pathogenesis

A DECK BUILDING GAME BY JAMIE & LOREN CUNNINGHAM

GAME OVERVIEW

PATHOGENESIS is a deck building game in which players take the role of bacterial pathogens attacking the human body. But the human body isn't defenseless—once triggered, the immune system fights to destroy the pathogens and eventually achieve immunity. To win, players build up their deck of pathogens and virulence factors to protect themselves from the immune system and maximize the damage they do to the body before they run out of time.

Players start the game with a personal deck of cards representing the resources available to them as starting pathogens. Each turn players use their existing cards to acquire stronger pathogens, gain offensive and defensive traits, improve their environment, and damage the body.

Damage to the body is signified by the removal of damage counters. When the body takes too much damage (i.e., runs out of counters) the game ends. At the end of the game, the player (or team) with the most damage counters wins. However, if the players take too long, the body becomes immune to all the pathogens and all the players lose the game.

IN THE BOX

44 Pathogen Cards

12 Toxin Cards

76 Immune System Cards

...and all the tokens you'll need:

    90 Damage Tokens

    12 Attack/Defense Tokens

    24 Genetic Value Tokens

    25 Immune Tokens

4 Decks of 10 Starter Cards

34 Environment Cards

3 Body Boards with Petri Dishes

50 Trait Cards

15 Barrier Cards

16 Card Dividers

PLAYING PATHOGENESIS

In **PATHOGENESIS**, all players start the game with a *starter deck* of 14 cards, 10 of which they will choose to use in this game. These starter decks are the same for every player. Players build their decks, making them stronger and more specialized, by acquiring additional cards throughout the game.

At the beginning of the game, all players shuffle their 10 starter cards and lay them face down to create a *deck*. Draw the top 5 cards of the deck to create the *hand*—the cards that each player has to work with this turn. If a card instructs you to draw additional cards during your turn, these are drawn from your deck and added to your hand.

Some cards have purchasing power—the card's *genetic value*—which allows you to buy additional cards to improve your deck. To purchase cards, place one or more cards from your hand face up in front of you so the sum of the genetic value of these cards equals the cost of the new card(s) you wish to buy. You can purchase as many new cards as you can afford on each turn. At the end of your turn, all newly purchased cards, as well as the cards used to buy them, go face up in your individual *discard pile*.

You may also play cards from your hand to create and upgrade pathogens and alter the environment for those pathogens, which are used to attack the human body. If a pathogen is killed by the body's immune system, all the cards associated with that pathogen are put face up in your discard pile. Any surviving pathogens remain in play until they're killed in a future round.

Unplayed cards left in your hand go into the discard pile unless you choose to hold onto them for the next turn.

DISCARD PILE — JAMIE DISCARDS THE NEW DNA CARD — CARDS IN HAND — THEN DRAWS FOUR CARDS — DRAW DECK

Jamie has two cards that couldn't be played this round, one of which could be useful on a future turn. Jamie keeps the useful card and discards the other. Since Jamie's hand limit is currently 5 cards, she draws 4 additional cards from the deck to get a hand of 5 cards for her next turn.

In the last phase of your turn, draw a new hand of cards from the top of your deck to prepare for the next turn.

Any card that's used, killed, expended, etc. is *discarded*, meaning it goes into your discard pile and is eventually shuffled back into your deck. A few cards allow players to remove cards from their player deck permanently. These cards are *trashed* and are placed back in the box where they won't be used again during the current game.

The goal of the game is to build the most effective deck and win the game by attacking the human body with pathogens. As players acquire new and stronger cards, these cards cycle from their discard piles to their decks and into their hands, giving them more options as the game progresses. Play continues this way until one of the game's end conditions is met.

GAME SET UP

PREPARE THE BODY

The human body is represented by three body locations or *tracts*. Place the body tract boards close to the playing area.

Separately shuffle the 5 Barrier cards for each tract and place them face down in their indicated place on each board. Turn the top card of each deck face up.

Place the appropriate petri dish on the indicated area of each board and add damage counters to each dish.

For these examples, we're setting up for a quick 3 player competitive game, so we're adding 40 points of damage counters to each body tract.

The number of damage counters (indicated in the table on page 20) depends on the game mode, number of players, and the difficulty level chosen for the game.

PREPARE THE IMMUNE RESPONSE

There are two *Immune Response* decks, identified by white backs: the Innate Immunity deck (Deck 1 with one dot in the bottom right corner) and the Adaptive Immunity deck (Deck 2 with two dots). Using the dots, separate them into two decks and shuffle them.

INNATE (DECK 1)   ADAPTIVE (DECK 2)

Only a portion of each deck is used in any given game to ensure players don't know which cells and processes of the immune system they're facing. Remove the number of cards from Deck 1 needed for the type of game you're playing (see table on page 20) and place them face down near the playing area. Remove the necessary number of cards from Deck 2 and place them face up next to Deck 1; this serves as the beginning of the discard pile for the Immune Response deck. The remaining Immune Response cards will not be used during this game.

> In our quick 3 player game, each of these decks contains 15 cards.

PREPARE THE ACTIVE GENE POOL

Shuffle the Gene Pool deck (composed of trait, toxin, and environment cards, marked with a dark back) and place it face down in the center of the table. Draw the top 5 cards and lay them face up to form the center row.

Lay out the 7 Pathogen Supply decks and the Fever Supply deck where everyone can access them.

- Multi-Point of Entry Super Pathogens
- Gastrointestinal Pathogens
- Gastrointestinal Super Pathogens
- Respiratory Pathogens
- Respiratory Super Pathogens
- Tissue Pathogens
- Tissue Super Pathogens
- Fever Cards

EACH PLAYER RECEIVES A STARTER DECK

Each starter deck, designated by a unique symbol in the bottom left corner (▲ ♦ ✤ ✱), is made up of 10 New DNA cards and 4 pathogens. Every player should select a deck and choose 6 of the New DNA cards to use in this game. Shuffle the 6 New DNA cards and 4 pathogens to create your initial deck. Draw the top 5 cards to create the hand for your first turn.

TOKENS

A variety of tokens are used throughout the game. Place these within easy reach of the play area. For additional information about tokens and how to use them, see the Appendix (page 12).

The player who goes second receives 1 genetic value token. The third player receives 2 genetic value tokens. The fourth player receives 3 genetic value tokens.

> Genetic value tokens can be used once on any turn to increase the total genetic value for purchasing cards. Once spent, return the tokens to the stock.

GAME PLAY

Starting Player: The player who was unwell most recently goes first. Turns progress clockwise from the starting player.

The phases of each player's turn proceed in the following order. Phases 2 and 3 aren't used in the initial rounds; they're added in after the immune system activates.

PHASE 1: BUY AND PLAY CARDS

Actions in this phase may be done in any order:

- Use card abilities
- Buy new cards from the Active Gene Pool
- Play cards from your hand to create or augment your pathogens

PHASE 2: PREEMPTIVE ATTACK

Some environment cards allow pathogens to attack the body during this phase.

Skip this phase if you don't have any cards with this trait in play.

