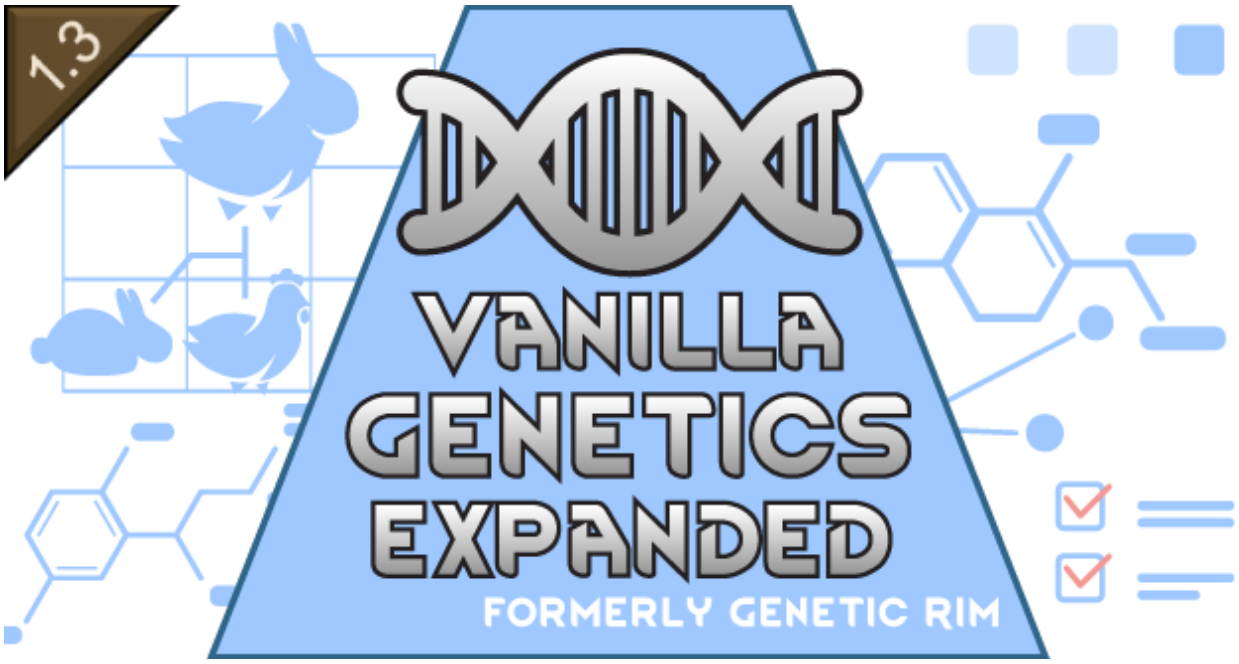


Vanilla Genetics Expanded

19th October 2021

OVERVIEW

Vanilla Genetics Expanded is an updated version of Genetic Rim by Sarg Bjornson, with improvements across the board pertaining to game flow, mechanics and art-style where necessary.

HYBRIDS

There is a huge number of hybrids, so we have added them all on a separate document: https://docs.google.com/spreadsheets/d/1QxyHvaZ2zrut7xdD0D6rdJTjVoyxjG0FXPUSwZxvSVo/edit#gid=696354075

HYBRID QUALITY

Hybrids now have quality, which is based on the genoframe used to create their growth cells. Using a poor quality genoframe will result in a poor quality hybrid, while using a legendary quality genoframe will give you a legendary quality hybrid.

Qualities work in a very similar fashion to vanilla item qualities - they are a flat multiplier to all the stats across the board. Only hybrids as part of Vanilla Genetics Expanded have qualities.

Table below explains how different qualities affect different fields in RaceDef.

Quality/Stat	Awful	Poor	Normal	Good	Excellent	Masterwork	Legendary
statBases							
MoveSpeed	x0.8	x0.9	x1.0	x1.1	x1.2	x1.45	x1.65
Market Value	x0.5	x0.75	x1.0	x1.25	x1.5	x2.0	x3.0
Filth Rate	x2.0	x1.5	x1.0	x0.8	x0.5	x0.25	x0.05
LeatherAmount	x0.8	x0.9	x1.0	x1.1	x1.2	x1.45	x1.65
Tools							
Power	x0.8	x0.9	x1.0	x1.1	x1.2	x1.45	x1.65
Race							
baseHungerRate	x2.0	x1.5	x1.0	x0.9	x0.8	x0.5	x0.25
baseBodySize	x0.85	x0.90	x1.0	x1.05	x1.1	x1.2	x1.25
baseHealthScale	x0.8	x0.9	x1.0	x1.1	x1.2	x1.45	x1.65
lifeExpectancy	x0.5	x0.75	x1.0	x1.25	x1.5	x2.0	x3.0

Hybrid quality displays similar to how items quality does -in brackets right after the name of the hybrid. For example: Thrumfallo (Legendary), Wolfchicken (Poor) etc.

Stats are visibly affected on the stat page of such animals.

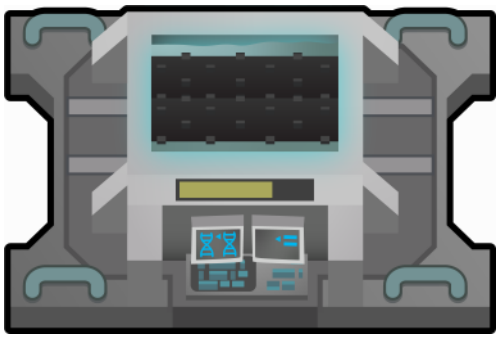
If two hybrids have been created using Fertility Unblockers, they can reproduce. Otherwise, hybrids cannot create living offspring. **If two hybrids reproduce, the quality of the offspring will always be that of the parent with the lowest quality.** This also applies to egg-layers.

GENOFRAME AND TISSUE GRINDER

Genoframe is a new item that's used to determine the quality of the hybrid made in the Genomorpher. Genoframes are created on Tissue grinder structure. Depending on the desired quality of the genoframe, it takes more and more animal corpses to make it.

Tissue Grinder is a normal workbench with normal bills, so people can set the desired amount of a specific genoframe.

TISSUE GRINDER



“A workplace accident waiting to happen, the Tissue Grinder takes the corpses of animals and carefully rips and tears them to pieces in order to extract useful genetic data in the form of Genoframes. The hardware is also capable of combining two identical frameworks into a superior form by comparing and improving upon latent and inferior genetic material.\n\nWorkspeed is influenced by someone who actually knows what they’re looking for in order to skip some of the more routine tasks, and possibly shouldn’t be placed into the hands of someone with no concept of ethics, morality or conscience.”

Tissue grinder is a workbench responsible for creating new genoframes. While the process does take a lot of work (3500), the speed of work scales with Intellectual skill. It does NOT use Crafting as a skill that determines work speed, only Intellectual.

Tissue grinder is locked behind the Genetic Alteration research project.

Tissue grinder requires 110 steel and 3 components to make.

Dimensions: **3x2** with an interaction cell in the middle of the longer edge.

Work driver falls under ‘Genetics’ work priority category.

Tissue grinder has a bill for each of the genoframe quality levels. First bill uses animal corpses (Any).

Bill: Create Genoframe (Awful)
Skill Used: Intellectual skill.
Requires: Animal Corpse (literally any).
Result: Genoframe (Awful)
Description: Create an awful quality genoframe from an animal corpse.

Bill: Refine Genoframe (Poor)
Skill Used: Intellectual skill.
Requires: 2x Genoframe (Awful).
Result: Genoframe (Poor)
Description: Create a poor quality genoframe from two awful quality genoframes.

Bill: Refine Genoframe (Normal)
Skill Used: Intellectual skill.
Requires: 2x Genoframe (Poor).
Result: Genoframe (Normal)
Description: Create a normal quality genoframe from two poor quality genoframes.

Bill: Refine Genoframe (Good)
Skill Used: Intellectual skill.
Requires: 2x Genoframe (Normal).
Result: Genoframe (Good)
Description: Create a good quality genoframe from two normal quality genoframes.

Bill: Refine Genoframe (Excellent)
Skill Used: Intellectual skill.
Requires: 2x Genoframe (Good).
Result: Genoframe (Excellent)
Description: Create an excellent quality genoframe from two good quality genoframes.

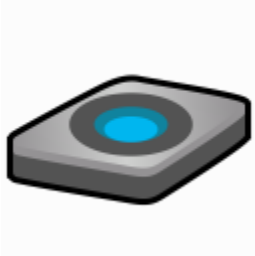
Bill: Refine Genoframe (Masterwork)
Skill Used: Intellectual skill.
Requires: 2x Genoframe (Excellent).
Result: Genoframe (Masterwork)
Description: Create a masterwork quality genoframe from two excellent quality genoframes.

Bill: Refine Genoframe (Legendary)
Skill Used: Intellectual skill.
Requires: 2x Genoframe (Masterwork).
Result: Genoframe (Legendary)
Description: Create a legendary quality genoframe from two masterwork quality genoframes.

GENOFRAMES

A **Genoframe (Awful)** can be crafted on the **Tissue Grinder** using a single animal corpse. Each consecutive level of genoframe requires **two of the previous genoframes** to craft. This will allow players to control their supply of genoframes using the bills menu.

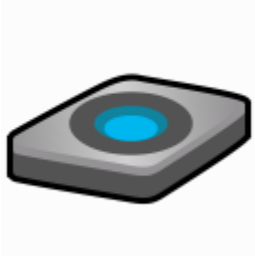
Each genoframe is a separate item, as follows:



Genoframe (Awful)

Market value: 50
Description: "*A stable genetic material consumed by the genepod machine that serves as a framework for hybrid experimentation. After the framework is used to create a growthcell, the genoframe is empty and discarded.*

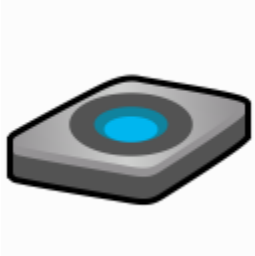
Awful genoframe will result in a hybrid with greatly decreased stats over a normal hybrid."



Genoframe (Poor)

Market value: 100
Description: "*A stable genetic material consumed by the genepod machine that serves as a framework for hybrid experimentation. After the framework is used to create a growthcell, the genoframe is empty and discarded.*

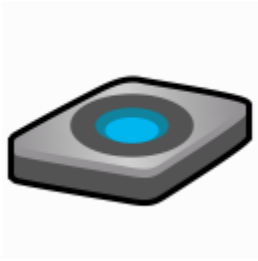
Poor genoframe will result in a hybrid with slightly decreased stats over a normal hybrid."



Genoframe (Normal)

Market value: 200
Description: "*A stable genetic material consumed by the genepod machine that serves as a framework for hybrid experimentation. After the framework is used to create a growthcell, the genoframe is empty and discarded.*

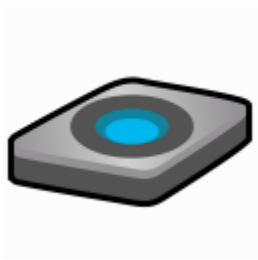
Normal genoframe will result in a hybrid with baseline stats."



Genoframe (Good)

Market value: 400
Description: "*A stable genetic material consumed by the genepod machine that serves as a framework for hybrid experimentation. After the framework is used to create a growthcell, the genoframe is empty and discarded.*

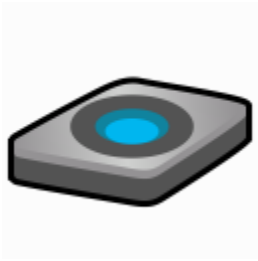
Good genoframe will result in a hybrid with slightly improved stats over a normal hybrid."



Genoframe (Excellent)

Market value: 800
Description: "*A stable genetic material consumed by the genepod machine that serves as a framework for hybrid experimentation. After the framework is used to create a growthcell, the genoframe is empty and discarded.*

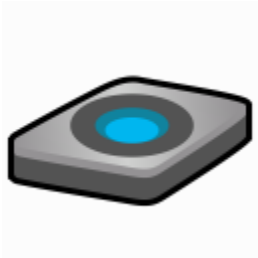
Excellent genoframe will result in a hybrid with significantly improved stats over a normal hybrid."



Genoframe (Masterwork)

Market value: 1600
Description: "*A stable genetic material consumed by the genepod machine that serves as a framework for hybrid experimentation. After the framework is used to create a growthcell, the genoframe is empty and discarded.*

Masterwork genoframe will result in a hybrid with superior stats over a normal hybrid."



Genoframe (Legendary)

Market value: 3200
Description: "*A stable genetic material consumed by the genepod machine that serves as a framework for hybrid experimentation. After the framework is used to create a growthcell, the genoframe is empty and discarded.*

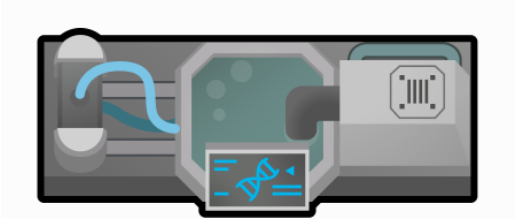
Legendary genoframe will result in an incredibly powerful hybrid that's eclipsing normal creatures."

Genoframe also has a separate 'Unfinished Genoframe' object, as merging genoframes is something that requires quite a lot of work, and as such the item can be put back in storage and then picked up and finished the next day.

GENOME EXTRACTOR

Genoframes don't make hybrids by themselves. Player needs to obtain genomes. Those can either be purchased from the Genetics Supplies trader, acquired from Abandoned Labs, or extracted using the Genome Extractor Table.

GENOME EXTRACTOR TABLE



"A specialized extraction module that is equipped to extract the genomes from a subject's corpse. The material is converted into a soupish-mixture which is then condensed into the relevant genome. Processing speed is influenced by intelligence, as it relies on knowing which button to press, when to press it and where to find it under the intimidating number of submenus."

Genome extractor is a table responsible for extracting genomes of various kinds from animal corpses. While the process does take a lot of work (2500), the speed of work scales with Intellectual skill. It does NOT use Crafting as a skill that determines work speed, only Intellectual. It requires 6 in that skill.

Genome extractor requires 100 steel and 3 components to make.

Genome extractor is locked behind the Genetic Alteration research project.

Work driver falls under the 'Genetics' work priority category.

