

**TEMPORAL TRANSMUTATIONS: MEDIEVAL ALCHEMY,  
CHIMERAS, AND BIOART**

**TRANSMUTAÇÕES TEMPORAIS: ALQUIMIA MEDIEVAL,  
QUIMERAS E BIOARTE**

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QUIMERAS Y BIOARTE**

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### Abstract

This essay explores the symbolic and philosophical connections between medieval alchemy, the figure of the Chimera, and contemporary BioArt. It argues that BioArt is not merely a biotechnological practice but also draws on archaic and alchemical imaginaries to produce artworks that challenge the boundaries between human and non-human, natural and artificial. The Chimera, as a hybrid figure, symbolizes transformation, the reconciliation of opposites, and the emergence of new modes of existence. Alchemy, in turn, is presented as a spiritual and material precursor to BioArt, offering a vision of transformation as a pathway to knowledge. Through the analysis of specific BioArt projects and historical references, the essay demonstrates how contemporary practices update and reinterpret classical and medieval symbols, proposing an ontology of hybridity. The result is not only an aesthetic proposition but also a philosophical and ethical one: an invitation to rethink matter, life, and creation from a more integrated perspective. In conclusion, the hypothesis is confirmed—BioArt emerges as a contemporary form of alchemy, generating chimerical creations that reactivate classical traditions and foster novel insights into the present. This essay ultimately proposes a historical hybridization, encouraging us to create our own philosophical and artistic chimeras

**Keywords:** BioArt; Alchemy; Chimera; Hybridity.

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### Resumo

Este ensaio investiga as conexões simbólicas e filosóficas entre a alquimia medieval, a figura da Quimera e o BioArte contemporâneo. Defende-se que o BioArte não é apenas uma prática biotecnológica, mas também se alimenta de imaginários arcaicos e alquímicos para criar obras que desafiam as fronteiras entre o humano e o não-humano, o natural e o artificial. A Quimera, como figura híbrida, torna-se símbolo de transformação, de reconciliação de opostos e de abertura a novas formas de existência. A alquimia, por sua vez, é apresentada como precursora espiritual e material do BioArte, ao compreender a transformação como via de conhecimento. Através da análise de obras bioartísticas e referências históricas, o ensaio demonstra como essas práticas contemporâneas atualizam e ressignificam símbolos clássicos e medievais, propondo uma ontologia do híbrido. A proposta é tanto estética quanto filosófica e ética: uma convocação para repensar a matéria, a vida e a criação sob uma perspectiva mais integrada. Conclui-se que o BioArte funciona como uma forma de alquimia contemporânea, produzindo criações quiméricas que reativam o diálogo com o passado e abrem caminhos para novas compreensões do presente. O texto convida à hibridização histórica, propondo a criação de nossas próprias quimeras filosóficas e artísticas.

**Palavras-chave:** BioArte; Alquimia; Quimera; Hibridização.

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### Resumen

Este ensayo explora la conexión simbólica y filosófica entre la alquimia medieval, la figura de la Quimera y el BioArte contemporáneo. Sostiene que el BioArte no solo incorpora prácticas biotecnológicas, sino que también se nutre de imaginarios arcaicos y alquímicos para producir obras que cuestionan las fronteras entre lo humano y lo no humano, lo natural y lo artificial. La Quimera, en tanto figura híbrida, funciona como un símbolo de transformación, de integración de opuestos y de apertura hacia nuevas formas de existencia. Por su parte, la alquimia se presenta como un antecedente tanto espiritual como material de las prácticas bioartísticas, al concebir la transformación como una vía de conocimiento. A través del análisis de obras bioartísticas y de referentes históricos, el ensayo demuestra cómo estas prácticas contemporáneas actualizan y resignifican símbolos clásicos y medievales, planteando una ontología de lo híbrido. La propuesta no solo es estética, sino también filosófica y ética: se invita a repensar la materia, la vida y la creación desde una visión más integrada. En conclusión, se confirma la hipótesis de que el BioArte actúa como una forma de alquimia contemporánea, dando lugar a creaciones quiméricas que reactivan el diálogo con el pasado y abren nuevas perspectivas sobre el presente.