PHASE 3: IMMUNE RESPONSE ATTACK

Draw one Immune Response card for each pathogen you have in play.

PHASE 4: PATHOGENS ATTACK THE BODY

The surviving pathogens attack the body, removing damage counters from the petri dishes equal to the value of the attack.

PHASE 5: CLEAN UP

Cards from the Immune Response Attack are placed in the Immune Response discard pile.

Any cards used, purchased, or killed by the immune system during this turn are placed in your discard pile. Any unused cards in your hand are either discarded or held for the next round.

Draw back up to a hand of 5 cards from your deck for your next turn (plus additional cards for surviving pathogens with the card draw ability). If there aren't enough cards in your deck to draw a full hand, shuffle your discard pile and continue drawing as needed.

At the end of the third round after the final player has cleaned up, discard 1 Immune Response card if these conditions exist:

- The immune system has not been activated.
- No Barrier card was removed during the round.

Do this at the end of all future rounds in which these conditions exist.

PHASES OF A PLAYER'S TURN

PHASE 1: BUY AND PLAY CARDS

Using card abilities

Some cards enable you to draw additional cards, pull cards from your discard pile, affect other players' pathogens, eliminate cards from your hand or discard pile, etc. These actions can be taken in any order, at any time during Phase 1.

Buy new cards from the Active Gene Pool

Certain cards have a *genetic value* that allows a player to purchase new cards from the Active Gene Pool—the 5 face up cards from the Gene Pool deck and the face up decks of Pathogen Supply and Fever Supply cards.

These cards can be played for an action OR used for their genetic value, not both.

On your turn, you can acquire new cards from the Active Gene Pool equal to the total genetic value of all the cards you plan to spend. A card's cost is found on the lower right hand corner of the card. You can purchase as many cards as you can afford on your turn.

Newly acquired card(s) and the cards used to purchase them go face up in your discard pile at the END of your turn. They do not go into your hand or into play immediately.

There should always be 5 cards in the Active Gene Pool center row. As soon as a card is removed, immediately fill the empty slot with a card from the top of the deck. If the deck runs out, shuffle the discard pile to form a new deck. If any of the Pathogen Supply or Fever Supply decks are depleted, those cards are no longer available for purchase.

Depending on card abilities, it's possible to draw additional cards throughout Phase 1. If there aren't enough cards in your deck to allow you to finish a draw action, shuffle your discard pile to form a new deck and continue your turn. Any cards played or used on your turn are NOT placed in your discard pile until the END of your turn, so these cards aren't part of your new deck if shuffling is required mid-turn.

Playing cards from a player's hand to create and enhance pathogens

There are four types of cards that can be played: pathogens, traits, toxins, and environment cards. See the Appendix (page 12) for more information on creating and modifying pathogens.

There's no cost to play a card; just place it face up in front of you. Once a card is put into play, it can't be used for another purpose. For example, you can't play a pathogen and then discard it for its genetic value. Cards in play may not be removed or discarded.

Traits and toxins stay attached to a pathogen once played; they can't be swapped between pathogens, used to connect pathogens, rearranged, or removed to make room for other cards.

Hints for Strategy: Specializing in a single body tract increases the likelihood that the traits and pathogens drawn in any single hand will be compatible and can be played together. Having too many cards that can't be played together makes it more difficult to assemble competitive pathogens.

PHASE 4: PATHOGENS ATTACK THE BODY

The immune system doesn't respond to the presence of pathogens during the first few rounds of play, so after Phase 1 players immediately move to Phase 4. Phases 2 and 3 are added later as the game progresses.

Note: Attack is not optional. All pathogens in play must attack the body each turn.

> Your body is constantly surrounded by bacteria and generally your immune barriers are sufficient to protect you from most of them. It isn't until these barriers are breached that the body begins mounting an immune response, starting with the innate immune system and progressing to stronger and more specific types of immunity if the infection persists.

The pathogens that you have in play attack the body each turn. The attack icon shows the amount of attack contributed by that particular card or token. The total attack of the pathogen is the attack values on:

- The pathogen card
- Any attached or shared trait and toxin cards
- Attack tokens played on the pathogen

Initially, the pathogens must break through the immune system's **Barriers**. Once a Barrier deck is depleted, the pathogens begin taking tokens from the body tract. This also stimulates the immune system to begin attacking the pathogens each turn, adding Phases 2 and 3 to the game. Tokens may only be taken from a specific tract if all barrier cards have been eliminated from that tract. For the rest of the game, an attack on the body removes damage counters equal to the attack value; this hastens the demise of the body, and the damage counters count as victory points at the end of the game for the player (or team) that acquired them.

> When playing a competitive mode, if you do more damage to the tract than the tract has damage counters, you may take the additional counters **from any other body tract.**

> Casey has a Respiratory Super Pathogen with two traits and a toxin. It survived the Immune Response Attack and is now ready to attack the body. Casey adds up the attack values from the pathogen, trait, and toxin cards. The total attack value adds up to 10. Casey takes 10 points of damage/victory counters from the Respiratory Tract. If the Respiratory Tract has only 8 damage counters, she takes two damage counters from either the Gastrointestinal Tract or the Tissue Tract.

Determining which area of the body a pathogen may attack

Tract specific pathogens may only attack the area of the body that they are specific for (i.e., Tissue Pathogens and Tissue Super Pathogens must attack the Tissue Tract and cannot attack the Respiratory Tract or the Gastrointestinal Tract.) If a pathogen doesn't have a predetermined body tract—such as starter pathogens and the Multi-Point of Entry Super Pathogens indicated ⟳—you choose which tract to attack. This decision can be made at any point during your turn and the pathogen is considered to be a tract specific pathogen of that type (with all the advantages and disadvantages that entails) until the end of the round. All of the attack values for the current turn must be directed at that single body tract. If the pathogen survives another round, you may attack a different body tract with it on a future turn.

> John has a Multi-Point of Entry Super Pathogen in play. John has attached 2 trait cards that are also able to affect any body tract. John decides during Phase 1 to attack the Respiratory Tract. This makes his pathogen a Respiratory Pathogen for the rest of this round. John then plays his environment card Smoking that only benefits Respiratory Pathogens; he may also use Biofilm to share traits between this pathogen and other Respiratory Pathogens. This pathogen can only attack the Respiratory Tract in the body. On John's next turn he could decide that this pathogen is a Tissue Pathogen and play the rest of his turn accordingly.

Because pathogens with ⟳ connectors can connect to any type of trait or toxin, it's possible that you could have a mixture of traits and toxins on a single pathogen. However, if any attached trait or toxin is specific to a single body tract, it can only be used if the pathogen is in that tract.

> Morgan has a Multi-Point of Entry Super Pathogen and she's attached a Tissue trait that gives her card a card draw ability and a Respiratory toxin that adds to her attack value. If Morgan determines that her pathogen is a Respiratory pathogen this turn, she can't use the Tissue specific ability to draw an extra card when drawing her hand at the end of her turn. If she decides to attack the Tissue Tract with the pathogen this turn, she gets the card draw ability, but doesn't use the extra attack that damages the Respiratory system. If Morgan chooses to attack the Gastrointestinal Tract this turn, she may use the attack and defense values on the pathogen itself, but can't use either of the abilities on the Tissue and Respiratory specific cards.