Genome extractor uses normal bills, thus allowing people to select their desired genome count using the bills menu.

There is a bill for every single type of tier 1 genome that can be extracted. These bills use a whitelisted Defs of animal corpses that are accepted. Tier 2 or above genomes need to be extracted with Genome Excavators

BILLS

Bill: Extract Ursine genome
Skill Used: Intellectual skill.
Requires: Animal Corpse (See specific genome lists).

Result: Ursine genome
Description: Extract the genetic material of a bear.

Bill: Extract Boom genome
Skill Used: Intellectual skill.
Requires: Animal Corpse (See specific genome lists).
Result: Boomine genome
Description: Extract the genetic material of an explosive animal.

Bill: Extract Avian genome
Skill Used: Intellectual skill.
Requires: Animal Corpse (See specific genome lists).
Result: Avian genome
Description: Extract the genetic material of a bird.

Bill: Extract Feline genome
Skill Used: Intellectual skill.
Requires: Animal Corpse (See specific genome lists).
Result: Feline genome
Description: Extract the genetic material of a cat.

Bill: Extract Muffalo genome
Skill Used: Intellectual skill.
Requires: Animal Corpse (See specific genome lists).
Result: Muffalo genome
Description: Extract the genetic material of a muffalo.

Bill: Extract Rodent genome
Skill Used: Intellectual skill.
Requires: Animal Corpse (See specific genome lists).
Result: Rodent genome
Description: Extract the genetic material of a rodent.

Bill: Extract Canine genome
Skill Used: Intellectual skill.
Requires: Animal Corpse (See specific genome lists).
Result: Canine genome
Description: Extract the genetic material of a wolf.

GENOMES

Every animal hybrid in genetic Rim consists of a sequence of genomes. As explained later, they can be either primary or secondary. The following is the list of all genomes, and what animals can be used to extract those.

Ursine genome (Tier 1)

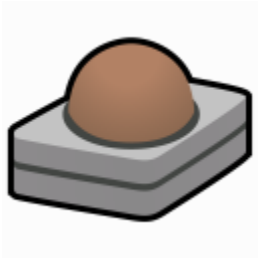
Description: *"A payload of ursine genetic material. Can be used at the genepod to create a growth cell of a hybrid animal. Can be used as either a primary or secondary genome."*
Made from: Grizzly Bear, Polar Bear
Unique trait of all Ursine hybrids: Increased body size. Attacks by this creature have a chance to stun.

Boom genome (Tier 1)

Description: *"A payload of boom genetic material. Can be used at the genepod to create a growth cell of a hybrid animal. Can be used as either a primary or secondary genome."*
Made from: Boomrat, Boomalope
Unique trait of all Boomine hybrids: Always explodes on death. Produces chemfuel if it's a farm animal. If it's a combat animal, it can be detonated on command by using a special gizmo, or has a ranged fire attack

Avian genome (Tier 1)

Description: *“A payload of avian genetic material. Can be used at the genepod to create a growth cell of a hybrid animal. Can be used as either a primary or secondary genome.”*
Made from: Chicken, Turkey, Ostrich, Emu, Cassowary, Duck, Goose
Unique trait of all avian hybrids: All primary avian hybrids produce eggs. Combat avian hybrids get a movement speed increase.



Feline genome (Tier 1)

Description: *“A payload of feline genetic material. Can be used at the genepod to create a growth cell of a hybrid animal. Can be used as either a primary or secondary genome.”*
Made from: Cougar, Panther, Lynx, Cat
Unique trait of all Feline hybrids: All Feline hybrids have an inherent dodge chance.

Humanoid genome (Tier 1)

Description: *“A payload of human genetic material. Can be used at the genepod to create a growth cell of a hybrid animal. Can be used as either a primary or secondary genome.”*
Made from: Humans
Unique trait of all Human hybrids: All humanoid hybrids have a somewhat decent level of intelligence and can do various new tasks around the colony. Humanoid hybrids can talk... more or less, and will periodically discuss interesting topics with colonists, increasing their Social joy by 0.1.

Muffalo genome (Tier 1)

Description: *"A payload of muffalo genetic material. Can be used at the genepod to create a growth cell of a hybrid animal. Can be used as either a primary or secondary genome."*
Made from: Muffalo, Yak, Bison
Unique trait of all Muffalo hybrids: All muffalo-gene animals are pack animals. They also have an increase to minimum comfortable temperature.

Rodent genome (Tier 1)

Description: *"A payload of rodent genetic material. Can be used at the genepod to create a growth cell of a hybrid animal. Can be used as either a primary or secondary genome."*
Made from: Hare, Snow hare, Squirrel, Alpha beaver, Capybara, Chinchilla, Raccoon, Rat, Guinea Pig
Unique trait of all Rodent hybrids: Reduced bodySize, increased reproduction rates (if fertile)

Canine genome (Tier 1)

Description: *"A payload of canine genetic material. Can be used at the genepod to create a growth cell of a hybrid animal. Can be used as either a primary or secondary genome."*
Made from: Timber Wolf, Arctic Wolf, Warg, Yorkshire Terrier, Husky, Labrador Retriever, Fennec

Fox, Red Fox, Arctic Fox
Unique trait of all Canine hybrids: All canine hybrids have an increase to attack speed.

Reptile genome (Tier 2)

Description: *"A payload of reptile genetic material. Can be used at the genepod to create a growth cell of a hybrid animal. Can be used as a primary genome."*
Made from: Turtle, Cobra
Unique trait of all Reptilian hybrids: All reptile hybrids have greatly increased minimum and maximum comfortable temperature. They also have melee and ranged venomous attacks

Insectoid genome (Tier 2)

Description: *"A payload of insectoid genetic material. Can be used at the genepod to create a growth cell of a hybrid animal. Can be used as a primary genome."*
Made from: Megascarab, Spelopede, Megaspider
Unique trait of all Insectoid hybrids: All hybrids with insectoid genome get 100% toxic resistance as well as an armor increase. Combat hybrids get a further increase to armor.

Equine genome (Tier 2)

Description: *"A payload of equine genetic material. Can be used at the genepod to create a*

growth cell of a hybrid animal. Can be used as a primary genome."
Made from: Horse, Donkey, Dromedary
Unique trait of all Equine hybrids: Can be ridden in caravans. All equine hybrids are good for caravaning. A caravan with one of them needs a shorter resting period, only stopping to rest between 23:30 PM and 4 AM.

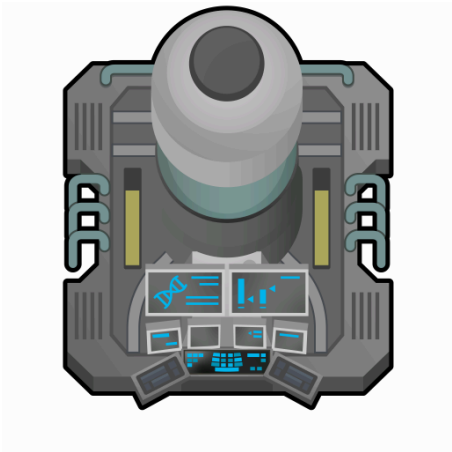
Colossal genome (Tier 3)

Description: *"A payload of colossal genetic material. Can be used at the genepod to create a growth cell of a hybrid animal. Can be used as a primary genome."*
Made from: Thrumbo
Unique trait of all Colossal hybrids: Extreme increase in size, HP amount, damage and Market Value at the cost of slower attack speed.

GENOMORPHER AND GROWTH CELLS

When the player starts obtaining genomes and genoframes, a genepod is required to start growing growth cells.

GENOMORPHER



"A machine where the miracle - or horror - of birth happens using automated procedures, a little genetic hand-waving and a great heaping dose of lost sleep. The inserted Genoframe is

influenced by two genomes, one dominant and one recessive, and can be modified with optional boosters.\n\nThe process isn't perfect, due to material contamination, missing chromosomes or simple bad luck, and can result in something completely unwanted being developed. For the machine, it makes no difference whether it's trying to grow an animal or a comically large fruit. The resulting growth cell has a limited lifespan as the embryonic fluid will start breaking down if not allowed to gestate properly."

Genomorpher is a structure that autonomously creates growth cells from genomes, genoframes and boosters. It uses intricate, custom UI to initiate the process and allow players to tailor the hybrid to their liking as well as be informed of the risks and the resources required.

Genomorpher is locked behind the Genetic Creation research project.

Work driver falls under the 'Genetics' work priority category.

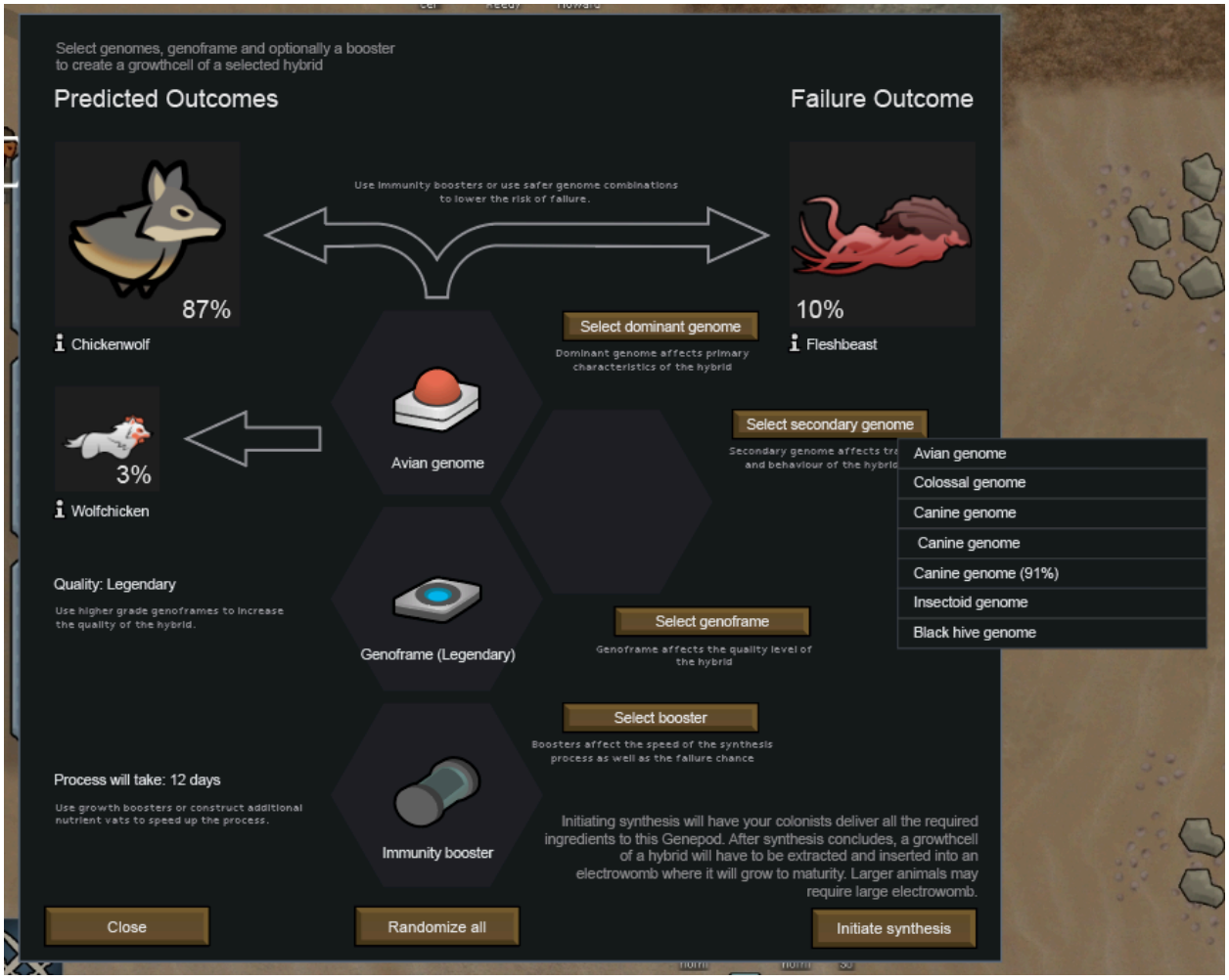
The process takes 3 days by default.

Genomorpher requires 200 steel and 6 components to make.

Dimensions: **5x5** with an interaction cell in the middle.

This structure has two progress bars on each side of the main vat, but they are linked and display the same progress.

GENOMORPHER USER INTERFACE



Genomorpher user interface contains a large amount of vital information the player needs to access. It will be broken down below, going from top to bottom.

Predicted Outcomes

This section displays two animals that can come out in growth cells. The first animal is located in a big square box and has the highest chance of appearing, while the second animal appears in a smaller box and has less chance of appearing. These boxes show the sprite of an animal (east view), as well as a big percentage number. There is an animal name underneath with an information button taking the player to the detailed description of the animal. *The entirety of the percentage calculations will be described in the section below.*

If there is no hybrid that meets the criteria (for example, the player selects X primary genome and Y secondary genome, but we don't have an animal with such a crafting recipe), it doesn't show anything as a result and does not let the player continue.

Failure Outcome

This section displays a failure outcome. The animal is located in a big square box. This box shows

the sprite of an animal (east view), as well as a big percentage number. There's an animal name underneath with an information button taking the player to the detailed description of the animal. *The entirety of the percentage calculations as well as possible risks will be described in the section below.*

DNA Chain
This section shows a DNA chain of the hybrid. Player can access the buttons on the right hand side to change what genomes, genoframes and boosters are used in creation of this hybrid. The list that appears when the player selects 'Select dominant genome' etc pulls data from player stockpiles and shows all genomes the player has.

Quality section
This section shows the player what quality the hybrid will come out as.

Process will take section
This section tells the player how long the process will take between clicking 'Initiate synthesis' and the genomorpher producing the growth cell.

Randomize all
This button allows the player to randomize all the inputs using the possible items in player stockpiles.

Initiate synthesis
When a player initiates synthesis, genomorpher can no longer be accessed. Instead, it displays the progress level, and on the info card in the bottom left corner it states time left. For obvious reasons we don't want to display what will come out, as it's still left to chance.

GENOMORPHER CALCULATIONS

So we know that mixing two genomes can yield two different hybrids, but do we know how these percentages are calculated?

The system is actually very simple.

