target of the immune system, but in autoimmune diseases, their associated T cells are not deleted and instead attack.

**Summary:** The MHC (I and II) is very important in T cell immune response, without it, T cells couldn't get to each cell's antigens!

**Exogenous antigens:** are antigens that have entered the body from the outside, for example by inhalation, ingestion, or injection. Exogenous antigens are the most common kinds of antigens, and includes pollen or foods that may cause allergies, as well as the molecular components of bacteria and other pathogens that could cause an infection.

**Endogenous Antigens:** Endogenous antigens are that have been generated within previously-normal cells as a result of normal cell metabolism or because of viral or intracellular bacterial infection (which both change cells from the inside in order to reproduce). The fragments are then presented on the surface of the infected cells in the complex with MHC class I molecules.

**Autoantigens:** Autoantigens are normal "self" protein or complex of proteins or nucleic acid that is attacked by the host's immune system, causing an autoimmune disease. These antigens should, under normal conditions, not be the target of the immune system, but due to mainly genetic and environmental factors, the normal immunological tolerance for such an antigen has been lost.

**Haptens:** A hapten is essentially an incomplete antigen. These small molecules can elicit an immune response only when attached to a large carrier such as a protein. Immune response can only be elicited by the hapten-carrier adduct. Sometimes the small-molecule hapten can block immune response to the complete antigen by preventing the adduct from binding to the antibody, a process called hapten inhibition. In this case, the hapten acts as the epitope for the antigen, which binds to the antibodies without causing a response. If this happens with enough haptens, there will not be enough antibodies left to bind to the complete antigen, thus inhibiting the antibody response. An epitope, also known as an antigenic determinant, is the part of an antigen that is recognized by the immune system, specifically by antibodies, B cells, and T cells. The latter can use epitopes to distinguish between different antigens, and only binds to their specific antigen. In antibodies, the binding site for an epitope is called a paratope. Although epitopes are usually derived from non-self proteins, sequences derived from the host that can be recognized are also classified as epitopes. Epitopes determine how antigen binding and antigen presentation occur.

**Antigenic determinants** recognized by B cells and the antibodies secreted by B cells can be either conformational or linear epitopes. Antigenic determinants recognized by T cells are typically linear epitopes, acid antigens. This is why polysaccharides are generally T-independent antigens and proteins are generally T-dependent antigens. The determinants need not be located on the exposed surface of the antigen in its original form, since recognition of the determinant by T cells requires that the antigen be first processed by antigen presenting cells. Free peptides flowing through the body are not recognized by T cells, but the peptides associate with molecules coded for by the major histocompatibility complex (MHC). This combination of MHC molecules and peptide is recognized by T cells.

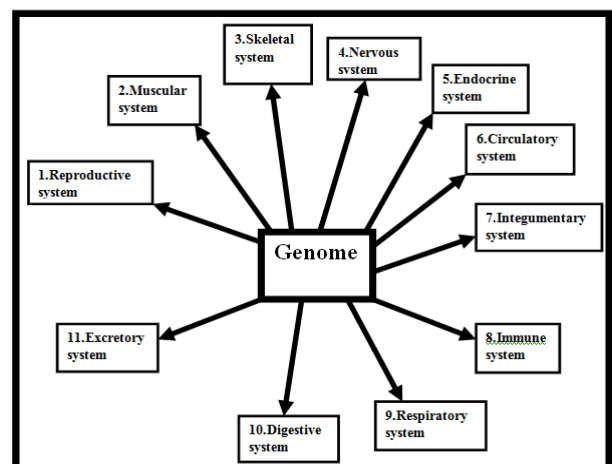


Figure 6. Functional arms of a human or mammalian Genome [Original, by Feleke Eriso, 2021]

## DISCUSSION

The genome not only synthesizes each type of functional arm such as excretory and nervous systems, it makes each cell type specialized professional for a specific type of function without having any training university & curriculum!! For functional & structural differentiation or professional specialization of human body cells the human Genome does not use any training university with designed curriculum and academic staff, instead it uses its predesigned directives of coded information in its 46 DNA molecules [5-11]. The students of biology and medical science are being taught a lie which states that parasitic males of *Strongyloides stercoralis* do not exist in human body in the parasitic generation and the type of reproduction is parthenogenesis by the females in the absence of parasitic males of *Strongyloides stercoralis*. This is wrong because both parasitic males & parasitic females are practically observed in the body of human host in the parasitic generation & the method of reproduction is sexual (by copulation of the male and female) similar to that in the free-living generations in soil [12,13].