Breaking through the Barriers

Before players can damage the human body (i.e., gain damage counters) they must first attack and destroy the immune system's Barriers. These Barriers consist of a deck of 5 cards on each body tract board. Turn the top card of each Barrier deck face up so you can see the defense value of the top card of each deck. On your turn, if the total attack value of the pathogens attacking this site is greater than or equal to the defense value on the Barrier card 🛡, trash the Barrier card and flip up the next card of that deck. You may remove as many cards as you have attack value to defeat. Pathogens of the same type may combine their attack values.

When you defeat a Barrier card, you get genetic value tokens equal to the defense of the Barrier cards. These tokens can be used on any future turn. Once spent, they're returned to the stock.

Amy has a Tissue pathogen, a Respiratory pathogen, and an Opportunistic (non-specific) pathogen in play. Her Tissue pathogen must attack the Tissue Barrier. Her Respiratory pathogen must attack the Respiratory Barrier. She chooses to make her Opportunistic pathogen a Tissue pathogen for this round. Her Tissue pathogens now have a combined attack of 4, which is enough to beat the defense value of 3 on the Barrier card with one left over. She trashes the Barrier card and flips up the next Barrier card, which has a defense of 2. The remaining 1 attack isn't enough to defeat it, so it remains. If there hadn't been another card, Amy would have taken 1

damage counter from the Tissue Tract with her remaining attack. Amy's Respiratory pathogen has an attack of 2, but the Barrier card has a defense of 3. Amy can't defeat this Barrier, so it remains.

Amy receives 3 genetic value tokens for the Tissue Barrier she defeated; she may use these on a future turn.

Start of the Immune Response Attack

At the beginning of the game, **play only 3 of the 5 Phases each round** (Phases 1, 4, and 5). The player who removes the last Barrier card from one of the body tracts is the first player attacked by the immune system. On their **next** turn, they resolve all 5 Phases in their correct order. From that point on, all players include phases 2 and 3 in the play order until the end of the game.

The body has a number of natural standing defenses. From the time we're born, these defenses fight off bacteria that we encounter in the environment. Chemical and physical barriers to infection—such as our stomach acid, the layers of dead cells that make up the surface of our skin, the normal flora microbes that inhabit our body, and the mucus produced by our lungs—keep our body from being damaged by the routine microbes we encounter in our day to day lives. The major players of the immune system don't need to come into play unless these barriers fail and there is damage to the cells of the body.

PHASE 5: CLEAN UP

Once Phase 4 is completed and any damage counters have been collected, it's time for clean up. Clean up is done in the following order:

1. Cards used this turn go into your discard pile. Cards to be discarded include the following:

- Cards purchased this turn
- Cards used for their genetic value to purchase cards this turn
- New DNA cards used to discard cards from the center row
- Environment cards used this turn
- Pathogens killed this turn (along with all associated trait and toxin cards)
- Unused cards from your hand that aren't being held for the next round

Pathogens that survived the Immune Response Attack on this turn are NOT discarded. They stay in play with all attached traits, toxins, and tokens until they're killed in a future round.

2. Draw your hand back up to 5 cards.

- If any cards were held from your last hand, they count toward the hand limit for the next round.

If you hold 2 cards from the previous hand, only draw 3 new cards to create a hand with a total of 5 cards for the next turn.

- If you have a surviving pathogen attached to traits with card draw abilities, those traits increase your hand limit during this phase.

If you have a pathogen in play with the traits Siderophores and Lipases, each giving an additional card draw, draw your hand up to 7 cards instead of 5.

- If the deck doesn't contain enough cards for you to draw your full hand, draw as many cards as possible, completely depleting the deck. Then shuffle the discard pile to make a new deck and draw cards as needed to complete your hand.

THE IMMUNE SYSTEM

The immune system has a 3 tiered defense that comes into play in waves as the game progresses. The first layer of immune defense is the Barrier deck for each body tract. While the Barrier decks are all in play, Phases 2 and 3 are skipped and players move directly from Phase 1 (buying and playing cards) to Phase 4 (attacking the body). When any one of the Barrier decks is depleted, the next two layers of the immune response come into play with the Immune Response decks. Unlike the Barrier decks, the Immune Response decks are offensive and work independently or cooperatively to kill pathogens.

PHASE 2: PREEMPTIVE ATTACK

After you play and purchase cards, the combat stage of the turn begins. On most turns the immune system goes first. However, if you played an environment card with the preemptive attack symbol, the pathogen you played it on attacks during Phase 2 instead of Phase 4. Place the damage counters it receives on the card that gave it the preemptive attack to remind you that this pathogen has already attacked. If the pathogen is killed during the Immune Response Attack during Phase 3, the pathogen and all associated traits, toxins, and tokens are discarded normally, but remember to put the damage counters into your stock.

If the pathogen survives the Immune Response Attack, it does NOT attack again during the normal attack phase; collect its damage counters along with any others earned on the current turn. The environment card goes into the discard pile during the clean up phase.

Some Immune Response cards decrease the damage that a pathogen does to the body. This ability does NOT affect cards with a preemptive attack. Damage counters earned during an attack are not retroactively removed from the pathogen and returned to the tract. All other Immune Response card effects on the player or pathogen are resolved normally.

PRE-EMPTIVE ATTACK

PHASE 3: IMMUNE RESPONSE

You and your pathogens face off against the immune system. Draw one card from the Immune Response deck for each pathogen you have in play. These cards are randomly assigned face down until all of your pathogens have the appropriate number of Immune Response cards. All Immune Response cards are flipped over and the effects are resolved in the following order:

1. Card Movement: Some Immune Response cards are attracted to specific protein tags. These tags are represented by tokens added to the pathogens by Immune Response cards previously drawn.

The Immune Response card Eosinophil moves to a pathogen with an IgE antibody token. If it's assigned to a card without a token, but an IgE is present on one of the current player's other pathogens, this Immune Response card moves to the tagged pathogen, adding its attack to the Immune Response card that's already there and leaving the pathogen it was originally assigned to with no Immune Response card.

2. Area Effects: Some Immune Response cards affect the attack strength of other Immune Response cards that are also in play that round.

The card Inflammation adds one to the attack value of all other Immune Response cards currently in play. This is taken into consideration before the attack is resolved in the next step.

3. Resolve Card Attack: Add up the total defense value for each pathogen—this is the sum of the defense 🛡 value on the pathogen card and all attached or shared traits, toxins, and tokens. Then add up the attack value of the immune system which includes the attack value of all immune system tokens present at the beginning of this round plus the sum of all immune system cards assigned to the pathogen. If the attack value of the Immune Response card(s) and tokens is equal to or greater than the total defense value of a pathogen, that pathogen dies—it and all attached traits, toxins, and tokens are discarded. A pathogen with a combined defense value greater than attack value of its Immune Response card(s) and tokens survives the Immune Response Attack and remains in play. There's no deduction to the "health" of the pathogen—it survives or it doesn't.