The dominant genome has a 10% base chance to turn into a secondary genome and make the secondary genome a dominant genome (essentially, a swap).

There is a 10% base chance of a failed outcome.

You can check Failure Outcomes by following the hyperlink.

Then, boosters and genoframes each contain xml tags that can alter these chances. Those two xml tags are called:

<stability>5<stability>
Stability is a number that gets deducted from the swap chance. For example, stability 5 means that the base chance of the genes swapping turns from 10% to 5% (becoming more stable). This value can also be negative, which will mean the chance of genomes swapping their positions and resulting in an unwanted hybrid are larger.

<safety>10<safety>
Safety is a number that gets deducted from the Failed outcome chance. For example, safety 5 reduces the risk of the failed outcome by 5% (from 10% to 5%). This value can also be negative, increasing the risk of a failed experiment.

Each hybrid added by this mod will have to have tags that represent the required combinations. For example, the following tags can appear in Wolfchicken xml:

<dominantGenome>GR_CanineGenetic</dominantGenome>

<secondaryGenome>GR_AvianGenetic</secondaryGenome>

This means that if the end result meets the criteria (dominant genome has been detected as canine, secondary genome has been detected as avian), it then creates a growth cell for that hybrid (inheriting the quality from the genoframe used). After the growth cell is created, resources used to create the hybrid are gone.

If in any case the Genomes inserted don't result in an actual hybrid based on all the hybrid 'recipe tags', the **process can't continue.**

If the process of synthesis completes, the genomorpher will automatically produce a growth cell of that specific hybrid. Growth cells don't stack, and they list out the ingredients used to create it.

GROWTH CELL

Not tradeable
Description: "A portable, human-made casing designed to hold an embryo until it is transferred to a relevant Electrowomb, similar to fertilized eggs that require incubation. The embryonic fluid is

unstable due to the unnatural genetic combination, so it will need to be implanted within 7 days after its creation.”

Growth cell contains the embryo of a hybrid that then needs to be inserted in an electrowomb. The size of the electrowomb depends on the body size of an adult hybrid. Anything less than 1 bodySize can use the normal electrowomb, whilst anything more than 1 bodySize requires a large electrowomb.

Growth cells spoil by themselves,, and their lifespan is 7 days. If they are not inserted in electrowomb by then, they deteriorate and disappear. They have to be kept at a temperature between 0 and 50 degrees Celsius.

Growth cell contains all the information about what genomes were used to create it. You can see them on inspect panel.

ELECTROWOMBS

Electrowombs are vat-like machines that simulate the womb of an animal and can adjust their temperature, humidity and the likes based on the type of growth cell inside. They allow growth cells to develop into actual hybrids. Electrowombs come in two sizes, depending on the size of the hybrid you might need to use the larger electrowomb.

It’s at the electrowomb stage that the mod determines whether the growth cell spawns a Failure or not, based on the ingredients of the Growth Cell, as well as whether it spawns the intended hybrid or flips the result.

Please note: Hybrids have a special tag that determines whether they require a large electrowomb. If you insert a growth cell into a small electrowomb, and the game selects a hybrid that would normally require a large electrowomb, **it spawns a failure outcome instead! But it DOESN’T tell the player it’s a failure until the womb has finished growing the hybrid.**

Example: *You create a growth cell using Chicken as primary genome and Wolf as secondary genome. The Chickenwolf has the highest chance of being the outcome, so you put it in a small growth cell (because Chickenwolf is small). Unfortunately, the game decided that the genomes should flip, and it grows a Wolfchicken instead. Because it’s a small electrowomb, Wolfchicken won’t fit, and as such, the game spawns an Aberrant Fleshbeast instead.*

Electrowombs are described below:

ELECTROWOMB

“A relatively small machine designed to simulate the environment of a mother’s womb. Once a Growthcell has been inserted, the embryo can start growing all the way to its adult life stage before being released. Provides limited growing room for specimens.”

Electrowomb is a small, 1x1 structure that allows a Growthcell to grow into an animal hybrid. The moment the growth cell is inserted into an electrowomb, electrowomb displays the outcome hybrid with a very small drawsize, that over time grows to a desired adult size of the animal.

The small electrowomb will only properly grow small hybrids, with a body size of 1 or smaller. It is however very cheap to build.

Electrowomb is locked behind the Genetic Creation research project.

Work driver falls under the ‘Genetics’ work priority category.

This structure has a progress bar on the bottom, underneath the vat tank.

This structure cannot be rotated and always faces the same direction. The hybrids in it always face south.

Electrowomb requires 15 steel and 1 component to make.

Dimensions: **1x1**. Can be interacted with from any side.

If the player right-clicks a growth cell with a pawn anywhere on the map, an option to *Insert into an Electrowomb* appears, which when selected, will have that pawn insert the growth cell into the closest electrowomb.

LARGE ELECTROWOMB

“A larger machine designed to simulate the environment of a mother’s womb. Once a Growthcell has been inserted, the embryo can start growing all the way to its adult life stage before being released. Provides more growing room for larger specimens.”

Large Electrowomb is a large, 2x2 structure that allows a Growthcell to grow into an animal hybrid. The moment the growth cell is inserted into an electrowomb, electrowomb displays the outcome hybrid with a very small drawsize, that over time grows to a desired adult size of the animal.

Large electrowomb supports growing bigger hybrids.

Electrowomb is locked behind the Genetic Creation research project.

Work driver falls under the ‘Genetics’ work priority category.

This structure has a progress bar on the bottom, underneath the vat tank.

This structure cannot be rotated and always faces the same direction. The hybrids in it always face south.

Large Electrowomb requires 120 steel and 4 components to make.

Dimensions: **2x2**. Can be interacted with from any side.

If the player right-clicks a growth cell with a pawn anywhere on the map, an option to *Insert into a large Electrowomb* appears, which when selected, will have that pawn insert the growth cell into the closest large electrowomb.

GENOME RECOMBINATOR

Players can construct a Genome recombinator to mix various unused genetic material into alternatives.

GENOME RECOMBINATOR

“A specialized extraction module that is equipped to extract the genomes from a subject’s corpse. The material is converted into a soupish-mixture which is then condensed into an extremely complex genome. Completely useless by itself, but functions as a template which can be compared to another genome. The procedure removes any excess genetic information and renders them completely identical.”

This machine uses the bills menu. The first recipe accepts up to 100Kg of animal corpses, producing a template genome.

Players can then duplicate a genome that they have using the new template genome. Such a recipe requires that specific genome plus the template genome, and yields two of that specific genome.

Genome recombinator is locked behind the Genetic Duplication research project.

Genome recombinator requires 140 steel, 6 advanced components and 60 gold to make.

Dimensions: **3x2** with an interaction cell in the middle of the longer edge.

Work drivers fall under the ‘Genetics’ work priority category.

Bill: Duplicate Ursine genome
Skill Used: Intellectual skill.
Requires: Ursine genome, Template genome.
Result: 2x Ursine genome
Description: Duplicate the genome using a blank template.

...(etc)

TEMPLATE GENOME

Market value: 400
Description: "*Absolutely and completely worthless, but when properly processed alongside an actual genome it can be trimmed down to an identical copy.*"

Template genome is an empty payload of genetic connections that can be imprinted by any other genome. It then duplicates the similar DNA relations and essentially clones the genome. It's created on the Genome Recombinator by inserting a **100 kg** worth of animals into the Genome Recombinator (any surplus of mass is wasted).

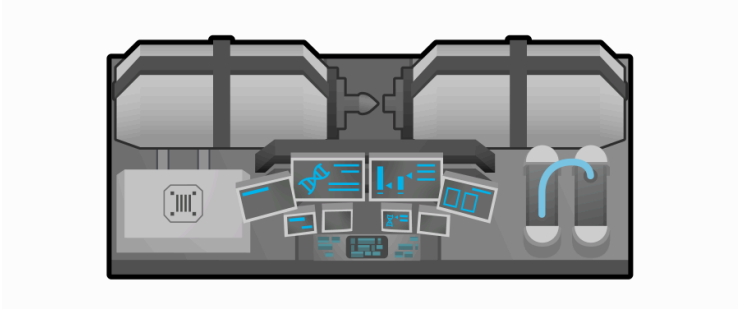
INSECTOID GENOMES (VFE-I)

If the Vanilla Factions Expanded - Insectoids mod is found, Warrior, Drone and Royal genomes can also be created in a similar manner, using two insectoid genomes. The Bio-engineering lab also becomes craftable.

GENETICS TINKERING TABLE

Players can construct a brand new workbench (that's similar to Mechanoid Tinkering Table) that allows them to construct various types of boosters, as well as craft other items that perhaps might be required by this mod.

GENETICS TINKERING TABLE



“An advanced and specialized workbench capable of manufacturing medical-grade implants and mixing genetic boosters specifically tuned to Genomorphers. These include but aren’t limited to boosters that improve the safety or stability of hybrids and even micro-controllers that enable direct user-input.”

This table is a workbench, 5x2 in size. It has a bills menu that allows players to, well, do bills. It is used to primarily create boosters, but other items that are a part of this mod will also be craftable here.

Genetics Tinkering Table is locked behind the Genetic Creation research project.

Genetics Tinkering Table requires 210 steel, 6 components and 2 advanced components to make.

Dimensions: **5x2** with an interaction cell in the middle.

Work drivers fall under the ‘Genetics’ work priority category.

Bill: Craft Immunobooster
Skill Used: Intellectual skill.
Requires: 1 neutroamine, 5 steel.
Result: 1x Immunobooster
Description: Craft an immunobooster.

Bill: Craft 5x Immunobooster
Skill Used: Intellectual skill.
Requires: 5 neutroamine, 10 steel.
Result: 5x Immunobooster
Description: Craft immunoboosters in bulk.

Bill: Craft Harmonobooster
Skill Used: Intellectual skill.
Requires: 1 chemfuel, 5 steel.
Result: 1x Harmonobooster
Description: Craft a harmonobooster.

Bill: Craft 5x Harmonobooster
Skill Used: Intellectual skill.
Requires: 5 chemfuel, 10 steel.
Result: 5x Harmonobooster
Description: Craft harmonoboosters in bulk.

Bill: Craft Tempobooster
Skill Used: Intellectual skill.
Requires: 1 insect jelly, 5 steel.
Result: 1x Tempobooster
Description: Craft a tempobooster.

Bill: Craft 5x Tempobooster
Skill Used: Intellectual skill.
Requires: 5 insect jelly, 10 steel.
Result: 5x Tempobooster
Description: Craft tempoboosters in bulk.

Bill: Craft Fertility Unblocker
Skill Used: Intellectual skill.
Requires: 1 medicine, 5 steel.
Result: 1x Fertility Unblocker
Description: Craft a fertility unblocker.

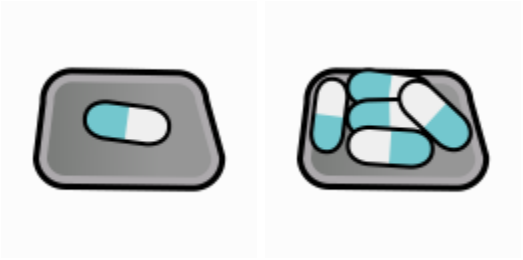
Bill: Craft 5x Fertility Unblocker
Skill Used: Intellectual skill.
Requires: 5 medicine, 10 steel.
Result: 5x Fertility Unblocker
Description: Craft fertility unblockers in bulk.

Bill: Craft Stabilizator
Skill Used: Intellectual skill.
Requires: 1 Immunobooster, 1 Harmonobooster.
Result: 1x Stabilizator
Description: Craft a stabilizators.

Bill: Craft 5x Stabilizators
Skill Used: Intellectual skill.
Requires: 5 Immunobooster, 5 Harmonobooster.
Result: 5x Stabilizator
Description: Craft stabilizators in bulk.

Bill: Craft Controller
Skill Used: Intellectual skill.
Requires: 1 Advanced Component.
Result: 1x Controller
Description: Craft a controller.

Bill: Craft 5x Controllers
Skill Used: Intellectual skill.
Requires: 5 Advanced Component
Result: 5x Controller
Description: Craft controllers in bulk.



IMMUNOBOOSTER

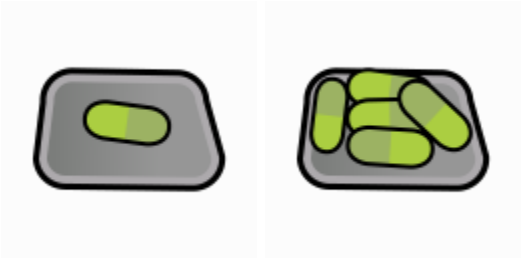
Market value: 20
Description: "*Capsules containing genetic restorative medicine that helps prevent genomes from breaking down prematurely. Effectively helps mitigate the possibility of the hybrid ending in complete failure.*"
<safety>5</safety>

Immunobooster is a basic booster that increases the safety of the genetic experiment by 5 points.

HARMONOBOOSTER

Market value: 12
Description: "*Capsules containing genetic stabilizers that help maintain the dominant-recessive genome relationship. Effectively reduces the chance of the hybrid having the opposite intended result.*"
<stability>5</stability>

Harmonobooster increases the stability of your experiment by 5 points.



TEMPOBOOSTER

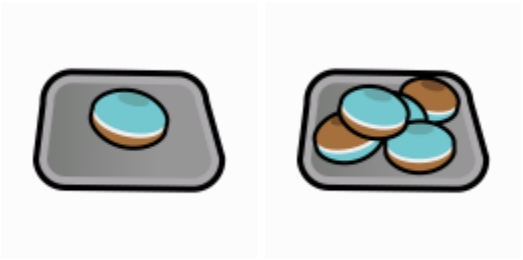
Market value: 18
Description: "*Capsules containing growth hormones that help speed up the hybrid's growth process, halving the time it takes to complete.*"
How much shorter is the process: 50%

Tempobooster speeds up the process of creation of a growth cell.

FERTILITY UNBLOCKER

Market value: 28
Description: "*Compressed medicine that allows hybrids to develop functional sexual organs. Effectively allows hybrids to reproduce with the exact same species.*"
Animals can be impregnated by another animal of the exact same species/can impregnate.

The Fertility Unblocker allows animals to reproduce without the need of growing new hybrids in electrowombs.