### Connect your computer to Internet

**Steps of opening the video:** Select, copy and paste the title of the video (only the blue colored & underlined) on Google search space on your computer desktop screen and then press Enter Key of your computer keyboard. Click Video. Now, click the slide with the correct Title of video you pasted because when the video is copied & pasted, several other unwanted videos will appear together. When video 1 ends playing, repeat the same steps for playing of video 2, and then of video 3.

Title of video 1a: **Understanding the Immune System in One Video**

Title of video 1b: **Immune System Summary (1)**

Title of video 2: Skeletal System : Bone Formation (Intramembranous Ossification & Endochondral Ossification)"

Title of video 3: **How your muscular system works - Emma Bryce**

**Figure 7. Videos of immune system, skeletal system and muscular system as the 3 examples of functional arms of the human Genome**

## CONCLUSION

- Antigenic determinants or epitopes synthesized by a different genome are different and the grafts of cell, tissue, or organ transplants from adequately unrelated donors are discriminated by immunologically competent cells of the recipient. That is the reason for why autograft & usually isograft are accepted whereas allograft & xenograft are rejected in graft transplantations.
- Human genome synthesizes:
  - Skin (epithelia) including mucosa in visceral organs to serve as a physical barrier like the giant Chinese Wall built by Ming dynasty to keep invaders out of China,
  - Antigen Presenting Cells to serve like the police force, and
  - Natural Killer Cells, Cytotoxic T Cells, including Antibodies & the Complement System to serve like defense forces of a sovereign country against direct invaders!!
- The errors & unknownnesses cleared from biological sciences by Genome Model of genomic-things consist of 3 types (categories):
  - 1<sup>st</sup>•lie, eg: Cell Theory, Darwinism, living-things/nonliving-things, 95-98% of human genome is junk DNA, biological viruses are nonliving-things (i.e., nongenomic- things).
  - 2<sup>nd</sup>•beating around the bush, eg: biology is the study of living-things and then admitting that we do not know what a living-thing is!! Achievability of the objectives of Human Genome Project with the fund of \$3 billion USD.
  - 3<sup>rd</sup>•Unknown at all. eg: What a living-thing is was not known or undefined.
- Before the emergence of Feleke's Genome Model of genomic-things, biological sciences were the set of Fake Science as it was loaded with lots of:
  - lie, misleading beatings around the bushes, and unknownnesses of crucial scientific truths.

- Depth & width of fakeness of fake (false) biological sciences has been displayed spectacularly hereabove and transformed into a true science called superscience by Feleke's Genome Model of genomic-things.
- Every individual of each species from genomological viruses upto humans (*Homo sapiens*) is synthesized by the Genome of its specific species.
- The Genome is a self-replicating automatic molecule.
- A crucial message of priority to superscientists of the world:
  - We have to rescue student children of all human races of the globe without any delay from the danger of being taught fake (false) biological sciences loaded with a lot of lie, beatings around the bushes, and unknownnesses of crucial scientific truths.
- It is the time of jubilation for molecular genomologists of the world because of knowing that Genome is the only miraculous target in molecular genomology being the only molecule that automatically synthesizes itself and every individual in each species of all genomic-things including genomological viruses upto human beings.
- All of the scientific truths of Oncology & Cancer reside in the structure and function of the automatic self-replicating molecule called Genome!!!!
- As partly mentioned above, genome is the only molecule capable of self-copying reproduction and synthesizing all other nongenome molecules, organelles, cells, tissues, organs, organ-systems, and the entire body of each individual organism in every species of all genomic-things.

Respected reviewer scientists and readers of this paper! Please open and observe the following 252 different musical films/videos, one by one separately from one another. You observe these musical videos in Honor of Human Genome (46 DNA molecules) which has been synthesizing us with its automatic mechanisms since the emergence of *Homo sapiens* & will continue doing the same for an indefinite number of human generations time to come. Connect your computer to Internet.

**Steps of opening the video:** Select, copy and paste the title of each video (only the blue colored & underlined) on Google search space on your computer desktop screen and then press Enter Key of your computer keyboard. Now, click the slide with the correct Title you pasted because when each of the 252 videos is copied & pasted, several other unwanted videos will appear together. When the play of the video is ended, close it and copy paste the next video.