4. Additional Effects: After an attack is resolved, some Immune Response cards have additional effects to be resolved. For example, the Immune Response card Fever adds a card from the Fever supply to the player's discard pile. Other cards add tokens to the pathogen, draw additional cards, or trash cards from the player's discard pile.

Effects that cannot take place are ignored—for example, if the pathogen dies and is discarded, no token can be added to it.

Tokens are added after movement and attack resolution, so they don't affect the Immune Response cards that were played on this turn.

5. Discard the Immune Response Cards: At the end of Phase 3, all Immune Response cards played during that turn are placed in the Immune Response discard pile.

IMMUNE RESPONSE DECK

The Immune Response deck is divided into two parts. The Innate Immunity deck (Deck 1) is composed of immune cells and responses that would come into play immediately after infection is detected in the body. The Adaptive Immunity deck (Deck 2) is composed of cells and systems that take longer for the body to mobilize, but that have the potential for a larger overall attack value. There are 9-10 unique cards in each deck and a total of 4 copies of each card. Not all of the cards are used in any one game.

Shuffle Deck 1 and Deck 2 independently during set up and draw the correct number of cards from each deck based on the table on page 20. This means that between zero and four copies of any given card could be in the Immune Response deck for any given game.

The cards to be used from Deck 1 are placed face down and serve as the draw deck for the Immune Response during Phase 3. The cards to be used from Deck 2 are placed face up and initially serve as a discard pile for Deck 1.

> The innate immune response consists of white blood cells such as macrophages, neutrophils, and basophils as well as chemical signaling molecules that can stimulate inflammation and fever or attract other white blood cells. These types of responses come into play within seconds after the body receives signals that there has been damage to any of the body's cells and they stay in play until the danger has been dealt with. This branch of the immune system isn't specific and can have a difficult time telling human cells from pathogenic cells, so the overall damage done by these components is normally held in check.

Once Deck 1 has been depleted, **all the Immune Response cards from the discard pile** (which now contains both Decks 1 and 2) are shuffled together to make a new Immune Response deck. This combined deck serves as the Immune Response deck until the end of the game. The cards that are discarded from this combined deck are no longer available during this game.

> The adaptive immune response brings the B-cells and the T-cells into play, along with the various classes of antibodies that the B-cells produce. This branch of the immune system takes longer to mobilize because it's highly specific, attacking pathogens rather than human cells. When used in combination with the elements of the innate immune system that are already in play, this can have a devastating effect on infecting pathogens.

If the second Immune Response deck is depleted, the body wins. If at any point a player needs to draw an Immune Response card and there isn't one left to draw, the game ends immediately with the body reaching "immunity" and all players losing.

What if a player has no pathogen in play during the Immune Response phase?

It's important to have a pathogen in play when the immune system attacks. If the immune system is active and you begin your turn without a pathogen in play and without a single pathogen in your hand, you have two options.

1. Show your hand to the other players, discard your entire hand, and draw a new hand. This may be repeated until you draw a hand of cards containing a pathogen.

2. The immune system attacks. If you have no pathogens in play and choose not to play a pathogen this turn, the immune system attacks you. During the Immune Response phase, draw one card from the Immune Response deck which attacks by removing damage counters from your stockpile equal to the Immune Response card's attack value. These tokens are removed from the game. They DO NOT go back to the body tract they were taken from.

LASTING EFFECTS OF TOKENS

Once a token is placed on a pathogen (by an Immune Response card or by a trait from another pathogen), that token stays on the pathogen until the pathogen dies.

Amy has 2 Tissue pathogens in play. Amy plays the Coagulase trait on her 1st Tissue pathogen, which allows her to place a +2 defense token on her second Tissue pathogen. During the Immune Response her first pathogen is killed. Because the +2 defense token has already been placed on the second pathogen, it stays in place until the second pathogen dies, even though the card that shared the token is now gone.

LASTING EFFECTS OF CARDS

Card effects aren't adjusted retroactively. If a card is present at the beginning of the phase, its effects persist until the end of that phase, even if the card is lost.

During clean up, John has a pathogen with a trait that allows him to draw an extra card. He draws 6 cards into his hand for the next round. On Amy's turn she uses her Predatory Bacteria card to kill John's pathogen. John's pathogen and all of its traits go into his discard pile. John does NOT discard down to 5 cards, because the trait that allowed him to draw an extra card was in play when he drew the cards.

No pathogen may benefit from the effect of the same trait twice.

There are 2 or more copies of each trait in the Gene Pool deck. Some cards allow traits to be shared to other pathogens in the same body tract. However, if a player plays 2 copies of the same trait that allow sharing of the trait, each pathogen may benefit only once from the effect of that trait.

Nathan has 2 Gastrointestinal pathogens and he also has 2 copies of the trait Gelatinase, which allows him to place a +2 defense token on another Gastrointestinal pathogen.

Nathan may not play both copies of the trait on the same pathogen (each pathogen can only have one copy of a single trait).

He may play one copy of the trait on each of his pathogens. If he does this, he may not:

- **Place a token on a pathogen that already has the card for that trait.** Since both of his pathogens are already benefiting from the +2 defense from the Gelatinase card itself, they can't get an additional +2 token for the Gelatinase trait. If he played a third Gastrointestinal pathogen (one that wasn't attached to the Gelatinase trait) it could get a token and benefit from the effects of the trait.
- **Nathan may not place two identical tokens on the same pathogen.** Once the third pathogen gets a +2 defense token, it's benefiting from the defense of the Gelantinase trait so it can't get a second defense token for the second copy of the trait in play.
- **Nathan may not use the Fertility Plasmid trait or the Biofilm card to share traits to pathogens already benefiting from that trait.** If Nathan plays Biofilm on the third Gastrointestinal pathogen, it gets the benefits of all of the traits/toxins of the other Gastrointestinal pathogens in play. Because it already has a +2 defense token, it wouldn't get any more defense from the two Gelatinase traits currently in play. It would get an additional +1 attack because that wasn't previously shared to it, but it only gets it once rather than twice (for the two cards in play).

The third pathogen continues to get the defense bonus (as well as any other defense bonuses from other traits in play) through the end of Phase 3, even if both of the other two pathogens die during the Immune Response Attack. It won't get the attack bonuses of dead pathogens during Phase 4, as those bonuses are no longer present (and therefore not shareable) if the pathogens died during the immune attack in Phase 3.

ENDING THE GAME

The game ends when either of the following conditions is met:

The combined Immune Response deck runs out (after Deck 1 has been shuffled into Deck 2). At any point if a player needs to draw an Immune Response card but cannot, the game immediately ends. The body has become immune to all of the pathogens. The body wins and all of the players lose the game.

The required number of body tracts are depleted of damage counters.

The number of body tracts that must be depleted of damage counters for game to end depends on the mode of game being played. For competitive games with 2-4 players, the game ends immediately when any single body tract runs out of damage counters. All players then count the total value of the counters they've acquired of all types. The player with the most total damage counters—regardless of which body tract they're from—wins the game.