**Palabras-chave:** BioArte; Alquimia; Quimera; Hibridación.

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### Introduction

Chimera, with its fusion of different beings and elements, has long been a powerful and complex symbol in the history of philosophical, esoteric, and alchemical thought. This hybrid creature, originating in classical mythology, stands not only as a representation of the

impossible, the fantastical, and the morally negative or aberrant, but also as an archetype rich in interpretative potential concerning transformation, duality, and transcendence. In this sense, the Chimera becomes a figure that invites philosophical reflection on the nature of identity, multiplicity, and the interconnection between the physical and spiritual realms.

For this reason, in the present article I propose to explore this mythical figure in relation to two practical-reflective domains: esotericism—specifically through the lens of alchemy—and BioArt. Alchemy, understood both as a protoscientific practice and as a hermetic philosophy, has long been characterized by its pursuit of internal transmutation and spiritual perfection, employing symbols that, along their course, begin with a material stage and evolution in order to access transformations of a metaphysical order. Within this context, the Chimera emerges as a metaphor for the integration of opposites, for the fusion of the animal and the divine through a kind of revelatory manifestation.

It is worth clarifying that when I refer to medieval alchemy, I am thinking of the alchemy developed between the 8th and 15th centuries, which represents a key stage in the history of Western thought, characterized by the fusion of Greco-Egyptian heritage with Islamic and Christian knowledge. Unlike ancient alchemy, which was more speculative and mythological in nature, medieval alchemy integrated a significant experimental dimension, aimed both at the transmutation of metals and the spiritual purification of the alchemist. Practices such as distillation, calcination, and dissolution were systematized, and instruments such as the alembic were introduced, largely thanks to the Arab treatises of Jābir ibn Hayyān (Geber). Latin alchemy later adopted a deeply Christianized allegorical language, as seen in texts by Roger Bacon and Albertus Magnus, where the search for the philosopher's stone was linked to the redemption of the soul. Unlike Renaissance alchemy, which came closer to the scientific method, or Eastern alchemy, focused on bodily longevity, medieval alchemy was framed as a sacred science, where the physical and metaphysical were inseparable. Thus, this tradition laid the foundations of modern chemistry, while preserving a symbolic structure rooted in Neoplatonic and Hermetic thought (HOLMYARD, 1990); (PRINCIPE, 2012); (NEWMAN, 2004).

In the second part of this text, I will introduce the third link that supports this analysis: BioArt. This inclusion arises from my observation that the theoretical and artistic practices of bioartist-researchers reveal a connective thread leading back to alchemical practices and chimeric hybrids. The convergence of these disciplines opens a dialogical space in which both the Chimera and alchemy can be reinterpreted in the key of a world where biotechnology and

demiurgic artistic experimentation emerge as avant-garde modes of engaging with esoteric traditions. Thus, the central hypothesis I defend in this essay is that BioArt is an artistic movement grounded in practices inspired by medieval alchemy, resulting in chimeric creations.

In the first section of the essay, I will focus on analyzing certain aspects of the Chimera in esotericism and its resonance within the alchemical tradition, establishing the theoretical and philosophical foundations necessary to understand how these ancient symbols continue to inform contemporary reflection. Through a genealogical approach, I aim to identify the connections between the Chimera, internal transmutation, and the processes of integrating opposites, as well as their implications in the pursuit of unity within diversity. In the second section, I will turn to the realm of BioArt and the connections I perceive between its practices, alchemical traditions, and the Chimera as an existing entity. To exemplify this triadic correspondence, I will discuss two bioartistic works that vividly illustrate this relationship: GFP Bunny by Eduardo Kac and At Last I'm Perfect by Marc Quinn.