**Title of video 1:** Dejazmach by Samson Getachew (Official Video) | Ethiopian Music

**Title of video 2:** Ethiopian Music : Ayenew Arega (Shalon) - Bishemnut | - New Ethiopia Music 2020 Official Video

**Title of video 3:** Kibreab Tesfamariam Ylekhen Sefesukhw New Eritrean Blin Music 2020

**Title of video 4:** Bereket Mengisteab | New Eritrean Music Nebyney Koyne Remix 2020

**Title of video 5:** Selamawit Yohannes - Yebleni'loo | - New Ethiopian Music 2019

**Title of video 6:** (best traditional music & great dance)

**Title of video 7:** Emebet Firew - Embualele | - New Ethiopian Music 2017

**Title of video 8:** Weldegebrail Teklay - Kemti Nay Kedem (Official Video) Ethiopian Tigrigna Music

**Title of video 9:** Ethiopian music: Yeshe Birhane - Selel Bebeley - Ethiopian Music

**Title of video 10:** (sendelye) Ethiopian Best wollo music

**Title of video 11:** ela tv - Nguse Abadi - Taga - - New Ethiopian Music 2019

**Title of video 12:** Mekdes Hailu Yasin Lubakoo New Afar Song

**Title of video 13:** Cha Cha Sami - Kijiw - - New Ethiopian Music 2019

**Title of video14:** Ashebir Belay - Welelaw Gojam | - New Ethiopian Music 2021

**Title of video 15:** Ashenafi Abebe - Eri Bekentu - - New Ethiopian Music 2020

**Title of video 16:** New Eritrean Music " "By Tirhas Tekleab(Gual Keren) |Official Video-2017

**Title of video 17:** ela tv - Kibrom Birhane - Mulu - New Ethiopian Music 2020 - (Official Music Video) - Tigrigna music

**Title of video 18:** Gamo Gofa Music Hash Amere Shanko & Melku Tocho

**Title of vide 19:** Tesfanesh Kebede - Mahay Tahay - New Somali Music 2017

**Title of video 20:** Abel Mulugeta - Atikelid Behager - - New Ethiopian Music 2021

**Title of video 21:** new Dawro music Tokibe'a-2008

**Title of video 22:** New Ethiopian tigrigna Music 2018 Michaele Raya Ethiopiawinet//

**Title of video 23:** Ethiopian Wolayita Music Alemayehu Chefako – E.Yanda Ya Yaneda -

**Title of video24:** ethiopian benishangul music asossa abulmejid

**Title of video25:** Bu'ura jaalalaa by Hanisha Solomon

**Title of video 26:** Buze Man (Buzayehu Kifle) - Awdamet Meta | - New Ethiopian Music 2017

**Title of video 27:** adu best benishangul gumuz music

**Title of video 28:** Melaku Sisay - Tedemer | - New Ethiopian Music 2018

**Title of video 29:** Fana Abraha - Setet | - New Eritrean Music 2018

**Title of video 30:** ela tv - Hermon Beraki - Ruhus Gama - New Eritrean Music 2019

**Title of video 31:** Genet Abate - Man Lilekih | - New Ethiopian Music 2017

**Title of video 32:** Ethiopian Music :Eshetu Mersha(Selam Awred.) New Ethiopian Music 2021

**Title of video 33:** Fouad Weldgergish (Aja Señdenekwma) | New Eritrean Blin Music 2020

**Title of video 34:** Medhanie Kidane Yingn nr Ardet () | New Eritrean Blin Music 2020

**Title of video35: New Eritrean Bilen music Mehari okbagergish ( ) Shalom Entertainment 2018**

**Title of video 36:** /Abdi Jemal Ethiopian Sidamo Traditonal Music Live

**Title of video 37: Adunya Duumo - Hawalle - New Ethiopian Music 2017**

**Title of video 38:** Ethiopian Sidama Music Abdi Jemal – WALI –

**Title of video 39:** Kafaalo Yuuka, Sidama singer

**Title of video 40:** Shumulo Shunde Heerina - New Ethiopian Music 2017

**Title of video 41:** Adunya Duumo - Diru Soorro Ayyaana - New Ethiopian Music 2017

**Title of video 42:** Hencok Daniel - Amile Landa | - New Ethiopian Music 2018

**Title of video 43:** NewEthiopian Hadiya, halaba, siltie, marako, kabena music | new Hadiya music | Hadiya Ethiopian

**Title of video 44:** Kassahun lema yahode maskel new Ethiopian music | new Hadiya Ethiopian music yahode kassahun lama

**Title of video 45:** New Music clip: Abulo Xumoro Hadiyya!! Hadiyyi Oosi, Gitanuwwi, Garaadduwwi, Gassaanuwwi, SOreenate!

**Title of video 46:** Ethiopian Hadiya Music Muluken Gezahegn–Kebera–

**Title of video 47:** New Hadiyya music by: Henock Daniel, Workaferewu Kebede, Mulugeta Sugamo & Kasahun Lema. Wixxiona!