STABILIZATOR

Market value: 32
Description: "*Compressed medicine that slows the growth of the specimen, increasing both stability and safety. Effectively increases growth time by 50% in exchange for a vastly increased chance of obtaining the intended result.*"
<stability>10</stability>
<safety>10</safety>
How much longer is the process: 50%

Stabilizator increases safety and stability of the process drastically, but also increases the length of it.

CONTROLLER

Market value: 220
Description: "*Self-assembling machinery that fuses with the specimen's nerve centers during the growth process. Effectively allows hybrids to be drafted but increases the chance of failure due to introduction of invasive foreign material.*"
Animals can be drafted and directly controlled.
<safety>-5<safety>

Controller implants the hybrid with a special module that allows the animal to be drafted and directly ordered around.

GENOME EXCAVATORS

Since hybrids are divided into three separate tiers, a traditional Genome Extractor bench simply isn't enough to obtain Tier 2 or Tier 3 genomes.

Tier 2 genomes are:

- Equine
- Insectoid

- Reptile

Tier 3 genomes are:

- Colossal

In order to extract genomes of a horse, insectoid or reptile, a player needs to craft a special item.


GENOME EXCAVATOR

“A simplified genome extraction device designed to be usable by even the most simple-minded goon, as such it resembles a caulking gun that works in reverse. The best genetic material can be found in the brain and the automated, single-use design instantly compresses this material into a usable genome.\n\nThe desired subject needs to be docile and trusting of the user who intends on scooping out their brain in a process that is not-quite instantaneous, but don’t let that stop you. Alternatively, it will also work on a dead body...”

Genome Excavator is an artifact-type item. It is used by selecting a pawn, right clicking on the excavator, thus allowing it to be used on an animal that would drop a genome of tier 2 (it will also extract tier 1). When you select the Excavate Genome drop, you pick a creature within 2 tiles around the user. The animal needs to be either tamed OR dead. Wild animals don’t work.

A satisfying ‘Thump’ sound plays and the creature’s brain is destroyed, dropping the genome on the ground next to it.

Genome Excavator is locked behind the Genetic Alteration research project.

It requires 40 steel and 1 component to make.

It is a single use item that disappears upon being used.

ARCHOTECH GENOME EXCAVATOR

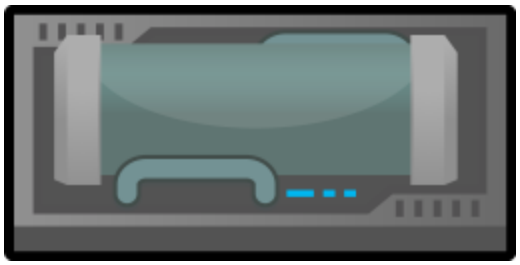
“An advanced genome extraction device that is capable of self-arming and self-guiding at the touch of a button. The best genetic material can be found in the brain and the automated design instantly compresses this material into a usable genome. Each device holds up to three charges before it becomes useless.\n\nThe desired subject needs to be docile and trusting of the user who intends on scooping out their brain in a process that is guaranteed to be painless and instantaneous. The device is much better at compressing material and as such can be used on even the largest of organisms.”

Archotech Genome Excavator is an artifact-type item. It unlocks a special gizmo that allows it to be used on ANY animal that would drop a genome of tier 2 or **3** (it will also extract tier 1). When you select the Excavate Genome gizmo, you pick a creature within 2 tiles around the user. The animal needs to be either tamed OR dead. Wild animals don’t work.

A satisfying ‘Thump’ sound plays and the creature’s brain is destroyed, dropping the genome on the ground next to it.

Archotech Genome Excavator is not craftable and can only be found in abandoned lab complexes.

It has 3 charges before it is destroyed.



NUTRIENT VAT

“A slurry of liquefied organic pulp fills this reinforced glass vat. This solution is used by genetic experiments, and increases work speed when placed near a genetics machine. One workbench can use up to two nutrient vats.”

The nutrient vat is basically a tool cabinet that accelerates the processing of genetic workbenches by 6%. You can link up to 2.

Nutrient vat is locked behind the Genetic Alteration research project.

Nutrient vat requires 75 Steel to make. (less than a cabinet since it has much less use)

INCIDENTS

ROAMING MONSTROSITIES

Packs of roaming, maddened hybrids can attack the player colony. This incident picks up any hybrids (not failures) and sets them as manhunters.

The incident is independent from the storyteller’s loop, so these “raids” won’t count as a real raid, adding more threat to the mod and an extra reason to create all these wacky animals.

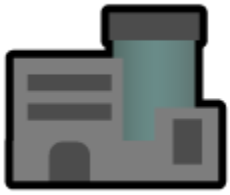
Some of the roaming packs will be easy as pie, while others will be hard as nails, it’s completely random.

The strength of the roaming packs will be ½ that of an equivalent manhunter pack, calculated by the hybrid’s combat power.

All hybrids will be afflicted by Greater Scaria.

QUESTS

A new quest is a part of this mod. It takes the player to an ancient laboratory, where some experiment has gone wrong. Players will face manhunting hybrids and explore dark, gloomy labs looking for equipment, genoframes, genome and even Archocentipede Project fragments.



ABANDONED LAB

This quest takes the player to a pre-exported location that looks like a large laboratory, where something has gone wrong.

Laboratory will be littered with debris as well as ‘Ancient’ variants of the new machines we’re adding in this mod. For example, Ancient Genomorpher, Ancient electrowomb etc. Those can’t be uninstalled and no longer work - can only be destroyed. They produce a bit of Steel when destroyed, but no components, so they aren’t the main attraction of the quest.

Some of the equipment in the lab, however, should still be operational. Players can also find Archocentipede Project structures, such as the DNA Storage Banks, Archocentipede Former and Archowombs. Those can all be uninstalled and taken back to the base.

The lab also has different genoframes, genomes, boosters etc littered around the place.

The lab is defended by a small number of completely random hybrids, all manhunting. They can be literally any hybrid - from small Chickencats to huge Thrumbears.

ANCIENT STRUCTURES

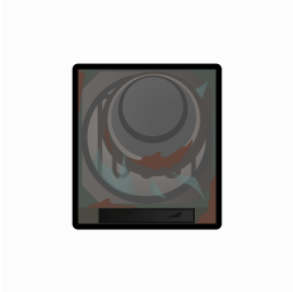
There is a small number of ancient variations to all the structures we’re adding in this mod - this allows us to come up with unique abandoned lab designs that the player ventures to as part of the quest.

These are no longer functional and can only be deconstructed for parts.

ANCIENT GENOMORPHER

“A Genomorpher that has fallen into complete disrepair, some salvage still remains.”

An ancient, no longer functioning genomorpher.



ANCIENT ELECTROWOMB

“This device has collapsed in on itself, rendering it useless.”

An ancient, broken down electrowomb. All the fluid has already dried up.

ANCIENT LARGE ELECTROWOMB

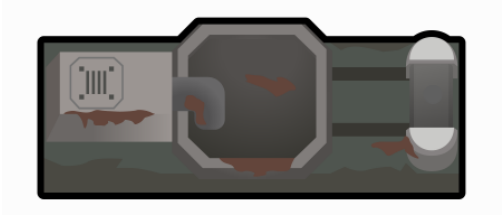
“The exterior shell has completely fallen apart, yet it seems that it exploded instead of imploded.”

A very ancient large electrowomb with cracked glass around it.

ANCIENT TISSUE GRINDER

“The machinery and electronics are irreparable but could be broken down for scrap.”

A very ancient tissue grinder, broken down.



ANCIENT GENOME EXTRACTOR

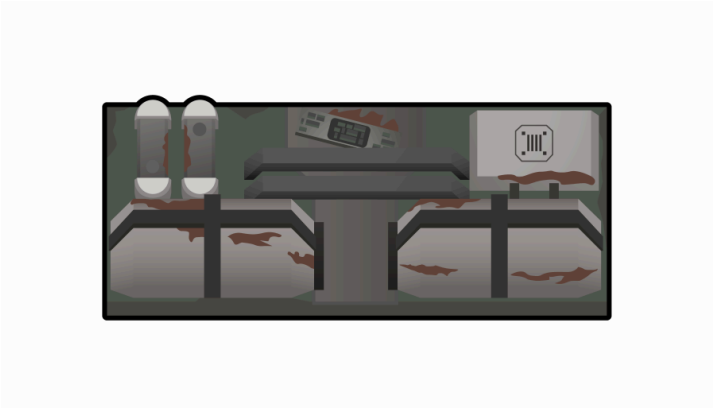
“Lacking proper maintenance for so long, this machine is rusted shut.”

An old, damaged, destroyed genome extractor.

ANCIENT GENOME RECOMBINATOR

“A very old recombinator that somehow possesses an awful stench and excessive mould.”

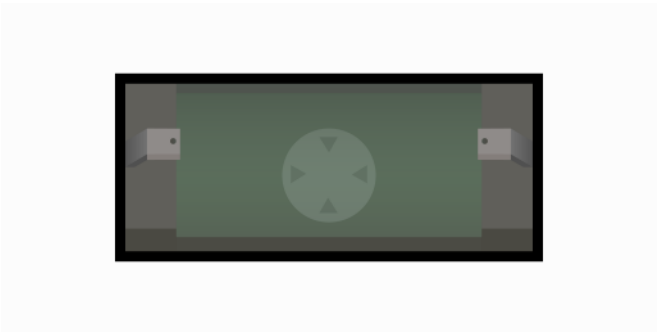
A very old and minging genome recombinator.



ANCIENT GENETICS TINKERING TABLE

“Most of the useful and otherwise functional parts are missing, indicating intentional sabotage.”

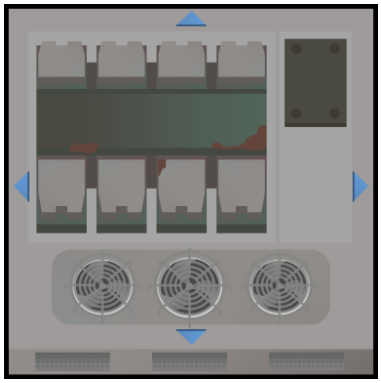
A broken down, old genetics tinkering table.



ANCIENT MICROBIOBATTERY

“A very efficient battery that has somehow managed to survive for so long without maintenance, purpose-built to power genome storage rooms.”

A 1x1 small ancient battery, placed around the ancient cryofreezer units. It can’t be uninstalled or picked up. It has the same capacity as a normal battery, and always starts off fully charged.



ANCIENT CRYOFREEZER

“A super-charged air-conditioning unit designed for its intended purpose of preventing genomes from breaking down entropically. Unfortunately, that temperature is also beyond the comfort range of almost all organic life but it can no longer maintain the desired output of approaching absolute zero.”

A 3x3 freezer block that does not expel heat, but instead releases arctic-cool air all around itself. We’re talking -100 or -200 degrees temperature. It’s risky walking into such a room with a freezer like this, but any genomes that survived the test of time will be in such a room.

AND SO MANY MORE!

You will find a lot more fluff in these labs, including ruined versions of the old Genetic Rim buildings, retextured and adapted.

RESEARCH PROJECTS

A number of new research projects become available with this mod and players are required to research them in order to unlock the various elements of genetic engineering.

GENETIC ALTERATION

“Craft the Tissue Grinder and Genome Extractor Table to create genoframes and genomes respectively.”

Unlocks: Tissue Grinder, Create genoframe bills, Genome Extractor table, Extract genome bills,

GENETIC DUPLICATION

“Manufacture Template Genomes through the Genome Recombinator and duplicate existing Genomes.”

Unlocks: Genome Recombinator, Genome duplication bills,

GENETIC CREATION

“Create new hybrids with the Genomorpher, gestate them in an Electrowomb and create boosters at the Genetics Tinkering Table.”

Unlocks: Genomorpher, Genetics Tinkering Table, Electrowomb, Large Electrowomb

GENETIC AUGMENTATION

“Grow bio-engineered implants for hybrids and animals alike on the Implant Augmentator.”

Unlocks: Implant Augmentator, Implants for Animals

GENETIC COMPATIBILITY

“Grow bio-engineered implants for humans on the Implant Augmentator.”

Unlocks: Implants for Humans

GENETIC MECHAHYBRIDIZATION

“Create Biomechanical Lab beacons to find mechahybridizers, and construct mechahybrid antennas to support more mechanoid hybrids.”

Unlocks: Mechahybrid Antenna, Biomechanical Lab beacon

FAILURE OUTCOMES

This mod has a number of unique failure outcomes tied to the percentage chance of the failed outcome. These failure outcomes are explained below:

FLESHLING

*Is a guaranteed failure outcome if failure chance is between **1%** and **5%**.*

“Something went terribly wrong. This wretched creature is struggling to keep breathing. Whilst it doesn’t pose any real threat and it seems quite friendly, it requires a tremendous amount of love and attention for it to find the strength to live another day.”

Fleshling is a small, fleshy critter that looks a lot like a human baby without any skin. It’s not an excellent combat creature, nor is it a farm animal. It does however nuzzle, and it can nuzzle quite a lot. The problem is, if it goes 24 hours without nuzzling, it melts into a puddle of blood and disappears.

ABERRANT FLESHBEAST

*Is a guaranteed failure outcome if failure chance is between **6%** and **10%**.*

“Something went terribly wrong. This wretched creature is struggling to keep breathing. Whilst it doesn’t pose any threat and will slowly bleed to death, attacking it can trigger its self-defense instincts.”

These creatures are essentially useless, with a very short lifespan, and they'll constantly lose their blood and create a mess. You could poke it with sticks and laugh at it, but the best course of action is just to put the poor critter out of its misery. It has however a 50% chance to go manhunter if attacked.

FLESH MONSTROSITY

*Is a guaranteed failure outcome if failure chance is between **11%** and **15%**.*

“Something went terribly wrong. This wretched creature is struggling to keep breathing. It’s rabid, and the moment it crawled out of the vat it started to look for the next unfortunate living being to destroy. It can and should be slain as soon as possible, as each additional kill only prolongs its life.”

A large, fleshy beast that spawns copious amounts of blood wherever it goes. It's manhunter. It's evil. It comes out of the tank and wants to murder everyone. It dies after 12 hours since emergence, but every time it kills (and oh boy it can kill) it resets the timer.