Tie Breaker: If there's a tie, the player with the most tokens from the tract that was depleted wins. If there's still a tie, the player with the most pathogens in their deck wins.

SPECIAL RULES FOR SPECIFIC MODES OF PLAY

SOLO GAME

1. Whenever you remove a Barrier card, select 2 other Barrier cards to remove as well.

2. At the beginning of each turn, you must trash one card (your choice) from the center row of the Active Gene Pool and replace it with the top card from the Gene Pool deck.

TWO PLAYER COOPERATIVE GAME

1. At the beginning of each player's turn, that player must trash one card (their choice) from the center row of the Active Gene Pool and replace it with the top card from the Gene Pool deck.

2. Each turn a player may pass one card from their hand to their partner's discard pile.

3. Cards purchased during Phase 1 may be placed into the current player's discard pile (as usual) or into the discard pile of their partner.

4. Cards that share traits to other pathogens in the same body tract (cards that add bonus attack and defense tokens or that allow the sharing of traits or toxin effects such as Fertility Plasmid and Biofilm) include not only the pathogens in play by the current player but also any applicable pathogens that their partner currently has in play.

5. Cooperative and team modes of play require depleting more than one tract of the body, so once the last damage counter is taken from any one body tract, all players may discard any pathogens in play that can only attack that tract.

6. The game ends and **the players win when all damage counters have been removed from all three body tracts**. In this mode, it's a race to see if the players can remove all the counters from all the tracts of the body before the Immune Response deck runs out of cards. Experienced players can increase the difficulty level by increasing the number of damage counters in each body tract and/or removing cards from the Immune Response decks. Suggestions for starting numbers are found in the table on page 20.

2 VS 2 TEAM GAME

1. In 2 vs 2 Team Games, players of each team alternate turns so a member of the opposing team always goes between the turns of members on the same team.

2. **All the rules for Two Player Cooperative Games apply between team mates (bullet points 2-5 above).**

3. The game ends when the last damage counter is depleted from the **second** body tract. (In this mode no additional damage counters are taken if there are fewer counters than the damage dealt to that tract). Each team counts the total value of the combined damage counters of both players. **Only the damage counters from the two depleted dishes count as victory points.** (Counters from the non-depleted dish are not counted).

Tie Breaker: If there's a tie, the team with the most damage counters from the dish that was depleted FIRST wins the game. If there's still a tie, the team with the most total pathogens in their decks wins.

APPENDIX
TIPS FOR NEW PLAYERS

Defense is necessary: You can't win the game without acquiring cards that have defense abilities. The immune system attacks players before players are able to attack the body. Trait cards that boost defense are valuable.

Buy pathogens: You need to buy pathogens throughout the game. As a guide, you may want to buy 3, 4, or 5 pathogens during the game depending on your strategy. If you have great traits and toxins but nothing to play them on, you won't get any victory points.

Specialize: Especially when playing in the competitive modes, you'll have an easier time matching traits, toxins, and environment cards to your pathogens if they specialize in one area of the body (Respiratory, Tissue, or Gastrointestinal). In cooperative and team play modes, you may want to have more flexibility to switch focus during the game or perhaps acquire cards from 2 tracts. Taking cards from all 3 tracts is almost never a good strategy because it's difficult to get cards that work together in your hand at the same time (unless you're inhumanly lucky). It's also a good idea not to specialize in the same tract as the person who goes right before you in the turn order. They get a chance to buy cards from the Gene Pool before you do, which can make it difficult to acquire the best cards for your tract.

TYPES OF CARDS

There are several types of cards used in **PATHOGENESIS**. Cards in the players' decks come from the starter decks and from cards purchased from the Active Gene Pool to grow and enhance the player decks. There are also Barrier cards, which protect each body tract, and the cards of the Immune Response deck.

PLAYER DECK
The most important cards in the player deck are the pathogens, which allow you to attack the human body and gain victory points. The rest of the player cards allow you to enhance and protect your pathogens. All pathogens have several inherent characteristics.

Attack and Defenses: This tells you how much damage the pathogen can do to the body and how much damage it can sustain from the immune system when it's attacked. These values are added to the attack and defense values of associated virulence factors. To play a card as a pathogen, simply set the card on the table in front of you. The pathogen stays in play until it's killed, at which point it goes to your discard pile.

Genetic Value: A pathogen card can be discarded from your hand for its genetic value when purchasing new cards. Pathogens may not be played AND used for their genetic value on the same turn, and a pathogen card that's in play as a pathogen can no longer be used for its genetic value.

Attachment Points: Pathogens have attachment points where you can add virulence factors. The higher the level of the pathogen, the more attachment points it has. Tract specific pathogens can only be attached to matching traits or toxins (for example, Tissue toxins can be played on Tissue pathogens but not on Respiratory pathogens). The purple attachment points on Multi-Point pathogens can bind to any type of virulence factor.

Cost: Some pathogens are in your starter deck; all others must be purchased. The cost to purchase a pathogen is in the lower right hand corner of the card.

Pathogens
The 3 levels of pathogen cards are based on the severity of infection they cause.

Level 1: Starter Pathogens
The pathogens in the starter decks can attack any body tract and bind to any trait cards, but they don't have enough attachment sites to bind to toxin cards. They're fairly weak in attack and defense and have a genetic value of 1.

Normal Flora: Bacteria normally associated with the human body. Adaptation to their environment has given them some resistance to the basic defenses of our body, but they don't have much capacity for causing damage.

The human body is made up of tens of trillions of human cells and is colonized by tens of trillions of bacterial cells. The vast majority of these organisms are completely harmless and many are actually beneficial because they aid us in processes like digestion or prevent more dangerous species of bacteria from colonizing the body by competing with them for space and nutrients. Normal flora organisms may also cause a variety of minor annoyances such as acne and body odor. Genetic changes to these organisms can upset the delicate symbiotic balance that exists in our body, allowing them to cause damage where they had been previously peaceful inhabitants.

Opportunistic Pathogens: Bacteria normally associated with the human body. These organisms have the potential to damage the body, but under most conditions they're held in check by the body's immune system.

A number of pathogens associated with disease can be found in low numbers in/on the body of healthy individuals, living harmlessly alongside the normal flora. Given the opportunity to cause infection, these pathogens will damage the body, especially if it's immunosuppressed.

Level 2: Tract Specific Pathogens

These cards cost 2 genetic value to purchase and are available from the Active Gene Pool. They have more attack and defense than the starter pathogens and have a higher genetic value. They also have more attachment sites for adding virulence factors. Unlike the starter pathogens, which can attack any tract of the body, each type of these pathogens infects a specific body tract. Virulence factors added to these cards must match the same color/symbol on the attachment site, indicating that it affects the same tract of the body, or must have a purple symbol, which can be used in any tract of the body.

These represent the types of bacteria that would cause routine infections. While these infections can be deadly if left untreated, the amount of damage they do to the body is typically minimal before they are eradicated by the immune system.