**Title of video 48:** NEW 2021 Ethiopian Music: Aduwa Victory over Italians, Frontier Gejja Gerbo of the Hadiyya

**Title of video 49:** Waachamo (Hossana) ye hadiyya kilil wana katama in ethiopia..please subscribe

**Title of video 50:** Ethiopian Music : henock Amile (umboshumore ) - New Hadiya Ethiopian Music 2021

**Title of video 51:** New hadiya, ethiopian music, liranch yoko (WORKU SHAWILO)

**Title of video 52:** Libix Hadiyyi Geemaraanchi Nagassa Sija - HMN Vidio Edaatete

**Title of video 53:** Addis Leggesse - Enjori አንጆሪ - New Ethiopian Music 2021

**Title of video54:** Worku Molla - Ayshagnim - - New Ethiopian Music 2020

**Title of video 55:** Tazebachew Demelash (Nama Nama) - New Ethiopian Music 2020

**Title of video 56:** Askenaw Alemu - | Gonder - Hot New Ethiopian Traditional Music 2018

**Title of video 57:** Feteh Tesfa Nega - De Du Di Da | - New Ethiopian Music

**Title of video 58:** Ethiopian Halaba Music Haymanot Amare & Zulfa Kemal – Terimo Wekos

**Title of video 60:** Demere Legesse - Bilemo Hinbile - New Ethiopian Music 2019

**Title of video 61:** Demere Legese - Merew | - New Ethiopian Music 2019

**Title of video 62:** Ethiopian 2019 New Amharic Music /Gesese TaDese Alesmama/

**Title of video 63:** Temesghen Yared - ESELIE (Official Video) - Eritrean Wedding Music 2019

**Title of video 64:** Hani Mihreateab - Hamatey - - New Eritrean Music 2019

**Title of video 59:** Nuradis Seid - Ho Bel | - New Ethiopian Music 2017

**Title of video65:** Tigist Asmare - Amelegnaw | - New Ethiopian Music Dedicated to Dr Abiy Ahmed

**Title of video66:** Bereket Mengisteab | Btihti Gezana | New Eritrean Guayla Music Video Remix 2020

**Title of video 67:** Semhar Yohannes #DANBO / Eritrean Song New Released 2020

**Title of video 68:** Andit Okbay - Luwamey - New Eritrean Music Video 20

**Title of video 69:** Kaleab Teweldemedhin - Koraley | - New Eritrean Music 2019

**Title of video 70:** New Eritrean Music 2020 -- Ngziyu - - By Nahom Tesfalem - (Hubi)

**Title of video 71:** Bereket Ogbamichael (beramu)- Alamida - - New Eritrean Music 2019

**Title of video 72:** ela tv - Abrhet - (Gual Ankere) - Senay Zemen - New Eritrean Music 2020

**Title of video 73:** TEDDY AFRO - New dvd HD - Aste Tewodros II

**Title of video 74:** Yonas Maynas - AB LBEY SEFERKUM - Eritrean Music

**Title of video 75:** Yohannes Estifanos, Semhar Yohannes, Danait Yohannes - Edu'ndo Beluley - New Eritrean Music 2018

**Title of video 76:** Estifanos Abraham (Zemach) - Mereat Adina - New Eritrean Music 2016

**Title of video 77:** Estifanos Abraham (Zemach) - Nestey - New Eritrean Music 2016

**Title of video 78:** Estifanos Abraham (Zemach) - Semira - New Eritrean Music 2016

**Title of video 79:** New Eritrean Music - Zaki Naju - 2018

**Title of video 80:** Bniam Habtemichael - Entay Ke Zeynafq - - New Eritrean Music 2020

**Title of video 81:** Eden Kesete - Defar'ye Zfetu - (Official Video) - Eritrean Music 2017

**Title of video 82:** Meshesh - Awdeamet - Traditional Eritrean Music

**Title of video 83:** New Eritrean music 2020 MAMA By Tedros (teddy) Goitom official video clip

**Title of video 84:** New #Eritrean Music 2019 (Official) by #Abera Beyene #Wesidoma

**Title of video 85:** Getachew Addis - Malefiya - - New Ethiopian Music 2019  
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**Title of video89:** LYE.tv - Mihreteab Michael - - Seb Nkhun - New Eritrean Music 2020  