FLESH GROWTH

*Is a guaranteed failure outcome if failure chance is between **16% and above**.*

"Something went terribly wrong. A huge and weird growth has spawned within the electrowomb, breaking it completely and spreading all around. This growth is a hatchery for small flies that can devour any living creature to the bone. It seems to be sensitive to daylight, but no one knows how far it can spread at night."

The Electrowomb breaks and between 5 and 10 patches of Flesh Growth appear where it was, spread on the floors. Flesh Growth is a sentient structure that duplicates itself and spreads, but only on tiles that are below 50% lit. It spreads VERY, VERY FAST, to the point where during one night, a whole building can get absolutely covered by it. It should have a few random graphics we can use.

Flesh growth cannot be deconstructed but needs to be attacked to be destroyed. It's flammable, so a molotov can generally clean it nicely... and everything else in the room. Every few hours, it spawns a swarm of Fleshflies, described below.

When flesh growth first spawns, **it destroys any light sources in the nearby vicinity** (around 5 radius).

FLESHFLIES

A swarm that spawns on Flesh growth.

“A swarm of small, deadly flies. Almost impossible to hit using rudimentary weapons, the ideal way of dealing with fleshflies is by using fire, to which they are highly susceptible.”

A swarm of tiny insects that appear as a single ‘animal’ ingame. Should have a custom body with hundreds of flies in it. It moves very slowly, and has almost no damage, but attacks very, very fast. It should be very difficult to hit - and the best way to deal with them is by using fire. They should be highly flammable.

WORK TYPE: GENETICS

Genetics is a new type of work placed before Research in the priority tab. Genetics uses Intellectual skill. It is used in all genetic engineering tasks added with this mod.

DISEASES

There is a small selection of new diseases that appear on the hybrids when their lifespan is up. They can be tended, but they lead to death regardless - best a person can do is prolong the lifespan of a hybrid by administering medicine and good treatment.

These animal diseases will ALSO be present in VFE-Arkology, as this is where they come from originally.

Muscle necrosis

“A viral infection causing an animal organism to turn on itself and reject normal functioning tissue, causing widespread necrosis across the entire animal body. A creature with Muscle Necrosis can be tended to which will slow down the disease, but cannot be cured.”

Deadly Genetic Disorder

A fast progressing disease that damages all the body parts of the animal, causing bleeding, lots of pain and a swift death. The speed of it depends on the HP of the animal of course, but generally it should deal around 40 damage spread across random body parts per day.

Animal Tuberculosis

“A disease originating from a bacterial infection that attacks lungs. Animals with tuberculosis will keep spitting blood until blood loss causes them to die. Every time a coughing attack occurs, the lungs of that animal will get more and more damaged. A creature with Animal Tuberculosis can be tended to which will slow down the disease, but cannot be cured.”

Deadly Genetic Disorder

Animal constantly vomits blood, like 10 times a day. Every time it does that, its lungs get damaged more and more. Of course when both lungs are destroyed, death occurs. Each time an animal vomits, blood loss occurs.

Animal Abasia

“A condition that makes an animal unable to walk by interfering with the motor cortex. If not treated in time, Abasia inevitably interferes with functioning of organs - for example by halting the heart functions. A creature with Animal Abasia can be tended to which will slow down the disease, but cannot be cured.”

Deadly Genetic Disorder

Similar to Royalty DLC Abasia. Animal can’t walk. Over time, other life functions drop, and when they drop to 0%, animal dies. It generally takes 6 to 7 days for animals to die to Abasia.

Sarg Syndrome

“A rare bacterial infection of the animal brain, which causes the animal to only be able to consume human meat, while consuming anything else will simply not satiate the animal’s hunger and make it vomit constantly. This will spell a death sentence for herbivores, and a slow death for carnivores. A creature with Sarg Syndrome can't be tended to or cured.”

Deadly Genetic Disorder

Carnivores only get sustenance from human meat or cadavers. If they eat anything else, they'll vomit and lose nutrition.

Herbivores will eat EVERYTHING around them, vomit and lose nutrition. They can absolutely annihilate all food sources around, and still be starving.

Greater Scaria

"A disease which causes affected creatures to enter berserk rages. A creature with greater scaria can't be cured and kills its host about five days after infection. Their seething rage will allow them to survive without having to eat or rest until their inevitable death.."

Deadly Genetic Disorder

This disease isn't triggered by age, but added to hybrids appearing during the abandoned lab quests, and in roaming monstrosities incidents.

Animals affected by it will just be permanent manhunters for 5 days, and then die, and rot 100% of the time.

(this way the player is unable to get "free" hybrids)

GENETIC TRADER

A new trader kind is available with this mod.

GENETICS SUPPLIES

Genetics supplies trader deals in various objects added with this mod, as well as items required to do various tasks with this mod, which includes:

- Components
- Advanced Components
- Neutroamine
- Medicine
- Glitterworld Medicine
- Herbal Medicine
- Genoframes (all qualities)
- Genomes (all kinds)
- Template Genomes
- Boosters (Harmonobooster, Immunobooster, Tempobooster)

PARAGON HYBRIDS

Paragon hybrids are the ultimate type of creature that can be created by combining two of the same animal genomes in the genomorpher.

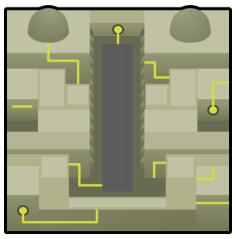
Similar to other hybrids, paragon creatures also benefit from the genoframe quality system. Not only they serve as reinforced versions of their base animal (better in every way), they are also highly beneficial for the Archocentipede project, which is a new endgame condition,

In order to obtain the growth cells of paragon creatures, the player needs to mix two of the same genome. Creating Paragon growth cells however is significantly more risky - stabilizer boosters become sort of a necessity, as the Paragon growth cells have **+15% chance of becoming a failed outcome.**

ARCHOCENTIPEDE PROJECT

Archocentipede is the pinnacle of genetic engineering, a perfected creature created on special technology that's not really fully comprehended by scientists. The project involves procurement of different Archotech genetics structures - all of which can be obtained (uninstalled and carried) from a new quest called Abandoned Genetics Lab.

DNA STORAGE BANK



"A vital piece of archotechnology that is part of the process in creating an Archocentipede.\n\nGenome Extractor Tables function in a very similar way to this device, except this machine requires live specimens and stores the genetic material for later use, preventing deterioration. Depending on the base Genoframe, the amount of viable genetic material extracted will vary.\n\nEach storage bank can only store the genetic material from a single animal branch, such as ursine or feline. Inserting a hybrid into the database yields half as much valuable data compared to a paragon."

Piece of archotechnology found in ancient abandoned genetics labs. This is a 3x3 storage bank for genetic material of paragon creatures. It has a progress bar that shows how full it is.

When initially placed, the player selects what kind of paragon genetic material this particular DNA storage bank will be used to gather. This is achieved through a gizmo with a drop down - where players can select from any genetic material. Genomes used for this can be configured via XML so other mods can add new needed genomes.

For example, a player can set it to collect ursine genome or reptile genome.

If the player tries to change the accepted genome while progress has already started, progress will be lost (with an “are you sure” prompt).

Player then gets another gizmo that displays a list of the animals owned by the colony that have that genome. Once an animal is clicked a genetics-task is then given to pawns to pick up this creature, deliver it to the bank and let it be harvested. The creature dissolves in the process and the body cannot be retrieved.

The bar gets filled depending what quality the hybrid was. The DNA bank is full when it reaches 100%.

Awful quality hybrids yield 1%.

Poor quality hybrids yield 3%.

Normal quality hybrids yield 6%.

Good quality hybrids yield 12%.

Excellent quality hybrids yield 25%.

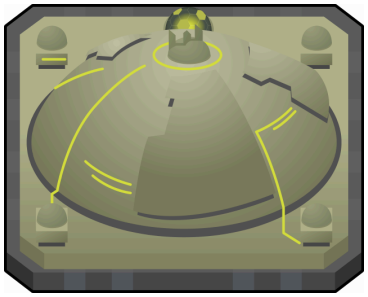
Masterwork quality hybrids yield 50%.

Legendary quality hybrids yield 100%.

Paragons provide 100% of this. Players can also use any hybrid that has a specific genome used to make it in order to fill the DNA bank. It yields however 50% of the values mentioned above due to the gene not being pure.

This means that inserting a Legendary Ursine Paragon will yield 100%, but legendary Thrumbear will yield 50%.

ARCHOCENTIPEDE FORMER



“The archotech version of the Genomorpher, this machine combines the best genetic material of all the animal branches into a single Archocentipede Growthcell. The way it functions is beyond understanding and is impossible to replicate even with the best glitterworld technology.\n\nIn order for this machine to function, it requires multiple connecting DNA Storage Banks which each have the complete genetic data from the different animal branches. Each storage bank will be completely drained in order to ensure that the resulting Growthcell is perfect in every single way.\n\nThe resulting Archocentipede Growthcell requires its own special Archowomb, as it is impossible to replicate the necessary nurturing environment.”

This is another structure that can be found in the Abandoned Genetics labs. This is a 5x4 structure that allows the assembly of the Archocentipede growth cell using experimental technology. It connects to all nearby DNA storage banks in a radius of 15.

It can and should be uninstalled and installed in the player base.

Its info box will display all nearby DNA banks and their percentage. If all DNA banks are found in radius, and full, the player can initiate the creation of the Archocentipede growth cell.

Creation of such a growth cell drains 100% of all the DNA storage banks in radius.

ARCHOCENTIPEDE GROWTH CELL

“A portable, archotech-made casing designed to hold an embryo until it is transferred to a relevant Electrowomb, similar to fertilized eggs that require incubation. This particular one is completely stable and contains the embryo of an Archocentipede, which can only grow in an

Archowomb.\n\nCare should be taken before beginning the process, as the resulting energy signature will force any and all hostiles to attack the colony before the monstrosity can be born."

A growth cell containing an archocentipede. Completely stable and resistant to deterioration.

ARCHOWOMB

"A relatively massive machine designed to simulate the environment of a mother's womb specifically for the Archocentipede. Once the Growthcell has been inserted, the embryo can start growing all the way to its adult life stage before being released.\n\nCare should be taken before beginning the process, as the resulting energy signature will force any and all hostiles to attack the colony before the monstrosity can be born. The procedure will last 15 days and once finished, the creature will be under the player's control with peerless combat prowess."

Archowomb is a 5x5 electrowomb that also needs to be obtained from abandoned genetics labs. It only supports the Archocentipede Growth cell.

Once the growth cell of an Archocentipede is placed in it, it initiates a 15 day timer of constant raids, similar to launching a ship.

After 15 days, an Archocentipede is born and under player control. The credits roll, explaining that the player reached a peak of genetic mastery and created a being that can manipulate the surroundings around it with the sheer power of its mind.

Players can keep playing after the credits roll and have an Archocentipede under their control.

ARCHOCENTIPEDE

“The Archocentipede is the end result of the Archotech Project, aiming to provide a "friendly" machine superintelligence with a capable body. Even though this centipede is forcefully loyal to the colonists, and can be somewhat controlled by them, most other inhabitants of the planet will consider its existence to be an abomination, since dabbling in archotech usually signals the end of comprehensible human life.\n\nUseful abilities: What do you mean useful? You have WON the game. The Archocentipede is basically unkillable by normal means, just use it to lay waste to everything on the planet. You don't have enemies now, you have pets. Ooooor... the archotech may kill all your colonists. One of the two.``

Archocentipede is the final genetically engineered creature a player can obtain with Vanilla Genetics Expanded. It has a very unique system of abilities that allows it to adjust itself to the situation it’s in.

Two special buttons and a bar are available - the buttons are respectively called ‘morph strength’ and ‘morph agility’. The bar starts with an indicator in the middle, but morphing in a specific direction moves it from the value of 0 to either -100 (Agility) or 100 (Strength).

At 0, Archocentipede benefits from 100% Armor, 16 damage, 3.6 movement speed, 0.3 chance to dodge melee attack, 2 second cooldown between attacks.

At -100 (Full agility), the Archocentipede sacrifices its armor and attack damage for movement speed, attack speed, dodge chance etc.

At 100 (Full Strength), the Archocentipede gives up movement speed and attack speed for the sake of gaining incredible armor and huge damage.

^ Deprecated, because orbital beam, but the idea is very good and will be used on other hybrid.

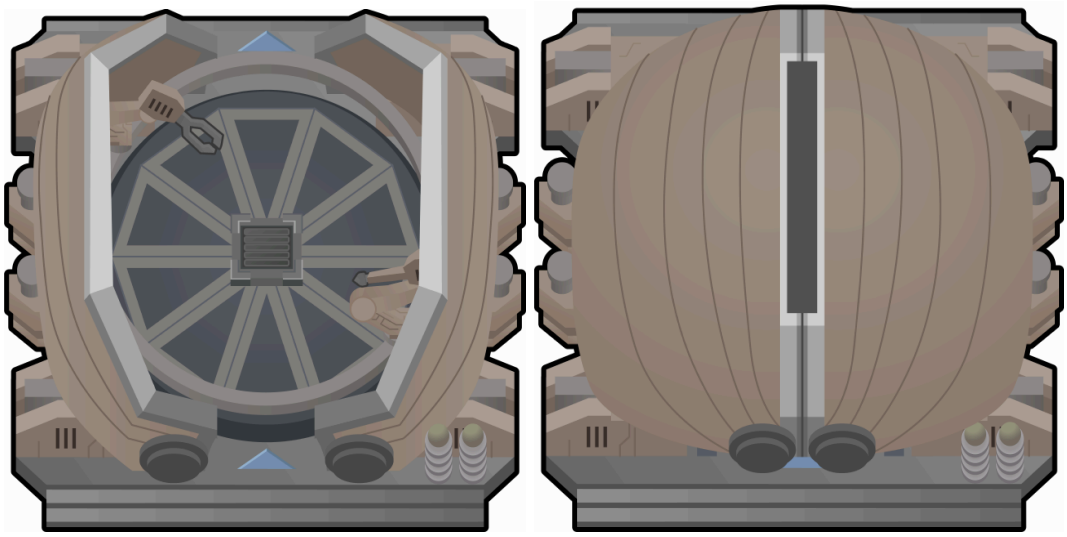
MECHANOID HYBRIDS

Vanilla Genetics Expanded wouldn’t be a proper reboot of Genetic Rim if we didn’t add Mechanoid Hybrids. They were, however, the biggest issue in the original Genetic Rim - and as such needed a proper rework. In the original genetic rim, players didn’t bother with any other hybrids and just went straight for the mechanoid ones, as they were vastly superior to everything else in the mod.