Level 3: Super Pathogens

These stronger pathogens have more potential to take on traits or toxins and more defenses against the immune system than regular pathogens. Tract specific super pathogens can attack the Respiratory, Gastrointestinal, and Tissue tracts respectively. The Multi-Point of Entry Super Pathogen can attack any of the tracts and has much more flexibility when it comes to binding to virulence factors.

These pathogens cause more deadly diseases that can do a significant amount of damage to the body (diphtheria, cholera, tetanus, tuberculosis, whooping cough, etc.). In the 1900's, tuberculosis, respiratory infections such as pneumonia, and diarrheal illnesses such as cholera were the three leading causes of death in the human population. Luckily in modern times, thanks to antibiotics and vaccinations, they are much less common.

Playing and Upgrading Pathogens

Pathogens, like all other cards available from the Active Gene Pool, are purchased by discarding cards with the appropriate genetic value from a player's hand.

You have two options for putting the pathogen into play:

1. The pathogen card is placed in your discard pile at the end of your turn just like all the other cards that are purchased from the Active Gene Pool. (Pro: this increases the total number of pathogens available in your deck and can be done if you don't have an upgradable pathogen in play.)

2. The pathogen can be used to upgrade a pathogen you currently have in play. The new pathogen goes into play immediately and all traits and toxins associated with the current pathogen are transferred to the new pathogen. This action is done during Phase 1 and follows the steps listed below. (Pro: the pathogen goes into play immediately.)

Steps to Upgrade a Pathogen

1. Upgrading must transform a pathogen into a pathogen of the next higher level: starter pathogen to tract specific pathogen to tract specific super pathogen or Multi-Point of entry Super Pathogen.

2. You must have a pathogen in play capable of being upgraded and a valid pathogen must be available for purchase for it to be upgraded to.

3. **You must pay the cost of the pathogen being purchased.**

4. Replace the pathogen currently in play with the newly purchased pathogen. The original pathogen is removed from your deck. (Starter pathogens go into the box. Tract specific pathogens go back into the correct pile in the Active Gene Pool).

5. All traits and toxins associated with the original pathogen are arranged on the open connection points of the new pathogen.

Note: this is the only time you may rearrange the positions of trait and toxin cards after they've been played.

OTHER TYPES OF CARDS IN PLAYER DECKS

New DNA

These cards are found in the starter deck and they can be used in **one** of three ways each time they're in your hand:

1. Expose a new card of the Gene Pool deck: Each New DNA can be played to discard 1 card from the center row of the Active Gene Pool and draw a new card to fill the empty spot. Place the New DNA card in your discard pile at the end of your turn.

2. Genetic value: Each New DNA is worth one genetic value towards purchasing new cards. It and the purchased card are placed in your discard pile at the end of your turn.

3. Trash the card to use its special ability: After using the card's special ability, the New DNA card is trashed (removed from the game) rather than discarded.

New DNA Special Abilities

These abilities can only be used once. After use, you must "trash" the card—place it back in the box as it will no longer be used in this game.

1. Rapid Cell Division (3 copies): You may sweep all five cards of the center row of the Active Gene Pool and place them in the Gene Pool discard pile. Five new cards are revealed from the Gene Pool deck.

2. Predatory Bacteria (1 copy): Discard any 2 cards from your hand—these cards cannot be played, used for genetic value, or used for their abilities this turn—to kill

any one pathogen in play. The pathogen and all traits and toxins associated with it go into the owner's discard pile as if it was destroyed by the immune system. Any tokens attached to the pathogen go back into the stock piles.

3. Adaptation (1 copy): Trash this card to discard one or more cards from your hand and draw that same number of cards from the top of your deck.

4. Infection (1 copy): Trash this card to place a card you purchased this turn from the Active Gene Pool on top of your deck instead of into your discard pile.

5. Variable Surface Antigens (1 copy): Trash this card to remove all immune system tokens from all of your pathogens in play.

6. Septic Infection (1 copy): Trash this card to allow one pathogen of your choice—yours or your partner's in team or cooperative play—to attack any body tract during that pathogen's attack phase until the beginning of your next turn.

7. Bacterial Symbiosis (1 copy): Until the start of your next turn, when a pathogen belonging to another player attacks the body, take 1 damage counter for each of your pathogens attacking the same body tract.

8. Persistent Infection (1 copy): Trash this card to place 1 card from your discard pile on top of your deck.
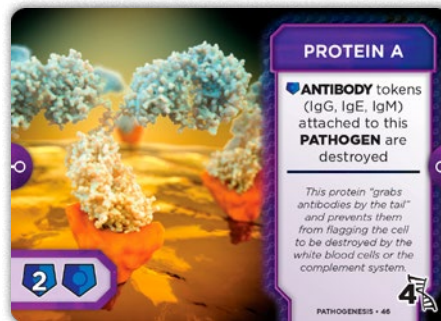
Traits

Trait cards are virulence factors found in the Gene Pool deck. They're oriented to be played horizontally on existing pathogens to augment their attack, defense, and other abilities. Tract specific traits must be attached to pathogens specific to the same tract or to nonspecific patho-

gens such as those from the starter deck or Multi-Point of Entry Super Pathogens. Trait cards have one attachment point on each side so you may play them on any single attachment point on a pathogen card. These stay in play attached to the pathogen as long as it survives.

Trait cards may be attached to 1 pathogen and may not be attached to any other cards. Further, pathogens are individual entities and are never connected to each other.

Toxins

Toxin cards are virulence factors that enhance the ability of the pathogen to damage the body. They're similar to trait cards but are oriented vertically, have larger attack bonuses for the pathogen. Tract specific toxins must be attached to pathogens specific to the same tract or to Multi-Point of Entry Super Pathogens. Toxins require two adjacent open attach-

ment points—this means that toxins cannot be played on pathogens from the starter deck because they don't have adjacent attachment points. These stay in play attached to the pathogen as long as it survives.

Toxin cards may be attached to 1 pathogen and may not be attached to any other cards. Further, pathogens are individual entities and are never connected to each other.

> Toxins do most of the damage to the body during bacterial infections. They are chemicals that either directly harm the body or trick the immune system into damaging the body. Many can enter the blood stream and be carried throughout the body, far from the site of the actual infection.

Environment Cards

Play environment cards from your hand for an immediate effect. At the end of your turn, they go into your discard pile.

Fever Cards

The body runs a fever to aid its ability to fight microbes, so these cards are typically placed into the player decks by Immune Response cards. However, when the fever becomes too high or lasts for too long, it starts damaging the body. Some traits in the player deck take advantage of this fact. Additional Fever cards are available for purchase in the Active Gene Pool.

Low grade fevers are a common response to infection. Fever can increase the efficiency of some anti-microbial systems in the body. However, long term or excessively high fevers lead to dehydration and electrolyte imbalances in the body. This can cause seizures in young children, delirium in adults, and affect heart rate in older individuals, ultimately doing more harm than good.