**Title of video 90:** Weyni Selemon - Deki Adey (New Eritrean Music 2019)  
**Title of video 91:** Dembena - Yohannes Habteab (Wedi Kerin) - Alo Seba I - New Eritrean Music 2020  
**Title of video 92:** Beraki Gebremedhin - -Hyoba New Eritrean Music 2020  
**Title of video 101:** Kako Getachew - Zor Zor - - New Ethiopian Music 2020  
**Title of video102:** Ella TV - Yonatan Tadese - Dula - Hazeki Libey - New Eritrean Music 2017  
**Title of video103:** Nahom Yohannes - Seb Entay Zeybele - Eritrean Music  
**Title of video104:** Nahom Tesfalem (Hubi) - Deqi Hanti Mahxen - - New Eritrean Music 2020  
**Title of video105:** Girum Wudu - Ethiopia Tikdem | - New Ethiopian Music 2019  
**Title of video106:** Mehari Degefaw (Qegne) - New Ethiopian Music 2021  
**Title of video107:** Kiros Alemayehu - Best 10 Music | Tigrigna Music  
**Title of video 108:** New Eritrean Music Russom G/giorgis /Wedi Gabr Awdeamet/ official video 2016  
**Title of video 109:** Ethiopian Music Kiros Alemayehu  
**Title of video110:** Bewketu Sewmehon - Gojam | - New Ethiopian Music 2017  
**Title of video111:** Maramawit Ageze - KURU GONDERE | - New Ethiopian Music 2018  
**Title of video112:** Danait Yohannes - Habeni Fiqri - (Official Video) | New Eritrean Music 2017  
**Title of video113:** Russom G/giorgis Alem / Old Eritrean Music  
**Title of video 114:** Filimon Bekele - Mase Awlo (Official Video) Ethiopian Tigrigna Music 2019  
**Title of video115:** Semhar Yohannes - Wedi Mislene (Official Video) | New Eritrean Music 2016  
**Title of video 116:** Mehari Degefaw\_ gebry new-Ethiopian\_ Traditional Music (Official Video) \_2020  
**Title of video117:** Eritrea - Semhar Yohannes - Loms Ferihe | - New Eritrean Music 2016  
**Title of video 118:** Best ever love song Amanual (momona) and Mussie Hadish  
**Title of video119:** Eritrean Classical Music  
**Title of video120:** Abinet Agonafir – Atehighbign - - Ethiopian Music  
**Title of video 121:** Ethiopian music: Solomon Haile - Des Yebelino - New Ethiopian Music 2017  
**Title of video 122:** Ethiopian Music Shambel Belayneh(Embi Ale)ሻምበልበላይነሀ(አምበኦላ)New Ethiopian Music 2021  
**Title of video123:** Nguse Abadi ZEMAY New Ethiopian Traditional Music 2018 Official Video  
**Title of video124:** Best Gonder Songs Compilation |  
**Title of video125:** AMEN - Medhanie GMedhn (?አሳይ) ft\_ Kiflom Ykealo - Dluw Dika ድሉውዲኻ - Eritrean Tigrigna Music 2021\_  
**Title of video126:** KEMEY ZEYNAFIK : Momona - Eritrean New Music 2019  
**Title of video127:** Amanuel Goitom - Gamey - New Eritrean Music 2018  
**Title of video128:** tekleyhaymanot kinfe | |new tigrigna music |bahlawi Tigrigna  
**Title of video129:** Eritrean Guayla Music Abrehet Berhane Kahtana eastafro.com