## **The origin and symbolic evolution of the Chimera**

### ***Mythological and literary roots***

The Chimera, whose origins trace back to Greek mythology, is traditionally described as a hybrid monster composed of anatomical elements from various animals. This mythological figure appears in classical texts such as the works of Homer (1990) and Hesiod (1988), where creatures are depicted whose appearance blends the fantastical with the terrifying<sup>1</sup>. Throughout different historical periods, the Chimera has been interpreted not only as a nightmarish creature, but also as a symbol of alterity and the inherent complexity of the human condition. In classical literature, this—let us call it—essential hybrid represents the embodiment of the irrational and the uncontrollable, a reminder that reality may be composed of disparate elements fused into an impossible whole.

This fragmented vision of the natural world connects with the notion that reality, far from being monolithic, is permeated by contradictions and dualities, but also by dialectical movements that suggest a kind of midpoint or allagmatic state. The myth of the Chimera, therefore, becomes a narrative within classical studies that challenges conventional logic,

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<sup>1</sup> V. (Homer, *Iliada*, VI 181-183) and (Hesíodo, *Teogony*, 319–325).

inviting us to explore a reality in which the possible and the “seemingly” impossible coexist in delicate balance.

*Symbolic transformation in medieval esoteric thought*

In the context of medieval esotericism, the Chimera acquires a far more complex symbolic dimension, being interpreted as an archetype that embodies the transformation of the self, the integration of dissimilar aspects, and the reconciliation of opposites into a singular form that cannot be subsumed by any of its parts. In this sense, it becomes a symbol of the process of individuation (ELIADE, 1978), in which the human being must confront internal conflicts and reconcile contradictions in order to achieve a more complete state of being<sup>2</sup>.

Fulgentius, for instance, played a key role in the transition from classical mythology to its symbolic reinterpretation in the Middle Ages. Although he does not address the Chimera specifically, he does discuss many hybrid monsters and explains that such creatures should be understood as allegories of the soul and human nature. In *Mythologiarum libri tres* (Books I and II), a fifth-century text (FULGENTIUS, 1970), when referring to monsters such as Scylla and the Minotaur, he clarifies that they represent the mixture of passions and contradictory natures. Following this interpretive logic, the Chimera may be read—through Fulgentius’s method—as a composite figure reflecting a soul dominated by unequal passions: violence (lion), lust (goat), and the poison of betrayal (serpent or dragon).

This interpretive approach would be inherited in part by medieval alchemists, who saw in chimeric creatures a metaphor for the *opus alchymicum*: the reconciliation of opposites into a transformed unity. However, the symbolism of the Chimera in alchemy also takes another direction: it is often associated with the notion of the “integral man,” thus shedding some of its negative moral connotation. It becomes a figure that describes one who has come to recognize and assimilate both the light and the shadow within.

This process of integration is exemplified in internal alchemy, where the transmutation of base matter (or *prima materia*) into spiritual gold is, in essence, the transformation of the lower aspects of the self into manifestations of wisdom and harmony. In this light, the Chimera stands as a reminder that true transformation entails the acceptance of the complexity inherent in existence—embodying the intrinsic duality of the universe: the

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<sup>2</sup> I refer to individuation in the Simondonian sense of the term.

coexistence of apparently opposing forces that nonetheless complement and enrich one another.

This integrative paradigm is foundational to esoteric thought, where it is posited that ultimate reality emerges as a synthesis of opposites. In alchemical symbolism, the Chimera can thus be seen as a representation of the union between matter and spirit, the fusion of the natural and the unnatural. From this perspective, the alchemical process is not limited to the transformation of metals but extends toward a holistic vision of being, in which every element of the universe participates in a dance of polarities whose integration gives rise to a new reality.

As a hybrid being, the Chimera exemplifies this dynamic of union and the dissolution of boundaries, which, I contend, invites a reconsideration of the morally negative status this mythical creature has long borne within the general imagination.