TOKENS

PLAYER TOKENS

Attack Bonus: Some traits create area effects that increase the attack of other pathogens in the same tract of the body. Each turn that a pathogen with this trait is alive, it may add one of these tokens to another pathogen of the same type. No pathogen may benefit from this trait more than once, so a single pathogen should never have more than one attack token from a specific trait. Player tokens are added during Phase 1.

Defense Bonus: Some traits create area effects that increase the defense of other pathogens in the same tract of the body. Each turn that a pathogen with this trait is alive, it may add one of these tokens to another pathogen of the same type. No pathogen may benefit from this trait more than once, so a single pathogen should never have more than one defense token from a specific trait. Player tokens are added during Phase 1.

Genetic Value: This may be used in addition to or instead of the genetic value of cards from your hand when purchasing cards during Phase 1 of your turn.

IMMUNE TOKENS

Chemokine: This token represents cell signaling molecules of the immune system (cytokins) that allow for the movement of other immune cells to that site (chemotaxis). When placed on a pathogen, this token causes an extra Immune Response card to be drawn for this pathogen during the Immune Response Attack. A single pathogen may accumulate multiple chemokine tokens. For example, a pathogen with two chemokine tokens would draw 3 Immune Response cards each turn instead of just one.

C3 Token: This token represents a protein tag added to the pathogen by the immune system's complement response. This token attracts and increases the attack of certain Immune Response cards.

IgG Antibody Token: This token represents an Immunoglobulin(Ig) class G antibody. This token attracts and increases the attack of certain Immune Response cards.

IgE Antibody Token: This token represents an Immunoglobulin(Ig) class E antibody. This token attracts and increases the attack of certain Immune Response cards.

IgM Antibody Token: This token represents an Immunoglobulin(Ig) class M antibody. When this token is played on one of your pathogens, the fate of that pathogen is linked to another of your pathogens (or to the next pathogen you play if you currently have no other pathogens in play). When the fates of the two pathogens are linked, when one of them dies the other dies as well.

The adaptive immune response brings the B-cells and T-cells into play along with the various classes of antibodies that the B-cells produce. In the body, each class of antibody can have multiple functions; however, for the simplicity of game play, each class of antibody has been assigned one of the possible functions of its class.

Immune Tokens with attack value: C3, IgG, IgE, and IgM tokens have their own constant attack value if the tokens are present on a pathogen at the beginning of a turn. If the tokens were played on a previous turn add their attack value to the attack value of cards played onto the pathogen this turn.

DAMAGE COUNTERS/VICTORY POINTS

When you attack the body, remove damage counters equal to the attack value of the pathogen from the appropriate body tract. These counters both represent the health of the body and count as victory points to determine the winning player or team once the game is over.

DEFINITION OF TERMS

Active Gene Pool: All the cards available for purchase. This includes the 7 Pathogen Supply decks and the Fever Supply deck that are available every turn and the 5 cards drawn from the Gene Pool deck that form the center row. When a card from the center row is purchased, immediately draw a new card from the top of the Gene Pool deck to replace it.

Attachment Points: This is where pathogens, traits, and toxins attach to each other. The total number of attachment points on a pathogen determines how many traits/toxins it can bind to. Traits and toxins have attachment points on both sides for ease of play, but **can't attach to more than one pathogen at a time**. The number of attachment points on each side of a trait or toxin represents the number of available attachment points needed on the pathogen to allow the trait or toxin to bind there.

Body Tract: Three separate body tracts are represented by the playing boards: the Respiratory Tract, the Gastrointestinal Tract, and the Tissue Tract. Each tract has its own specific Barriers to infection and its own supply of damage counters/victory points. Some pathogens are particularly adaptable and able to infect and cause damage to any part of the body; however, many pathogens, toxins, and traits have a specific part of the body that they can affect. Tract specificity is indicated by the following symbols:

Respiratory Tract

Gastrointestinal Tract

Tissue Tract

Gastrointestinal pathogens such as Vibrio cholera cause no significant damage to the skin if you rub it onto an abrasion, but it causes life-threatening diarrhea if introduced into the intestinal tract. Similarly, Streptococcus pneumonia will die in the stomach long before it can cause food poisoning, but can cause pneumonia if it colonizes the lungs. These organisms have different characteristics that allow them to survive and thrive in the environments found in some parts of the body but not others. A few organisms have the ability to infect and cause disease no matter how they enter the body. Bacillus anthracis, for example, causes severe infections of the skin when it contaminates open cuts or abrasions, can cause food poisoning if ingested, and is often fatal if inhaled into the lungs.

Killed/Discarded: When one of your pathogens is killed by the immune system or an opponent, it and all cards associated with it go into your discard pile.

Pathogen: An organism that can infect the body and cause disease. In **PATHOGENESIS**, all pathogens are bacterial cells with an inherent attack and defense value that can be modified by virulence factors. These cards also have a genetic value. Pathogen cards can be played as pathogens OR used for their genetic value, but not both.

Trashed: Trashed cards are removed from the game. They go back in the box, not into a player's discard pile.

Virulence Factor: Any characteristic that would help a pathogen cause disease in the body. These are represented by trait and toxin cards in the Gene Pool deck and must be connected to pathogen cards in play. These may help protect your pathogens from the immune system or allow them to cause additional damage to the body and/or grow faster (represented by the card draw ability).

Traits are encoded in the genome of the organism. Mutations to the organism as well as horizontal gene transfer with other bacterial cells may alter what traits a pathogen has and potentially allow it to become more "virulent," i.e., better able to cause disease.

ICONOGRAPHY REFERENCE

Attack: This symbol indicates the amount of damage a pathogen can inflict on the body. Generally this symbol contains a number indicating its attack value. The sum of the attack values on the pathogen and associated virulence factors is used to calculate damage to the body. If this symbol appears without a number, the instructions on the card describe the amount of attack that should be added and under what conditions it's effective.

Defense: This symbol indicates the amount of damage the pathogen can withstand before being killed by the immune system. Generally this symbol contains a number indicating its defense value. The sum of the defense values on the pathogen and associated virulence factors must be greater than the immune system's attack for the pathogen to survive. If this symbol appears with no number, the instructions on the card describe the amount of defense and under what conditions it's applied. **Note: The defense of a pathogen is not reduced if it survives the immune attack.**

Genetic value/genetic cost: When this symbol is on the banner, it indicates the genetic value or purchasing power of the card when used to acquire new cards from the Active Gene Pool. When this symbol appears in the lower right hand corner of a card, the value represents the cost to purchase that card.
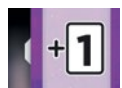
Card draw: This indicates the number of additional cards you may draw into your hand. If this symbol is on an environment card, the card is discarded as usual at the end of your turn. If this symbol is on a trait card, it allows an immediate card draw when played on a pathogen. If that pathogen survives the Immune Response Attack, the card draw effect stays in place, essentially increasing your hand limit for as long as the pathogen survives.