**Title of video130:** a talented boy in music his age is 17 years old.  
**Title of video131:** Ngise Abadi Mix Taga at stage  
**Title of video132:** Nguse Abadi - ZEMAY New Ethiopian Traditional Music 2018  
**Title of video133:** Aster Endale Ethiopian Musicdon't forget like & Subscribe Now Abrish Show  
**Title of video134:** [Eritrean Music] Bereket Goytom - Guembier - Official Music Video 2016  
**Title of video135:** LYE.tv - Amanuel Goitom - Teamanit | - New  
**Title of video138:** New Eritrean music 2018 Maebel Selam Wedi Tkul -  
**Title of video139 :** New Eritrean music Amanuel weldegabr momona Adey  
**Title of video140:** Nati TV - Berhe Gile (Meshesh) | Oayney - New Eritrean Music 2018  
**Title of video141:** LYE.tv - Rimdet Alem - Mrux | - New Eritrean Music Video 2016  
**Title of video142:** Eritrean Music Russom Ggiorgis - Oromay አርምድርአሰምግገርግስ  
**Title of video143:** Amarech Alemu - Ere Gedam | - New Ethiopian Music 2018  
**Title of video144:** New Eritrean wedding Music - Hani Mihreteab - Lega Shibo 2018  
**Title of video145:** Best Gonder Songs Compilation |  
**Title of video146:** Mebre Mengste - Kehagere Yasededegn  
**Title of video147 :** MebrieMengistie - Minew Kefagn Zentro | |Ethiopian Traditional Music  
**Title of video148:** Fitsum Tekhlebrhan (Wedi Kerin) Ykre/ New Eritrean Music  
**Title of video149:** Semere Habtemariam - Rai'leni |New EritreanMusic  
**Title of video150:** KIDANE TEKLU~ERITREAN LIVE MUSIC ON STAGE  
**Title of video151:** /Mebre mengstieEhedalehu eneshedalehu agere egebalehu./  
**Title of video152:** ቀናሎ (Ethiopian best tradational music & great dance)\_  
**Title of video153:** Henok Ambaye - Ethiopiawit Enat | - New Ethiopian Music 2021  
**Title of video154:** ♥Best Ethiopian cultural music with amaizing wollo dance and Gojam musics mixed.  
**Title of video155:** New Eritrean Tigringa music 2020 // by Beraki Gebremedhin /Kendiel/  
**Title of video156:** ela tv - Yohannes Habteab (Wedi Kerin) - Seb yu Hager | - New Eritrean Music 2020  
**Title of video157:** አንገሥት ♥ wubete belay ወብራላይ  
**Title of video158:** Official Eritrean Music: Mama Tihamena Ala by Mihreteab Michael  
**Title of video159:** Mihreteab Michael - Fewsiyo Qanza (Official Video) | - Eritrean Music 2018  
**Title of video 160:** New Eritrean Music 2016 NGUYEYELU // By MIHRETAB/KUFLOM/ANDIT/HAILE  
**Title of video 161:** Bereket Mengisteab - Tselaley Live Performance  
**Title of video 162:** Bereket Mengisteab | Kikeyid Demo Old Eritrean Music  
**Title of video 163:** Bereket Mengisteab [Neaki Amine] New Eritrean Guayla Music Video Remix 2020  
**Title of video 164:** Bereket Mengisteab [Selam Selam] New Eritrean Music Video Remix 2020  
**Title of video 165:** Bereket Mengisteab [Tselaley] New Eritrean Guayla Music Video Remix 2020  
**Title of video 166:** Bereket Mengisteab [Kewiluwa Gime] New Eritrean Guayla Music Video Remix 2020  
**Title of video 167:** Bereket Mengisteab | Agule || Official Audio Video  
**Title of video 168:** Bereket Mengisteab | Aewaf Kramat | | Original Version (Official Music Channel)



**Title of video169:** Bereket Mengisteab | - Zewzewa | - Eritrean Music - Official Music Channel

**Title of video 170:** Bereket Mengisteab | Shrara | | Official Audio Video

**Title of video171:** Bereket Mengisteab [Zemenay] New Eritrean Music Official Audio Video

**Title of video 172:** Bereket Mengisteab | Siye | New Eritrean Music Official Audio Video

**Title of video 173:** Bereket Mengisteab Nfas Nay Bereka [New Eritrean Music Audio Video] Official

**Title of video174:** Eritrean music 2020 Tekeste goitom (Selam alewa)

**Title of video175:** Ethiopian Music - Shambel Belayneh ሻዎብልላይኑ ህ (አሳቸዮ ፈተካ ወ) - New Ethiopian Music 2020

**Title of video176:** Raza Raya - Mahazaye /New Ethiopian Traditional Tigrigna Music

**Title of video 177:** ( Membre mengste) ♥♥♥

Title of video178: Maeken - Abera Beyene - Sgem Gobo - New Eritrean Music 2021 –

Title of video179: Dawit Nega - Baba Elen Ethiopian Traditional Tigrigna Music

Title of video180: Weta below 1 | Best Ethiopian new Music Video 2020

Title of video181: Ethiopian Music : Solomon Nigussie - New Ethiopian Music 2020

Title of video182: New Ethiopian Music Cover 2020 - Ziada Araya(ZI) - Hagere/

Title of video183: Fikremariam & Yohannes - Yichi Nat Ethiopia | - New Ethiopian Music 2020

Title of video184: Hot Ethiopian cultural music 2020 [New

Title of video185: Eyerusalem Asfaw | Meseret Mengistu | Menen Alene - Selam Agegnito | - New Ethiopian Music

Title of video186: Assefa Teshale - Yimegnushal | - New Ethiopian Music 2020

Title of video187: Wave Slassian - Axum - New Ethiopian Music 2017

Title of video188: Nguse Abadi - Zeyhalif Yelen | ] Live New Tigrigna Music

Title of video189: Seble Feleke - Wa Hagere - - New Ethiopian Music 2019

Title of video190: BEST New Ethiopian Music 2014 Milly Wessy - Endatay Official Video

Title of video191: Korchach - Gidin Koynu | - Eritrean Music

Title of video192: Eritrean new vedio hot gaiyla million sikay in asmara 2020..