We want to keep that element of superiority, but lock it behind a specific set of events and requirements, so that it feels like you’re working towards something big. We also want to use

Paragon hybrids in the process, so that the player can't just skip making hybrids altogether - in fact, the player needs to make normal hybrids in order to acquire mechanoid hybrids.

Mechanoid hybrids are not required for the Archocentipede project. Instead, they are a separate 'path' the player can take if they don't want to take part in Archocentipede project, but still want something powerful for the late game.



MECHAHYBRIDIZER

"A massive factory designed to improve upon genetically perfect animals by adding doses of mechanites in a controlled fashion and influencing the process to ensure the process is a success and there is no rejection of foreign materials. Once the operation begins on a creature designated as "paragon", the factory closes with hermetic seals and broadcasts a recovery signal to the nearest orbital mechanoid hive./n/nOriginally designed to be part of an automated mechanoid factory placed on animal worlds, the intent was to herd animals into the system, weaponize them, and send them off for their deployment. Due to the invasive nature of the mechanites, the creature absolutely had to lack junk genetic data lest the subject perish and waste materials. Later on, the lack of such paragons resulted in it being installed in facilities with genetic modification equipment on hand and external bypasses to reduce the waste material produced from summoning a retrieval team."

Mechahybridizer is a 5x5 gigantic factory structure that is NOT obtainable by the player in any way - it cannot be uninstalled and minified, it cannot be researched, it cannot be deconstructed.

Mechahybridize a Paragon

“Select paragon for the mechahybridization process. This animal will be brought to the mechahybridizer and converted into a mechanoid hybrid under the player's control. This process will take 12 hours and blow up one of the nearby mechafuses.”

Selecting this gizmo opens up a dropdown with the list of paragon creatures under player control on the local map. Upon selecting a Paragon creature, it will be moved into the mechahybridizer and the mechahybridization process will commence.

MECHAHYBRIDIZATION

When a Paragon creature under player control is designated to be mechahybridized, it will be carried onto the mechahybridizer, changing its graphic from _Empty to _Full.

At this point, the creature is within the structure and the process begins. Mechahybridizer needs 12 hours (there is a progress bar on the building) in order to change any paragon into a mechanoid hybrid.

Mechanoid hybrid leaving Mechahybridizer is under player control. It retains the name the animal had previously, as well as relations, training and area restrictions, as well as quality.

Once the animal leaves the machine, it changes back to _Empty and the process can be easily repeated.

Mechahybridizer will burn a nearby fuse every time a new creature is improved. If there are no fuses left, a following warning displays in top left side of the screen:

“Warning: Due to the mechahybridizer not being shielded by any mechafuses, an ancient mechanoid raid is on its way from orbit.’

After 6 hours ingame, a Mechanoid raid is spawned, drop pod scatter raid strategy with 2,5 times the incident points present in the map (same as any quest maps).

MECHAFUSE

“This piece of technology is unusual in that its design isn’t linked to the original Mechahybridizer, having been developed later on while trying to emulate the system internals. This is due to the fact that the Mechahybridizer broadcasts a signal to a nearby orbital mechanoid hive to protect the process and then recover the potential resulting mechahybrid to be dispatched into assignments. However, this process is extremely expensive and often there would be enough recovery personnel on-site, so this device was developed to reduce costs./n/nIn the event that the Mechahybridizer attempts to send a signal once it begins the operation, this device intercepts the signal before it can extend to a sufficient distance. Upon capture, the device self-destructs to fool the system that the signal has been received and a unit has been dispatched.”

A **1x1** structure that looks like a large, sci-fi looking fuse. They exist around the Mechahybridizer when it spawns naturally in the quest (3-4 per map).

Each time a Mechahybridizer completes the Mechahybridization process, a random fuse in radius explodes in a small radius, turning into mechafuse (spent).

Mechafuse completely stops the Mechanoid raids from taking place like they normally would when using mechahybridizer.

MECHAFUSE (SPENT)

A **1x1** structure that looks like a large, sci-fi looking fuse, no longer working.

MECHAHYBRID ANTENNA

“A large broadcasting server that is specifically tuned to maintain the tameness of mechahybrids. Without this server, the self-replicating mechanites within the mechahybrids will eventually no longer be able to register friendlies as their IFF updates and branches, causing them to go manhunter./n/nIt is important to note that a single antenna can only broadcast to a limited number of mechahybrids, specifically up to 5 of them regardless of their size or complexity. Any additionally mechahybrid present beyond the initial 5 will no longer receive updates and will eventually lose their “tameness”.”

A **3x3** structure that looks like a large, sci-fi antenna. It’s unlocked with the Genetic Mecha Hybridization research project. It costs 1 mechanoid chip, 150 steel and 5 components.

Mechahybrid antennas are required, more or less, to support mechanoid hybrids. Without them, Mechanoid Hybrids lose their “IFF Coherence” and eventually (in a period of 5 days) become manhunter (by being affected by Greater Scaria, so no coming back for them.

Each Mechahybrid Antenna can support up to 5 Mechahybrids. The antenna will reset the IFF Coherence of the 5 first mechahybrids you have.

If you have 7 mechahybrids, 2 latest ones will have their IFF Coherence decrease to 0% unless you build a second Mechahybrid antenna.

BIOMECHANICAL LAB BEACON

“This strange stellated octahedron seems to house an assembly of complex computer chips. It appears to be self-powered, and a faint beeping noise emanates from its core. The radio waves

it is constantly emitting are being decoded, but the process seems to have destabilized its power source, and it will blow up soon!"

A lab beacon that can be built with the Genetic Mecha Hybridization research project. **It requires 1 Mechanoid Chip**, found in Abandoned Lab quests.

When constructed, it starts beeping increasingly fast (with a flashing yellow light on it beeping faster and faster). After 10 seconds, it explodes in a radius of 1.9, destroying the beacon, but it immediately reveals a world map location called Biomechanical Lab Complex.

It's a 1x1 structure.

BIOMECHANICAL LAB COMPLEX

"The biomechanical lab beacon managed to decode the strange radio signals emanating from inside the strange mechanoid chip, revealing the coordinates of a lab complex not far from [map_definite]. This site seems to have been better hidden than the abandoned labs we have been exploring lately.\n\nThe beacon also revealed the original function of the lab complex: infusing paragon hybrids with reconstructive mechanites to somehow increase their power. Perhaps we should travel to the site with some of these hybrids."

This quest takes the player to a pre-exported location that looks like a mech laboratory, where something has gone wrong.

Laboratory will be littered with debris as well as 'Ancient' variants of the new machines we're adding in this mod. For example, Ancient Genomorpher, Ancient electrowomb etc. Those can't be uninstalled and no longer work - can only be destroyed. They produce a bit of Steel when destroyed, but no components, so they aren't the main attraction of the quest.

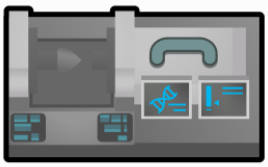
There is no operational Lab equipment in this lab. Instead, there is a large room (or several) with mechahybridizator and several mechafuses present, allowing the player to upgrade any of their paragons into Mechahybrids.

ANCIENT VARIANTS

There is an ancient variant of Mechahybridizer and Mechahybrid antenna. They can be present in the Biomechanical Lab Complex.

IMPLANTS

A handful of implants is added to improve the animals that players are fond of.



IMPLANT AUGMENTATOR

“This particular machine can be explained as a simplified and miniaturized version of a Genomorpher, using only a single genome which influences an inserted Genoframe. Instead of trying to create an entire animal, it instead creates very specific limbs or organs. Due to the

vastly simplified process and minimal variables, no complications arise during the process and the resulting product is similarly influenced by the quality of the Genoframe.\n\nThe Implant Augmentator can be used to create implants for animals - not just hybrids - with the quality of Genoframe dictating the deficits or bonuses those implants provide. Not all implants are created equal, some being inferior replacements and others providing new capabilities provided the animal in question can support them."

A new structure (1x2) that allows the player to combine genomes and genoframes to create various types of implants. It requires connection to power.

Implant Augmentator is locked behind the Genetic Augmentation research project.

Implant Augmentator requires 110 steel and 3 components to make.

Dimensions: **1x2** with an interaction cell at the bottom left of the longer edge.

Work driver falls under 'Genetics' work priority category.

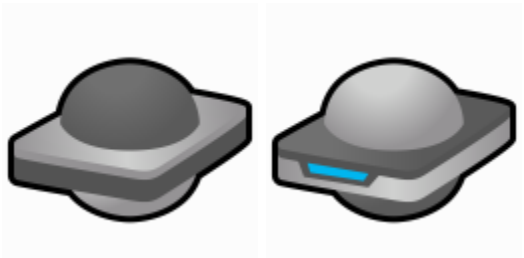
GENOFRAME QUALITY EFFECTS

Depending what genoframe is used, the implant has a different quality. This quality multiplies all the stats of that implant roughly using the following formula:

Awful: 0.5x
Poor: 0.75x
Normal: 1x
Good: 1.25x
Excellent: 1.5x
Masterwork: 1.75x
Legendary: 2x

This means that if an implant allows the pawn to lay eggs at the speed of 5 eggs per day, that implant of legendary quality will make it 10 eggs per day.

GENETIC IMPLANT



ANIMAL IMPLANTS

All implants are made in the Implant Augmentator using the bill system.

Implants can be used on **ANY animal**, not just the hybrids.

Implants are generally crafted using genomes and genoframes. Quality of the genoframe dictates quality of the implant without adding 7 of each implant. This means that **using a Legendary genoframe yields a legendary variant of that implant**, which comes with improvements over a normal or poor variant.

Generally speaking, implants using higher tier genomes are more powerful than those using lower tiers. Implant quality may, however, modify this (a legendary bear leg is better than an awful elephant leg).

All implants require Intellectual skill, with the Genetics work type, and require 5 skill if using tier 1 genomes, 7 skill if using tier 2, and 10 skill if using tier 3

Leg Implants

Animal implant: Bear leg

"A prosthetic animal leg strengthened with bear muscles, and ending in sharp bear claws that add a powerful melee attack."

Effect: Melee attack, base 8, 1.8 cd, Scratch (quality affected). Part efficiency 0.8 (quality affected -0.2, -0.1, 0, 0.1, 0.2, 0.2, 0.3), all armors (quality affected 0.5%, 1%, 2%, 3%, 4%, 5%, 6%)

Made using: Ursine genome, 1 Genoframe of any quality

Animal implant: Lizard leg

"A bionic animal leg reinforced with tough lizard skin."

Effect: Melee attack, base 16, 1.7 cd, Scratch (quality affected). Part efficiency 1 (quality affected -0.2, -0.1, 0, 0.05, 0.1, 0.15, 0.2), all armors (quality affected 0.5%, 1%, 3%, 5%, 6%, 7%, 7.5%). Moving (quality affected -20%, -10%, 10%, 12%, 15%, 17%, 20%)

Made using: Reptile genome, 1 Genoframe of any quality

Animal implant: Elephant leg

"A bionic animal leg reinforced with muscle tissue from a powerful elephant."

Effect: Melee attack, base 20, 1.6 cd, Scratch (quality affected). Part efficiency 1.2 (quality affected -0.3, -0.1, 0, 0.05, 0.1, 0.15, 0.2), all armors (quality affected 0.5%, 1%, 4%, 5%, 6%, 7%, 8%). Moving (quality affected -15%, -10%, 15%, 18%, 20%, 25%, 30%)

Made using: Colossal genome, 1 Genoframe of any quality

Tail Implants

Animal implant: Cat tail

"A tail implant that uses genetic splicing with feline genes to substitute a broken or missing tail. This implant is not meant to replace a healthy tail. Note that only creatures with a natural tail can use this."

Effect: Part efficiency 0.7 (quality affected -0.2, -0.1, 0, 0.1, 0.15, 0.18, 0.2), all armors (quality affected 0.5%, 1%, 2%, 2.5%, 3%, 3.5%, 4%)

Made using: Feline genome, 1 Genoframe of any quality

Animal implant: Scyther tail

"A scyther tail created by attaching a scyther blade to an animal's tail. Note that only creatures with a natural tail can use this."

Effect: Melee attack, base 20, 1.8 cd, Cut (quality affected). Part efficiency 1 (quality affected -0.2, -0.1, 0, 0.1, 0.15, 0.18, 0.2), all armors (quality affected 0.5%, 1%, 2%, 2.5%, 3%, 3.5%, 4%)

Made using: Insectoid genome, Reptile genome, 1 Genoframe of any quality

Animal implant: Reinforced tail

"An advanced animal tail, even more powerful than a natural one. Note that only creatures with a natural tail can use this."

Effect: Melee attack, base 35, 1.8 cd, Cut (quality affected). Part efficiency 1 (quality affected -0.2, -0.1, 0, 0.1, 0.15, 0.18, 0.2), all armors (quality affected 1%, 2%, 5%, 5.5%, 6%, 7%, 8%)

Made using: Colossal genome, 1 Genoframe of any quality

Eye Implants

Animal implant: Canid eye

“An eye implant that uses genetic splicing with canid genes to give an old (or damaged) eye decent vision. This implant is not meant to replace healthy eyes.”

Effect: Part efficiency 0.7 (quality affected -0.2, -0.1, 0, 0.1, 0.15, 0.18, 0.2)

Made using: Canine genome, 1 Genoframe of any quality

Animal implant: Insectile eye

“A bionic implant which gives the creature compound insectile eyes. Compared with simple eyes, compound eyes possess a very large view angle, and can detect fast movement.”

Effect: Part efficiency 1 (quality affected -0.2, -0.1, 0, 0.1, 0.15, 0.18, 0.2), all armors (quality affected 0%, 0%, 1%, 1.25%, 1.5%, 1.75%, 2%). Sight (quality affected -20%, -10%, 10%, 12.5%, 15%, 17.5%, 20%)

Made using: Insectoid genome, 1 Genoframe of any quality

Animal implant: Thrumbo eye

“A bionic eye reinforced with specialized photoreceptors from a powerful thrumbo.”