### **Alchemy and its relation to the figure of the Chimera**

The alchemical tradition, which flourished during the Middle Ages and the Renaissance, has been interpreted both as a proto-science and as a spiritual and philosophical doctrine. Alchemists, through complex processes of experimentation, sought the transmutation of base metals into gold, but they also proposed an analogy between material transformation and the spiritual evolution of the human being.

In this vision, alchemy emerges as a discipline that explores the inner structure of reality, identifying correspondences between the macrocosm (the universe) and the microcosm (the human being). The quest for the Philosopher's Stone—that elixir that enables transformation—becomes a metaphor for the process of self-realization and inner integration of opposites. It is here that the Chimera appears as an emblem of the complexity of the elements which, when fused, give rise to a new form of existence. It is important to note that alchemy does not end with the mere transmutation of metals; it is above all an art of hybridization and proto-biotechnological composition. Through the *coniunctio oppositorum*, the practitioner fused in their *athanor*—a generative matrix of impure and *mestizo* forms—substances as antagonistic as salt and mercury, sulfur and saltpeter, giving birth to a new material entity that transcends the mere amalgamation of its parts. In this way, the *Rebis* or “spirit of the chemical marriage” is engendered—hybrid figures that prefigure, in both their technical and symbolic dimensions, the functioning of the contemporary

bioreactor in BioArt: a vessel of cultivation where living matter is shaped and recombined to give birth to true biotechnological chimeras—a topic we will address later.

Within alchemical symbolism, the Chimera acquires multiple interpretations. On the one hand, it can be seen as a representation of *prima materia* in its chaotic state—a conglomeration of disparate elements that, through the alchemical process, are purified and reorganized to attain a state of perfection. On the other hand, it symbolizes the need to transcend duality, integrating opposing aspects into a harmonious unity that reflects the totality of being. This dual aspect is fundamental to understanding alchemical philosophy, which posits that reality is a web of polarities in constant interaction. The process of *coniunctio*, or the union of opposites, is the central axis of alchemical thought and is reflected in the image of the Chimera: a being composed of incompatible elements that nonetheless complement each other to form a meaningful whole. In this sense, it is both a challenge to conventional logic and an invitation to explore the possibility of a synthesis that exceeds apparent limitations.

However, from Antiquity—and with particular force in the Christian Middle Ages—the Chimera bore a negative moral charge that distinguished it from a mere natural prodigy: in bestiaries and moral treatises, it was presented as an omen of instability and corruption, a *monstrum* whose overflow of natures warned of the dangers of excess (JUNG, 1980). This moral valuation applies not only to mythological or fictional figures but also to technical artifacts: the alchemical furnace or the *athanor* itself, being conceived as active agents of transmutation, carried with them norms and expectations regarding what they could engender (ABRAHAM, 1998; PÉREZ MORALES, 2024a, 2024b, 2024c). Thus, the agency of an object—whether chimerical or technological—is defined both by its material configuration and by the moral quality tradition and practice assign to it. In this sense, the transition of the Chimera from a symbol of threat to an archetype of the integration of opposites reflects an ethical and aesthetic shift.

To conclude this first part, I would summarize the above as follows: the figure of the Chimera reveals a dual articulation that links alchemical praxis with contemporary hybridization. In its ontological dimension, in its material substratum, it reveals the technical capacity to fuse diverse matter—elements that, when converging into a single substance, engender a “new being,” a living entity whose ontology transcends the sum of its parts. In its rational or cultural dimension, this same fusion becomes a mirror of our own inner duality: the esoteric acceptance of the multiple body dissolves the ancient moral condemnation,

indicating that integrating light and shadow, the irreducible and the manifold, is not aberration, but a step toward plenitude. Thus, the Chimera moves from monster and omen of instability to archetype of spiritual and material synthesis, showing how the opus alchymicum, in its ritual of the “chemical wedding,” prefigured the biotechnological literalization we now call BioArt.