Title of video193: Buruk TV Negise New Eritrean music by [Samuel Zerizgi (Esaw)

Title of video194: Sami Getu - Fitawrari - - New Ethiopian Music 2020 (Official Video)

Title of video195: Maeken - Abera Beyene - New Eritrean Music 2020 - Grmaki Kelo (Official Music Video)

Title of video196: Maeken - Abera Beyene - Akilatley New Eritrean music 2020

Title of video197: ENEDE SEMU FIKER EDEN EMIRU 22 December 2020

Title of video198: Betelhem Abraham - Selamachin Yisemal - - New Ethiopian Music 2020

Title of video199: Mihret Mulugeta - Eketelatalehu | - New Ethiopian Music 2020

Title of video200: Desalegn Mersha - Atenet | - New Ethiopian Music 2020

Title of video201: Bereket Mengisteab | Ufoy Breri New Eritrean Guayla Music Remix 2020

Title of video202: Ahimed Teshome - Banda Nesh - - New Ethiopian Music 2020

Title of video203: Gete Aniley and Ziggy Zaga - Guba - - New Ethiopian Music 2020

Title of video204: Biniam Tesema - Ayzosh Hagere | - New Ethiopian Music 2020

Title of video205: Teddy Afro - - Atse Tewodros ||

Title of video206: Buruk TV. Xawiet by Feven Tsegay [New Eritrean Music 2020]

Title of video207: Eritrean music gayla million sikay asmara 2020 sgemey...

**Title of video208:** Redeat Lake - New Ethiopian Music 2020

**Title of video209:** Fisaha Hailay (Wedi Tsehay) TAALELE- (Official Video) Ethiopian Tigrigna Music 2020

**Title of video210:** New Eritrean blen Music Sefleltekunki yigenda by Shewhat Yohannes Shalom Entertainment 2020

**Title of video211:** Ethiopian Music : - Mesfin Bekele New Ethiopian Music 2020

**Title of video212:** Abera Beyene - - Ati Aminey - - New Eritrean Music 2020 - [Official Audio]

**Title of video 213:** Orion Salih - Mama Eritrea | Eritrean Music 2020

**Title of video 214:** Tesfealem Arefayne - Korchach - Abey Kibxah - አበይኩርኩ - New Eritrean Music 2021

**Title of video 215:** Meselu Fantahun - Bezint Geremaye - በዚህ ተግባር - New Ethiopian Music 2021

**Title of video 216:** Ethiopia GETACHEW The new Ethiopian national anthem

**Title of video 217:** Animated Ethiopian Flag (HD)[via torchbrowser.com

**Title of video 218:** Aregahegn Worash - Be Adisu Amet - - New Ethiopian Music 2020

Title of video 219: New Eritrean Blin Music (Yit Merkisi) by Elias Mesmer /2021

Title of video220: Elias Mesmer ( Woyishani ) Eritrean Blin Music.

Title of video 221: Elias Mesmer (Elila Nirsena ) Eritrean Blin Music.

Title of video 222: Wegayehu Seyoum (Achitti Lalle) - New Ethiopian Music 2020(

Title of video 223: ela tv - Saleh Ibrahim - Norit - New Eritrean Music 2020 - (Official Music Video ) - Tigre Music

Title of video 224: Merina (Eritrean Music) 2020

Title of video 225: The legend Mohammed Afa: Hot Guayla Blin Golya, Khartoum Sudan 2020:•

Title of video 226: Habtat Zerezghi - Endakhema Beldya | New Eritrean Blin Music 2018

Title of video 227: New Eritrean music M/D Idris AShtana wed keren 2017 (araonito eli jewaba )

Title of video 228: Shaket tv - M. Idris Ashtrana - Keren | - New Eritrean Music 2019 –

Title of video 229: Habtat Zerezghi - Densa Gebeniri | New Eritrean Blin Music 2018

Title of video 230: Mafi Kassa - Ethiopia | - New Ethiopian Music 2020

Title of video 231: Ethiopian Music: Tirubir Gizaw (Toki Bea) New Ethiopian Music 2020

Title of video 232: Ethiopian Music - Tsega muche - New Ethiopian Music 2020

Title of video 233: Ethiopian Music - Mastewal Chane - New Ethiopian Music 2020

Title of video 234: Demeke Bitew - Lib Aregelegn - - New Ethiopian Music 2020

Title of video 235: Eskedar Wodaje; Ethiopian music - New Traditional Amharic Music -Shi Jegna bY Eskedar Wodaje -2019 Music

Title of video236: Aregawi Tesfay - Wuey Seyab / New Ethiopian Tigrigna Music

Title of video237: Eritreawi'ye - Mihreteab Micheal-New Eritrean Tigrigna Music 2021-

Title of video238: Ashenafi Abebe - Eri Bekentu - - New Ethiopian Music 2020

Title of video239: Teddy Afro - Semberé - Video by Triple S Studio

Title of video 240: Eritreawi'ye - Mihreteab Micheal-New Eritrean Tigrigna Music 2021-