Discard a card from the center row of the Gene Pool: You can play any New DNA card to discard 1 card from the center row of the Active Gene Pool and replace it with a card from the top of the Gene Pool deck. The New DNA card is placed in your discard pile.
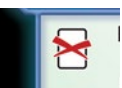
Trash this card: Some cards have a special, one-time-use ability described next to this symbol. When the special ability is used, you must trash the card once the action is complete (remove it from the game rather than put it in your discard pile).

Trash another card: Some cards allow you to trash other cards from your hand or discard pile. These cards are removed from the game rather than re-shuffled into your deck, which provides a way to get rid of useless or unwanted cards. Alternatively, you may use a card with this symbol to discard a card from the center row of the Active Gene Pool instead.
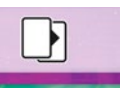
Sharing: This card allows you to share the effects of virulence factors on one pathogen with another pathogen that shares the same tract of the body. The card describes the specific conditions for this sharing action to occur. **Note: No pathogen can benefit from the effect of a single virulence factor more than once.**

Preemptive Attack: If you play an environment card with this symbol on a pathogen (specific cards designate which pathogens are eligible), that pathogen can attack the body before the immune system attacks the pathogen. **Note: The pathogen does not get to attack a second time on this turn.** Place any damage counters you gain on this card as a reminder that the pathogen has already attacked this turn. Collect these counters when the pathogen dies or after Phase 4.

CARD ANATOMY
PLAYER CARDS
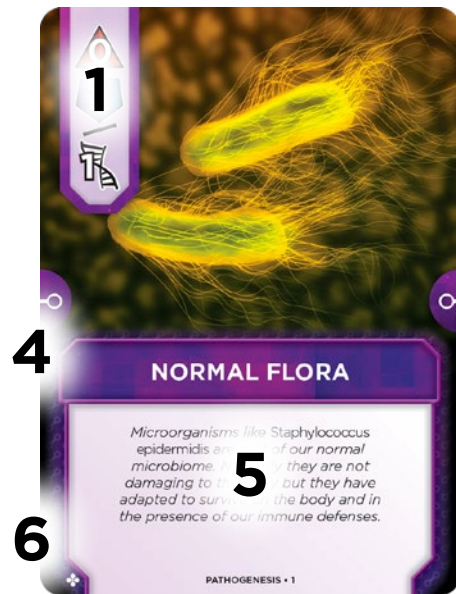
PATHOGEN

NEW DNA

ENVIRONMENT

TOXIN
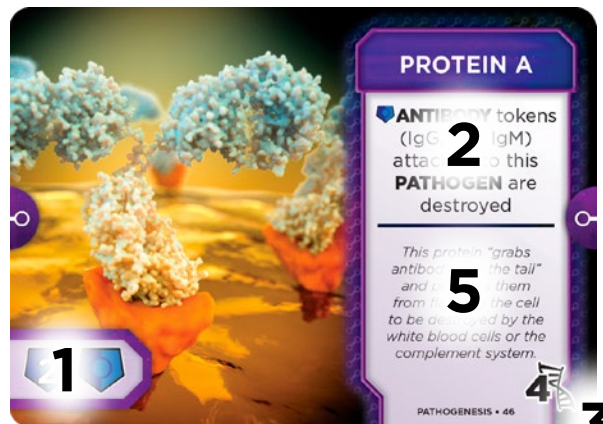
TRAIT

1. The **card banner** lists the main abilities of the card.

2. Some cards have **special abilities**.

3. The **cost to acquire** is listed on all cards that aren't part of the starter deck.

4. **Attachment points** are indicated on the sides of pathogen, trait, and toxin cards.

5. Additional information about the science behind the card that doesn't affect game play can be found in the italicized **flavor text**.

6. Cards in the starter deck have a **sorting symbol** in the lower left corner. Each 10 card starter deck includes cards with the same symbol.

CARD ANATOMY
IMMUNE SYSTEM CARDS

IMMUNE BARRIER

CILIARY ESCALATOR: CILIATED CELLS

3 **4**

After defe... this card take **3** gen... alue tokens for use on a future turn.

These cells conti... ove the mucous (and any pat... aught up in it) out ... ungs

2

3

PATHOGENESIS • 70

IMMUNE REPONSE
(INNATE IMMUNITY)

INFLAMMATION

1

+1 ATTAC... dded to all other immu... efense cards played on your **PATHOGENS** until the end of this phase.

Inflammation ... alized immune attack on ... pathogens.

2

3

PATHOGENESIS • 80

5

IMMUNE REPONSE
(ADAPTIVE IMMUNITY)

CLASSICAL COMPLEMENT PATHWAY

1

This card m... ove to one of your PA... ENS with **IgG** or Ig... available.

The classical complement pathway is made up of ... circulating in the blood, it is ... by antibodies attached to the ... of a pathogen.

2

3

PATHOGENESIS • 91

5

1. Immune Response cards list the **attack value** it normally deals to a pathogen.

2. Most immune system cards have **special abilities**.

3. Additional information about the science behind the card that doesn't affect game play can be found in the italicized **flavor text**.

4. The **amount of attack** needed to remove a Barrier card.

5. The **deck indicator** for Immune Response cards is printed in the lower right corner. One dot for the Innate Immunity deck (Deck 1), two dots for the Adaptive Immunity deck (Deck 2).

SET UP FOR VARIOUS MODES OF PLAY

Mode	Number of Players	Difficulty	Immune Response Cards per Deck	Total Value of Tokens per Tract	Game End Condition
Solo	1	Normal	6	60	Defeat 1 tract
Solo	1	Hard	5	60	Defeat 1 tract
Cooperative	2	Normal	10	20	Defeat all 3 tracts
Cooperative	2	Hard	8	20	Defeat all 3 tracts
Competitive	2	Normal	12	60	Defeat 1 tract
Competitive	2	Hard	10	60	Defeat 1 tract
Competitive	3	Normal, Quick	15	40	Defeat 1 tract
Competitive	3	Normal, Long	18	60	Defeat 1 tract
Competitive	3	Hard, Quick	12	40	Defeat 1 tract
Competitive	3	Hard, Long	15	60	Defeat 1 tract
Competitive	4	Normal, Quick	20	40	Defeat 1 tract
Competitive	4	Normal, Long	24	60	Defeat 1 tract
Competitive	4	Hard, Quick	16	40	Defeat 1 tract
Competitive	4	Hard, Long	20	60	Defeat 1 tract
Team play	4 (2 vs 2)	Normal	20	40	Defeat 2 tracts
Team play	4 (2 vs 2)	Hard	16	40	Defeat 2 tracts

As an example, when setting up a quick three-player game that we want to be difficult to beat, we would create an Innate Immunity Deck with 12 cards and a Adaptive Immunity Deck with 12 cards. All other Immune Response cards are returned to the box. The Innate Immunity Deck is shuffled and placed face down, the Adaptive Immunity Deck is placed face up in the discard pile.

Forty points of damage value tokens are placed on each of the three body barrier boards.

The game ends when one body tract has been defeated.

For the how-to-play video and support visit *www.wibaigames.com*.

PATHOGENESIS GAME CREDITS

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1-4 PLAYERS

30-60 MINUTES

AGE 14+

somersault 18:24