### **BioArt, Chimera, and alchemy: the chimeric literalization in the living laboratory**

Bioartistic creations have opened new spaces for reflection on what constitutes life, and more importantly, they have made visible entities that traverse the paths of hybridization. This fascinating artistic practice, which uses biology, genetics, and technology to explore the possibilities of the body and life, draws from a tradition that acknowledges the cultural and symbolic meanings embedded in the organic, the living, and the technological. In this context, the Chimera reemerges as a symbol that transcends its mythological origin to become a figure of exploration and experimentation in the field of art. The use of biological materials and living organisms in bioartistic practices allows us to question the boundaries between the natural and the artificial. Chimera, as an entity that fuses diverse elements within itself, stands as a metaphor for this creative process in which biological experimentation opens unexplored horizons. Moreover, the dialogue between the esoteric alchemical tradition and bioartistic practice becomes fertile ground for the development of new narratives about identity, transformation, and the relationship between what self is and its environment. Philosophically, it also takes a stance against the static conception of being.

BioArt, in its ability to reconfigure and re-signify life through biotechnological intervention, has become a space of reflection where diverse symbolic and philosophical traditions intertwine. Among these, alchemy stands out, whose legacy of transformation and the search for unity through diversity resonates in contemporary practices that engage with living matter. Thus, the figure of the Chimera, archetype of hybridization and synthesis, becomes a key interpretive link for understanding the dialogue between biology, art, and ancient symbolic doctrines.

To illustrate this convergence, I will discuss two paradigmatic works of BioArt. The first is GFP Bunny, created by Eduardo Kac, which involves the genetic manipulation of a rabbit to express a green fluorescent protein. The second, At Last I'm Perfect by bioartist Marc Quinn, is a sculpture made from synthetic diamond created from the artist's own

carbon, reflecting on immortality, the transformation of the body into a luxury object, and the intersection of biotechnology, identity, and the market. Both works, through their experimental proposals, draw from the alchemical tradition on one hand, and on the other, exemplify the tangible realization of a genetic chimera, inviting us to rethink notions of identity, transformation, and hybridity.

At the intersection of alchemical tradition and BioArt practices, the Chimera emerges as a pivotal figure—not merely an ancient symbol but a living archetype that spans centuries of imaginaries and materializes today in laboratories. While medieval alchemists worked with metals and essences to achieve the *coniunctio oppositorum*, BioArt turns to cells, genes, and vectors to literalize that call for the fusion of multiplicity. The Chimera's journey—from mythological beast to transgenic organism, achieved through practices reminiscent of alchemy—traces a continuous line in which matter, form, and meaning are intertwined.

Alchemy bequeathed us the idea of a process that transcends the material. Inner transmutation happened in parallel with the manipulation of physical substances Jung (1980). Today, protocols of genetic hybridization—microinjection, transfection, and CRISPR-Cas9 editing—act as modern analogues of *solve et coagula*, dissolving the boundaries between species and recomposing a mestizo genome (Doudna & Charpentier, 2014); (Mintz & Illmensee, 1969). In this sense, the bioreactor, a medium frequently used in bioartistic creations, not only reproduces cultivation conditions but also functions as a hermetic vessel where exogenous and endogenous genes converge to engender cellular chimeras whose ontological status compels us to rethink the category of existence. This literalization of the chimeric in BioArt unfolds along two dimensions, already mentioned, which draw on the alchemical heritage and the figure of the Chimera.

The first is the material and visible dimension of the hybrid's ontological status: the classical Chimera amalgamated parts of lion, goat, and serpent into an indivisible body that cannot be reduced to any of its parts. In other words, the Chimera is not simply a serpent to which a goat and a lion are added, nor any other combination that foregrounds one animal over the others—it is, essentially, individuated multiplicity. The second is the rational dimension of ontological status: the alchemical hybrid symbolizes the reconciliation of opposites within the soul and reaffirms an ontological position rooted in a multiple and conciliatory conception of being. The genetic chimera, in turn, confronts us with a divided

and composite subjectivity, inviting us to embrace interior multiplicity and dismantle dichotomies between natural and artificial.