Title of video 241: Mehari Degefaw - Gitem Alegn - New Ethiopian Music 2019

Title of video242: Teddy Afro concert DVD ethiopia 2019 new

Title of video243: Melake Abrham - Arha - - New Eritrean Music 2021

Title of video244: Abel Mulugeta - Atikelid Behager - - New Ethiopian Music 2021  
 Title of video245: wubete belay ♥ ( Ethiopian Best gonder music  
 Title of video246:Aster Aweke - Emiye Ethiopia (Official Video)  
 Title of video247:Amanuel Yemane - Adilatni - - New Ethiopian Music 2021  
**Title of video 248:** ela tv - Michael Yacob | Chapiko - Fanus Esele - New Eritrean Music 2020 - Hot Guyla  
**Title of video 249:** Eritrean Bilen Music - Kayni Gin Yigela - Damer Ghide  
**Title of video 250:** Frezer Kenaw (Babi) - Welo Mejen (Official Video) - Ethiopian Music  
**Title of video 251:** Berhe Amare - Kihdet (Official Video) Ethiopian Tigrigna Music  
 Title of video252: Ethiopia Cover Leul Sisay  
 ► Ethiopia & Eritrea are Habesha Twins, forming a trustworthy and fully capacitated power in favor of global peace& development in East Africa.  
 ► Ethiopians' Notes to Ethiopians: Nothing should be added to Green, Yellow, and Red colored Ethiopian National Flag; otherwise, its wonderful & exciting rainbow-like color can't be seen in whole.  
 ► Grand Renaissance Dam of Ethiopia must be photographed on a 2000 Currency Note of Ethiopian Birr and not on the Ethiopian Flag.

**Figure 8. A display of musical films to be observed in honor of automatic human genome**

#### Ethics

I declare that no ethical error is committed in the production of this paper. I also declare that I don't have any conflict of interest with anybody.

## ACKNOWLEDGEMENTS

I am deeply grateful to the scientists acknowledged in the text and list of references of this paper for their providing me with confidential data that can be counterchecked, for their correctness, with observable facts in the natural environment as well as with truths in reputable journals, and Internet. I was initially/originally mobilized or activated by two English biologist's exclamatory wondering, to generate Genome Model and revolutionize both pure & applied biological sciences to the current spectacular reality of scientific truth.

Those two English biologists named Toole G & Toole S stated: "We define that biology is the study of living-things and then we admit that we do not know what a living-thing is!". This is so because science cannot develop without science. I am really thankful to 252 teams of eminent musicians in the musical films included in this paper.

## REFERENCES

- Bookshelf, Biochemistry.5<sup>th</sup> edition. Immune Responses Against Self-Antigens are Suppressed. 2020. CDC: <https://www.coronavirus.gov>
- Chaplin DD. Overview of the Immune Response. *Journal of Allergy of Clinical Immunology*. 2010; 125(2 suppl 2): S3-23. Doi: 10.1016/j.jaci.2009.12.980
- Delves PJ. Overview of the Immune System. UK, MERCK MANUAL, April 2020.
- Feleke E. Biological viruses are certainly living-things and switching off genomic metabolism. *European Journal of Biology and Medical Science Research*. 2019; 6(5): 19-41.
- Feleke E. Dynamic and detailed Genome-Model of living-things. *International Journal of Development Research*. 2018; 08(08): 22138-22152.
- Feleke E. Genome-Model of living-things, definition of a living-thing, and the position of biological viruses among living-things. *International Journal of Current Research*. 2017; 9(07): 53764-53778.
- Feleke E. Genomic-things. *International Journal of Development Research*. 2020; 10(05): 35498-35504.
- Feleke E. Immune responses against autointracellular pathogenic genomes or cancered cells. *International Journal of Development Research*. 2018; 08(07): 21489-21496.
- Feleke E. Pandemicity of COVID-19 in Humans. *International Journal of Development Research*. 2021; 11(010): 43373-43378.
- Feleke E. Role of Genome-Model in type 1 diabetes mellitus. *European Journal of Biology and Medical Science Research*. 2019; 7(3): 35-48.
- Feleke E. Spectacular presence of parasitic males *Strongyloides stercoralis* in human host. *Microbiology Research International*. 2018; 6(2): 16-23.
- Feleke E. Superproof about sexual reproduction and life cycle in the parasitic generation of *Strongyloides stercoralis* in human host. *Afro-Egypt J Infect Endem Dis*. 2016; 6(1): 1-6.
- Jiang H, Chess L. How the Immune System Achieves Self-Nonself Discrimination During Adaptive Immunity. 2009. Doi: 10.1016/S0065-2776(09)01202-4

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