Effect: Part efficiency 1.25 (quality affected -0.2, -0.1, 0, 0.1, 0.15, 0.18, 0.2), all armors (quality affected 0%, 0%, 1%, 1.25%, 1.5%, 1.75%, 2%). Sight (quality affected -25%, -15%, 15%, 17.5%, 20%, 25%, 30%)

Made using: Colossal genome, 1 Genoframe of any quality

Ear Implants

Animal implant: Rodent ear

“An ear implant that uses genetic splicing with rodent genes to give an old (or damaged) ear decent hearing. This implant is not meant to replace healthy ears.”

Effect: Part efficiency 0.7 (quality affected -0.2, -0.1, 0, 0.1, 0.15, 0.18, 0.2)

Made using: Rodent genome, 1 Genoframe of any quality

Animal implant: Moth timpanal organ

“A bionic implant adding a moth tympanal organ to the creature's ear. Moths can hear sounds of a higher frequency than any bat can produce.”

Effect: Part efficiency 1.25 (quality affected -0.2, -0.1, 0, 0.1, 0.15, 0.18, 0.2), all armors (quality affected 0%, 0%, 1%, 1.25%, 1.5%, 1.75%, 2%). Hearing (quality affected -20%, -10%, 10%, 12.5%, 15%, 17.5%, 20%)

Made using: Insectoid genome, 1 Genoframe of any quality

Animal implant: Elephant auditory receptor

"This elephant auditory receptor can scan a really wide band of frequencies."

Effect: Part efficiency 1.5 (quality affected -0.2, -0.1, 0, 0.1, 0.15, 0.18, 0.2), all armors (quality affected 0%, 0%, 1%, 1.25%, 1.5%, 1.75%, 2%). Hearing (quality affected -25%, -15%, 15%, 17.5%, 20%, 25%, 30%)

Made using: Colossal genome, 1 Genoframe of any quality

Nose Implants

Animal implant: Rodent nose

"An implant that uses genetic splicing with rodent genes to give an old (or damaged) nose decent smelling. This implant is not meant to replace healthy noses. Can't be installed on birds and insects."

Effect: Part efficiency 0.7 (quality affected -0.2, -0.1, 0, 0.1, 0.15, 0.18, 0.2)

Made using: Rodent genome, 1 Genoframe of any quality

Animal implant: Insectoid pheromones

"An implant that uses genetic splicing with insectoid genes to give the ability to detect pheromones, thus improving the olfactory system. Can't be installed on birds and (ironically) insects."

Effect: Part efficiency 1.25 (quality affected -0.2, -0.1, 0, 0.1, 0.15, 0.18, 0.2), all armors (quality affected 0%, 0%, 1%, 1.25%, 1.5%, 1.75%, 2%). Breathing (quality affected -20%, -10%, 10%, 12.5%, 15%, 17.5%, 20%)

Made using: Insectoid genome, 1 Genoframe of any quality

Animal implant: Miniature thrumbo horn

"A bionic implant adding a small thrumbo horn where the creature's nose used to be. This implant acts as a nose, allowing the creature to breathe and smell, and can be used by the

creature in melee. Birds, insects, and creatures that already have a thrumbo horn don't have enough space on their skull to install this implant..”

Effect: Melee attack, base 20, 1.6 cd, Cut and Scratch (quality affected), Part efficiency 1.5 (quality affected -0.2, -0.1, 0, 0.1, 0.15, 0.18, 0.2), all armors (quality affected 0%, 0%, 1%, 1.25%, 1.5%, 1.75%, 2%). Breathing (quality affected -25%, -15%, 15%, 17.5%, 20%, 25%, 30%)

Made using: Colossal genome, 1 Genoframe of any quality

Jaw Implants

Animal implant: Wolf fangs

“A prosthetic animal leg strengthened with bear muscles, and ending in sharp bear claws that add a powerful melee attack.”

Effect: Part efficiency 0.7 (quality affected -0.2, -0.1, 0, 0.1, 0.2, 0.2, 0.3), all armors (quality affected 0.5%, 1%, 2%, 3%, 4%, 5%, 6%)

Made using: Canine genome, 1 Genoframe of any quality

Animal implant: Insectoid mandibles

“A bionic implant adding insect mandibles to the creature's face. Insect mandibles improve manipulation and eating, while also working as an offensive weapon.”

Effect: Melee attack, base 13, 1.6 cd, Bite (quality affected), Part efficiency 1 (quality affected -0.2, -0.1, 0, 0.1, 0.15, 0.18, 0.2), all armors (quality affected 0%, 0%, 3%, 4%, 5%, 6%, 7%). Eating (quality affected -25%, -15%, 15%, 17.5%, 20%, 25%, 30%)

Made using: Insectoid genome, 1 Genoframe of any quality

Animal implant: Bionic thrumbo jaws

“A bionic implant adding thrumbo jaws to the creature's mouth. These creatures devour trees, so you can imagine their jaws are up to the task.”

Effect: Melee attack, base 28, 2 cd, Bite (quality affected), Part efficiency 1.2 (quality affected -0.2, -0.1, 0, 0.1, 0.15, 0.18, 0.2), all armors (quality affected 1%, 2%, 3%, 4%, 5%, 6%, 7%). Eating (quality affected -25%, -15%, 15%, 17.5%, 20%, 25%, 30%)

Made using: Colossal genome, 1 Genoframe of any quality

Spine Implants

Animal implant: Muffalo spine

“A spine implant that uses genetic splicing with muffalo genes to give an old (or damaged) spine decent functioning. This implant is not meant to replace healthy spines.”

Effect: Part efficiency 0.7 (quality affected -0.2, -0.1, 0, 0.1, 0.15, 0.18, 0.2), all armors (quality affected 0%, 0%, 3%, 4%, 5%, 6%, 7%). Moving (quality affected -15%, -10%, -10%, -10%, -7.5%, -5%, 0%), Manipulation (quality affected -10%, 0%, 10%, 15%, 20%, 25%, 30%)

Made using: Muffalo genome, 1 Genoframe of any quality

Animal implant: Crocodile spine

“A bionic implant adding a sturdy crocodile spine to the creature's skeletal system.”

Effect: Part efficiency 1 (quality affected -0.2, -0.1, 0, 0.1, 0.15, 0.18, 0.2), all armors (quality affected 0%, 0%, 3%, 4%, 5%, 6%, 7%). Moving (quality affected -15%, -10%, -10%, -10%, -7.5%, -5%, 0%), Manipulation (quality affected -10%, 0%, 10%, 15%, 20%, 25%, 30%)

Made using: Reptile genome, 1 Genoframe of any quality

Animal implant: Reinforced bionic spine

“A bionic implant adding a plasteel structure with active mechanites to the creature's skeletal system.”

Effect: Part efficiency 1.25 (quality affected -0.2, -0.1, 0, 0.1, 0.15, 0.18, 0.2), all armors (quality affected 0%, 0%, 3%, 4%, 5%, 6%, 7%). Moving (quality affected -15%, -10%, -10%, -10%, -7.5%, -5%, 0%), Manipulation (quality affected -10%, 0%, 10%, 15%, 20%, 25%, 30%)

Made using: Colossal genome, 1 Genoframe of any quality

Brain Implants

Animal implant: Chicken brains

“An implant that uses chicken brain tissue to patch damaged neurological pathways. This implant is intended for brain-dead creatures.”

Effect: Part efficiency 0.5 (quality affected -0.1, -0.05, 0, 0.1, 0.15, 0.18, 0.2)

Made using: Avian genome, 1 Genoframe of any quality

Animal implant: Monitor lizard brain

“A bionic implant using monitor lizard brain tissue. This highly intelligent reptile has very quick reflexes.”

Effect: Part efficiency 1 (quality affected -0.1, -0.05, 0, 0.1, 0.15, 0.18, 0.2). Consciousness (quality affected -20%, -10%, 5%, 10%, 15%, 18%, 20%)

Made using: Reptile genome, 1 Genoframe of any quality

Animal implant: Bionic thrumbo brain

“A bionic brain implant using thrumbo neural tissue. Superb intelligence and reflexes.”

Effect: Part efficiency 1.5 (quality affected -0.1, -0.05, 0, 0.1, 0.15, 0.18, 0.2). Consciousness (quality affected -20%, -10%, 5%, 10%, 15%, 18%, 20%)

Made using: Colossal genome, 1 Genoframe of any quality

Heart Implants

Animal implant: Boomalope heart

“An implant that uses chemfuel to pump blood through the animal's body. This implant is intended for creatures whose heart is failing catastrophically, since it is less efficient than a natural heart.”

Effect: Part efficiency 0.7 (quality affected -0.1, -0.05, 0, 0.1, 0.15, 0.18, 0.2)

Made using: Boomalope genome, 1 Genoframe of any quality

Animal implant: Chitinous heart

“A bionic heart implant using a reinforced shell of insectoid chitin for protection. This is a heart designed to take a beating. Pun intended, but it's the last one, I promise.”

Effect: Part efficiency 1 (quality affected -0.1, -0.05, 0, 0.1, 0.15, 0.18, 0.2). Blood Pumping (quality affected -10%, -5%, 10%, 10%, 12%, 15%, 20%), Moving (quality affected -15%, -5%, 5%, 10%, 12%, 15%, 20%), Manipulation (quality affected -5%, -5%, 2%, 5%, 7%, 10%, 20%), all armors (quality affected 1%, 2%, 3%, 4%, 5%, 6%, 7%)

Made using: Insectoid genome, 1 Genoframe of any quality

Animal implant: Reinforced bionic heart

“A bionic heart strengthened by the action of active mechanites.”

Effect: Part efficiency 1.3 (quality affected -0.1, -0.05, 0, 0.1, 0.15, 0.18, 0.2). Blood Pumping (quality affected -10%, -5%, 10%, 10%, 12%, 15%, 20%), Moving (quality affected -15%, -5%, 5%, 10%, 12%, 15%, 20%), Manipulation (quality affected -5%, -5%, 2%, 5%, 7%, 10%, 20%), all armors (quality affected 1%, 2%, 3%, 4%, 5%, 6%, 7%)

Made using: Colossal genome, 1 Genoframe of any quality

Lung Implants

Animal implant: Muffalo lung

"An implant that uses muffalo genes to increase breathing capacity."

Effect: Part efficiency 1.1 (quality affected -0.3, -0.2, 0, 0.1, 0.15, 0.18, 0.2). Breathing (quality affected -20%, -10%, 5%, 10%, 15%, 18%, 20%)

Made using: Muffalo genome, 1 Genoframe of any quality

Liver Implants

Animal implant: Bear liver

"An implant that uses bear genes to improve function of the liver. Specially useful for those alcoholic chickens."

Effect: Part efficiency 1.1 (quality affected -0.3, -0.2, 0, 0.1, 0.15, 0.18, 0.2). Blood filtration (quality affected -10%, -5%, 5%, 10%, 12%, 15%, 20%), Metabolism (quality affected -10%, -5%, 5%, 10%, 12%, 15%, 20%)

Made using: Ursine genome, 1 Genoframe of any quality

Kidney Implants

Animal implant: Chicken kidney

"An implant that uses chicken genes to improve function of the kidney. Birds have large kidneys. Yep, you learned that today."

Effect: Part efficiency 1.1 (quality affected -0.3, -0.2, 0, 0.1, 0.15, 0.18, 0.2). Blood filtration (quality affected -10%, -5%, 5%, 10%, 12%, 15%, 20%), Metabolism (quality affected -10%, -5%, 5%, 10%, 12%, 15%, 20%)

Made using: Avian genome, 1 Genoframe of any quality

Stomach Implants

Animal implant: Boomalope stomach

"An implant that uses boomalope genes to improve function of the stomach."

Effect: Part efficiency 1.1 (quality affected -0.3, -0.2, 0, 0.1, 0.15, 0.18, 0.2). Eating (quality affected -10%, -5%, 5%, 10%, 12%, 15%, 20%), Metabolism (quality affected -10%, -5%, 5%, 10%, 12%, 15%, 20%)

Made using: Boomalope genome, 1 Genoframe of any quality

HUMANOID IMPLANTS

All implants are also made in the Tissue Growing Vat using the bill system. Humanoid implants require 1 genoframe of any quality, 1 humanoid genome and an additional genome (or two in some rare cases).

These implants can only be used on humans.

All implants require Intellectual skill, with the Genetics work type, and require 5 skill if using tier 1 genomes, 7 skill if using tier 2, and 10 skill if using tier 3

Hand Implants

Animal implant: Bear claws

"An improvement over the bionic Power Claw, these claws have been vat-grown with a mixture of human and bear DNA, and replace the subject's hand with versatile, non-retractable claws."

Effect: Melee attack, base 16, 2 cd, Scratch (quality affected). Part efficiency 1.1 (quality affected -0.3, -0.2, 0, 0.1, 0.15, 0.18, 0.2)

Made using: Ursine genome, Humanoid genome, 1 Genoframe of any quality

Animal implant: Digging mole claws

"Grotesque but powerful hand blades that have been modified to be used in mining operations, increasing both speed and yield."

Effect: Melee attack, base 5, 1 cd, Scratch (quality affected). Part efficiency 1 (quality affected -0.3, -0.2, 0, 0.1, 0.15, 0.18, 0.2), Mining Speed (quality affected 3%, 5%, 10%, 12.5%, 15%, 17.5%, 20%), Mining Yield (quality affected 1%, 2%, 4%, 5%, 10%, 12.5%, 15%)

Made using: Ursine genome, Humanoid genome, 1 Genoframe of any quality

Spine Implants

Animal implant: Bear muscle tissue

“Grafts of bear muscle tissue on the subject's torso increase overall strength and stamina. These grafts however tend to stimulate the production of an abundance of body hair.”

Effect: Manipulation (quality affected 5%, 10%, 20%, 22%, 25%, 27%, 30%)

Made using: Ursine genome, Humanoid genome, 1 Genoframe of any quality

Animal implant: Muffalo strengthened muscles

“By weaving muffalo muscle strands with the subject’s muscular system, strength, resilience and carrying capacity are greatly increased.”