The positive assimilation of the hybrid—whether in the figure of the Chimera, in alchemy, or in BioArt—also implies an ethical shift: what was once an omen of catastrophe—the monstrum—now becomes an icon of resilience and creative potential. The transmutation of lead into spiritual gold finds its echo in gene editing to produce luminescent organisms: aesthetic manifestations that weave together science and art through a transformative gaze Roob (1997). And from this stems something I consider fundamental: whether we talk of the Chimera, alchemical creations, or bioartistic works, all share the idea of creating new matter or new life to reveal hidden forms of being and existence in Nature. I would add that, although we cannot entirely disregard the utilitarian and/or functional interest of any creation or design, the primary aim does not lie in that interest, but in the demiurgic desire to create something new. In the hybrid body, therefore, political, aesthetic, and psychic tensions also condense—tensions that reveal the negative moral and agential charge historically associated with the Chimera, the power dynamics inherent in the demiurgic capacity to create, and the ways and judgments formed through its perceptual and sensorial apprehension Pérez Morales (2024c).

***The bioreactor as heir to the athanor: from hidden forge to living incubation***

On the other hand, the affinity between medieval alchemical practices and contemporary bioartistic practices is undeniable. The athanor, the quintessential alchemical furnace, was conceived as a closed organism: a womb of fire where arcane substances—mercury, sulfur, and salt—were subjected to long cycles of calcination, coagulation, and sublimation until they became the mythical lapis philosophorum. This hidden forge articulated three levels: the material (the *materia prima*), the symbolic (the macro-microcosmic correspondence), and the esoteric (the spiritual purification of the operator). Designed to operate with constant heat and a controlled atmosphere, the athanor was both a magical laboratory and a hermetic temple, where opposites encountered one another to give rise to a new substance.

The bioreactor, although designed according to the principles of molecular biology, follows a similar internal logic of enclosure and transformation: the culture chamber regulates temperature, pH, nutrient flow, and gases so that cells of different origins can fuse into a cellular chimerism. Gene transfection procedures, viral vectors, and co-cultures of cell

lines are not so far removed from the seals and sigils of alchemy: each technical parameter echoes the coniunctio oppositorum that Hermeticism expressed in symbolic terms.

Beyond a mere analogy, this parallel reveal an epistemological continuity: the alchemist and the bioartist share the same transformational imperative. Where the former sought the “elixir of life,” the latter pursues organisms that transcend the limits of natural biology. In this sense, the bioreactor becomes a new athanor, whose hyper-specialized technology converges with the alchemical fantasy of creating composite and living beings. Consequently, BioArt does not simply add a new myth to alchemy but rather literalizes the desire to fuse opposites into a single living body.

***Material hybridization practices: from allegory to organism***

The symbolic image of the Chimera—lion, goat, and serpent fused—functioned in alchemy as a generic program: it represented the possibility of a composite body in which piercing matter (spirit) and dense matter (body) were reconciled. Likewise, the Rebis and the androgynous dragon were plastic embodiments of the opus magnum, reminders that arcane matter contains within itself the seed of its own perfection.

In BioArt, however, this allegory becomes a concrete project. These are not mere metaphors: the protocols for inserting genes into embryos or stem cells are the modern equivalents of alchemical treatments. Similarly, inter-kingdom hybridization projects—bacteria engineered to produce pigments for textile fibers, viruses deployed as nanorobots—reveal that BioArt builds on an expanded medieval alchemical imagination: it is not a matter of assembling parts but of achieving a fusion that becomes a living unity, irreducible to its original components. Works within the movement that follow this trajectory are not only ontological experiments but also ontological statements: they propose a reality in which the hybrid ceases to be a monstrum and instead becomes a political and aesthetic subject endowed with moral agency.