Effect: Manipulation (quality affected 1%, 5%, 10%, 12%, 15%, 17%, 20%), Carrying capacity (quality affected +1, +5, +10, +15, +20, +25, +40)

Made using: Muffalo genome, Humanoid genome, 1 Genoframe of any quality

Brain Implants

Animal implant: Hibernation module

“A biochip that modifies the brain to reduce the need for sleep.”

Effect: Consciousness (quality affected 1%, 2.5%, 5%, 6%, 7.5%, 10%, 20%), Rest rate multiplier (quality affected 0.95, 0.8, 0.75, 0.6, 0.5, 0.45, 0.4)

Made using: Ursine genome, Humanoid genome, 1 Genoframe of any quality

Animal implant: Neuron reinforcement

“A biochip using animal stem cells to reinforce the natural abilities of human neurons, increasing learning and research speed..”

Effect: Consciousness (quality affected 1%, 2%, 5%, 6%, 7%, 8%, 10%), Global learning factor offset (quality affected 0.02, 0.05, 0.10, 0.125, 0.15, 0.175, 0.2), Research speed offset (quality affected 0.02, 0.05, 0.15, 0.175, 0.2, 0.25, 0.3)

Made using: Canine genome, Rodent genome,, Humanoid genome, 1 Genoframe of any quality

Waist Implants

Animal implant: Ovipositor

“You know you have gone too far in your scientific experiments when you are implanting a human being with an ovipositor. This will enable the colonist to lay chicken eggs twice a day. It hurts as hell, though. Also, yuck.”

Effect: Pain offset 0.1. Pain factor 1.1. Lays eggs every day (base amount 5, multiplied by quality factor)

Made using: Avian genome, Humanoid genome, 1 Genoframe of any quality

Sternum Implants

Animal implant: Muffalo skin

“A synthetic skin substitute that is much thicker and a much better insulator than human skin. This provides a measure of defense but, more importantly, makes the subject more resistant to low temperatures.”

Effect: Comfy temperature min (quality affected -1, -5, -15, -17, -20, -25, -30), Sharp and blunt armor (quality affected 0.5%, 1%, 2%, 2.5%, 3%, 3.5%, 4%), Heat armor (quality affected 0.5%, 1%, 5%, 6%, 7%, 8%, 10%)

Made using: Muffalo genome, Humanoid genome, 1 Genoframe of any quality

Animal implant: Iguana scales

“A synthetic skin substitute that is much thicker and a much better insulator than human skin. This provides a measure of defense but, more importantly, makes the subject more resistant to high temperatures.”

Effect: Comfy temperature max (quality affected 1, 5, 15, 17, 20, 25, 30), Sharp and blunt armor (quality affected 0.5%, 1%, 2%, 2.5%, 3%, 3.5%, 4%), Heat armor (quality affected 0.5%, 1%, 5%, 6%, 7%, 8%, 10%)

Made using: Reptile genome, Humanoid genome, 1 Genoframe of any quality

Animal implant: Thrumbo skin

“A synthetic skin substitute that is much thicker and a much better insulator than human skin. This provides a lot of defense and makes the subject more resistant to extremes of temperature.”

Effect: Comfy temperature min and max (quality affected 1, 5, 15, 20, 25, 27.5, 30), Sharp, blunt and heat armor (quality affected 0.5%, 5%, 20%, 25%, 30%, 35%, 40%)

Animal implant: Boomalope nodules

“These skin nodules can be integrated in a human's torso, causing a huge explosion if the subjects dies violently.”

Effect: Subject explodes on death (radius of 6, multiplied by quality factor)

Made using: Boomalope genome, Humanoid genome, 1 Genoframe of any quality

Animal implant: Muffalo mammaries

“By implanting muffalo mammaries into a colonist... Wait, what??? Who came up with this idea????? Anyway... this implant allows your colonist to be milked... What the...”

Effect: Pain offset 0.1. Pain factor 1.1. Produces milk every day (base amount 10, multiplied by quality factor), -5 mood

Made using: Muffalo genome, Humanoid genome, 1 Genoframe of any quality

Stomach Implants

Animal implant: Chemfuel stomach

“A reinforced bionic stomach that uses a combination of gastric acid and chemfuel to efficiently digest food.”

Effect: Metabolism (quality affected 1%, 5%, 10%, 12.5%, 15%, 17.5%, 20%), Hunger rate multiplier (quality affected -0.05, -0.1, -0.25,-0.3,-0.4,-0.45,-0.5)

Made using: Boomalope genome, Humanoid genome, 1 Genoframe of any quality

Heart Implants

Animal implant: Chemfuel heart

“A reinforced bionic heart that acts like a miniature 4-stroke internal combustion engine powered by chemfuel to pump blood through the body.”

Effect: Blood Pumping(quality affected 1%, 5%, 15%, 17.5%, 20%, 25%, 30%), Global work speed offset (quality affected 1%, 5%, 10%, 12.5%, 15%, 17.5%, 20%)

Made using: Boomalope genome, Humanoid genome, 1 Genoframe of any quality

Tibia Implants

Animal implant: Wolf muscular fibers

“The subject's legs can be modified by weaving hybrid human/wolf muscle fibers within the base tissue, giving her a significant strength and speed boost.”

Effect: Moving (quality affected 1%, 5%, 15%, 17.5%, 20%, 25%, 30%)

Made using: Canine genome, Humanoid genome, 1 Genoframe of any quality

Jaw Implants

Animal implant: Devouring jaws

“A set of improved teeth designed to rapidly chew and ingest any kind of food. Leaves kind of a mess, though...”

Effect: Talking (quality affected 1%, 5%, 10%, 12.5%, 15%, 17.5%, 20%), Eating speed offset (quality affected +0.1, +0.2, +0.5, +0.6, +0.7, +0.8, +1)

Made using: Canine genome, Humanoid genome, 1 Genoframe of any quality

Animal implant: Venomous fangs

“This hybrid implant substitutes the subject's jaw with a set of venomous fangs. Useful in combat, but not very comfortable.”

Effect: Melee attack, base 25, 1 cd, Very toxic damage (quality affected). Talking (quality affected -20%, -15%, -10%, -10%, -10%. 0, 0)

Made using: Reptile genome, Humanoid genome, 1 Genoframe of any quality

Nose Implants

Animal implant: Mouse pheromones

“A bionic vomeronasal organ that allows the subject pheromonal communication with other animals, increasing the chance of taming and training them successfully.”

Effect: Part efficiency 1.1 (quality affected -0.3, -0.2, 0, 0.1, 0.15, 0.18, 0.2), Tame animal and train animal chance (quality affected 1%, 5%, 10%, 12.5%, 15%, 17.5%, 20%).

Made using: Rodent genome, Humanoid genome, 1 Genoframe of any quality

Animal implant: Insectoid antennae

“These hybrid humanoid / insectoid feeling appendages can be implanted in a subject's head, completely modifying the way the subject "sees" and feels the surrounding world. The experience may be slightly overwhelming due to sensorial overload.”

Effect: Sight and Hearing (quality affected 1%, 5%, 15%, 20%, 25%, 27.5%, 30%). -5 mood

Made using: Insectoid genome, Humanoid genome, 1 Genoframe of any quality

Animal implant: Thrumbo horn

“A genetically modified thrumbo horn that can be implanted in a subject's forehead. Nasty.”

Effect: Melee attack, base 25, 0.9 cd, Scratch (quality affected). Part efficiency 1.2 (quality affected -0.3, -0.2, 0, 0.1, 0.15, 0.18, 0.2), Sight (quality affected -20%, -15%, -10%, -10%, -10%, 0, 0). +8 mood

Made using: Colossal genome, Humanoid genome, 1 Genoframe of any quality

Ear Implants

Animal implant: Mole-rat nerve dampener

“A biochip that reduces pain sensitivity, allowing the subject to survive pain shock.”

Effect: Part efficiency 1.1 (quality affected -0.3, -0.2, 0, 0.1, 0.15, 0.18, 0.2), Pain shock threshold (quality affected 1%, 5%, 10%, 12.5%, 15%, 17.5%, 20%).

Made using: Rodent genome, Humanoid genome, 1 Genoframe of any quality

Animal implant: Bunny ear

“This huge leporid ear gives amazing enhanced hearing. Also, super kawaii!”

Effect: Hearing (quality affected 5%, 10%, 20%, 25%, 30%, 35%, 45%). +2 mood (stacks 2 times)

Made using: Rodent genome, Humanoid genome, 1 Genoframe of any quality

Animal implant: Psychic dampeners

“Artificial hearing aids that block psychic emanations, providing considerable resistance to mechanoids' psychic attacks.”

Effect: Part efficiency 1.2 (quality affected -0.3, -0.2, 0, 0.1, 0.15, 0.18, 0.2), Psychic sensitivity (quality affected -5%, -10%, -20%, -22.5%, -25%, -27.5%, -30%).

Made using: Insectoid genome, Humanoid genome, 1 Genoframe of any quality

Eye Implants

Animal implant: Cat eye

“This hybrid humanoid / feline eye provides improved night vision, at the expense of a certain short-sightedness outside and during the day. Ideal for nyctophile colonists..”

Effect: Part efficiency 1 (quality affected -0.3, -0.2, 0, 0.1, 0.15, 0.18, 0.2), Shooting Accuracy Outdoors Dark Offset (quality affected 1%, 5%, 10%, 12.5%, 15%, 17.5%, 20%), Shooting Accuracy Outdoors Lit Offset (quality affected -30%, -25%, -20%, -17.5%, -15%, -12.5%, -10%).

Made using: Feline genome, Humanoid genome, 1 Genoframe of any quality

Animal implant: Compound eye

“This hybrid humanoid / insectoid eye provides improved vision in a wide range of different wavelengths, including those usually outside the human range, completely modifying the way the subject perceives his surroundings.”

Effect: Part efficiency 1.25 (quality affected -0.3, -0.2, 0, 0.1, 0.15, 0.18, 0.2)

Made using: Insectoid genome, Humanoid genome, 1 Genoframe of any quality

Kidney Implants

Animal implant: Kidney toxic filters

“This is a bioelectronic kidney prosthesis that greatly improves the efficiency of the subject's kidney by using insectoid tissue, providing resistence to toxic substances.”

Effect: Part efficiency 1.2 (quality affected -0.3, -0.2, 0, 0.1, 0.15, 0.18, 0.2), Toxic sensitivity (quality affected -5%, -10%, -15%, -17.5%, -20%, -25%, -30%).

Made using: Insectoid genome, Humanoid genome, 1 Genoframe of any quality

IDEOLOGY

If Ideology is installed, the mod will add several new Memes and Precepts. These are for flavor, not ground-breaking in any way.

MEMES

CAREFUL GENETICISTS

“Humanity has been practicing genetic engineering for centuries, and the correct way to use it as a tool is by carefully following a strict scientific method and proper experiment security.”

Impact: 1

Humanoid hybrids are frowned upon, while failures are acceptable. Receives bonus to workbench speed and mood penalty for using automated defenses (plus will refuse to build turrets).

Connected Precepts: Autonomous Weapons: Scorned, Failures: Accepted, Humanoid hybrids: forbidden, Genetic worktable speed: Genomorpher

MAD SCIENTISTS

“There must be no limits to genetic engineering. The exhilaration of creating new life, of bending the genetic code until it does what it was designed for, that's what makes science worth pursuing.”

Impact: 1

Humanoid hybrids are acceptable, while failures are frowned upon. Mood penalty for using automated defenses (plus will refuse to build turrets).

Connected Precepts: Autonomous Weapons: Scorned, Humanoid hybrids: accepted, Failures: Shameful, Genetic worktable speed: Implants

PRECEPTS

Autonomous Weapons:

Autonomous Weapons: Scorned

Impact: High
Effect: Can't build turrets. -5 mood if any turret is on the map.

Description: *"To create automated defences is a waste of time and good material, which could be better spent raising far deadlier animals."*

Associated memes: *Careful Geneticists, Mad Scientists*

Failures:

Failures: Accepted

Impact: Medium
Effect: No effect, baseline precept

Description: *"Genetic experimentation is risky, and we must accept that failures are an unavoidable part of the process."*

Associated memes: *Careful Geneticists*

Failures: Shameful

Impact: High
Effect: -15 mood if any failure is on the map

Description: *"We are destined to greatness. Failure is not an option, and any unwanted results of our experimentations should be gotten rid of as soon as possible."*

Associated memes: *Mad Scientists*

Humanoid hybrids:

Humanoid hybrids: Accepted

Impact: High
Effect: No effect

Description: *"Humanoid experimentation is just another tool at our disposal."*

Associated memes: *Mad Scientists*

Humanoid hybrids: Forbidden

Impact: High
Effect: -15 mood if any humanoid hybrid is on the map, baseline precept

Description: *"Humanoid experimentation is despicable, an absolutely unforgivable sin. We will not tolerate having such monstrosities running around the colony."*

Associated memes: *Careful Geneticists*

Genetic worktable speeds:

Genetic worktable speed: Implants

Impact: Medium
Effect: Implant augmentator work table speed: +25%.

Description: *"The key to experimentation is not being afraid of the results. We will labour incessantly to achieve new breakthroughs."*

Associated memes: *Mad Scientists*

Genetic worktable speed: Genomorpher

Impact: Medium
Effect: Genomorpher speed: +25%.

Description: *“Measure twice, cut once. A carefully designed experiment has much greater odds of success.”*

Associated memes: *Careful Geneticists*

Old and deprecated stuff

AGE DRUGS

Age pills are no longer needed, as the hybrids pop up fully grown (except when born naturally to a couple of fertile hybrids)

GENETRAINERS

This was a research project that gave you access to a genetrainer bench, a workbench that allowed you to “repurpose” mech serums (healer and resurrector. Skilltrainers worked, but some update broke them and I never got around to fixing that).

The repurposed mech serums were mixed with a genome, and the result was a genetrainer that could be used as an implant. However, it didn’t take “a slot”. It was basically a hediff that didn’t take the place of any organ or limb.

They were seldom used by players.

FURNITURE

Animal rugs are now no longer in the architect menu, and can be built in the art bench

Things such as cryofuel generators and Nitromilk traps have been deprecated as the hybrids that produced those items have new abilities and mechanics.

PARAGON SERUMS

Paragon serums no longer exist, as paragons are now created via genomes. Paragons that didn't have a corresponding genome have been deprecated (Pig, Rhino, Hare, Tortoise, Emu and Ostrich).