In antiquity, the “hybrid beast” was a negative sign—an omen of chaos or ruin. As mentioned above, the Chimera, in Hesiod (1988) and later Christian tradition, was read as a portent of misfortune. Medieval esotericists, however, reappropriated the logic of the coniunctio to re-signify the hybrid as an icon of soul integration. The triple figure demonstrated that, for the human being to achieve individuation, one must reconcile antithetical passions—anger, lust, deceit—thus acknowledging and embracing all facets of the self. Just as in the Middle Ages the hybrid paved the way for the art of meditation, today

BioArt demands an ethical reflection: to recognize our own multiplicity, to embrace the tension of opposites, and to accept life as a continuous dance of re-signifying processes.

***Case studies unpacked: GFP Bunny and At Last I'm Perfect as Chimeric Laboratories***

Eduardo Kac's GFP Bunny (2000) emerges as a modern paradigm of alchemy in its biotechnological guise. The work vividly demonstrates how BioArt transcends a mere allegorical transposition of alchemical concepts, propelling material hybridization beyond the realm of fiction into a tangible, observable process. In this instance, the piece presents Alba, a rabbit whose genome was engineered to carry the gene encoding the green fluorescent protein (GFP) derived from the jellyfish *Aequorea victoria*. This protein emits a vivid green glow under ultraviolet light. Alba is thus not only a biological organism but also a living artwork that materializes the alchemical impulse to transform matter via genetic manipulation.

Figure 1: Eduardo Kac. GFP Bunny. 2000, transgenic artwork: rabbit genetically modified with a green fluorescent protein (GFP) gene



Open access at: <https://www.ekac.org/gfpbunny.html>.

The creation process of Alba began with the genetic modification of a rabbit embryo. Through genetic engineering techniques, scientists inserted the GFP gene into the embryo's DNA. This type of genetic modification involves the transfer of a foreign gene to a recipient cell, which then develops to express the protein in question. In the case of GFP Bunny, the result is that Alba's cells, particularly those in her skin and other tissues, begin to produce the green fluorescent protein, which manifests as visible bioluminescence to the naked eye when the rabbit is exposed to ultraviolet light. This process was carried out in a specialized

laboratory, under the supervision of geneticists and bioartists who collaborated with Kac (2007) (PÉREZ MORALES, 2024a).

Thus, the rabbit Alba becomes a biological artifact that materializes light as an expression of the hidden knowledge of a new chromatic subspecies<sup>3</sup>. Bioluminescence, being a visible trait in Alba's body, presents itself not only as a biological characteristic of the creature but also as a symbolic manifestation of alchemical illumination. The creation of Alba goes beyond simple genetic modification; it becomes an artistic work that illuminates the interface between the biological and the technologically artificial. The green light emitted by Alba stands as a symbol of the transmutation of matter: a transformation that occurs not only at the molecular level but also as a visible image of the power of science to "create" or "modify" life, merging the natural with the artificial. This is not just a modified organism, but also a symbolic container that conveys the alchemist's desire to transcend the limits of nature and attain a form of perfection or illumination. Like the medieval Chimera, Alba brings together different elements: the gene of a jellyfish and the body of a rabbit, and while the predominant form is that of a rabbit, the jellyfish is present through the green color; this does not account for the very balanced genetic fusion. In this way, the work not only represents the mixture of species but also the hybridization of the organic with the biotechnological, the natural with the human-intervened.

The concept of monstrum, traditionally associated with deformity and chaos, is revisited in bioartistic practice. While in medieval alchemy and later esoteric interpretations, the Chimera or the androgynous dragon were understood as symbols of the integration of opposites, GFP Bunny brings that idea into the realm of the living, material, and, above all, ethical. Alba is not only a hybrid between species but also between natures: she is both a biological being and a work of art, a natural creature and a technologically designed artifact.

This type of hybridization, when represented as an artistic form rather than merely a scientific experiment, challenges the boundaries between what is considered "natural" and "artificial." The creature is not a monster to be feared or rejected, but a form of life that invites reflection on our relationship with technology, nature, and the ethics involved in altering biological limits. Kac's work proposes a new worldview, in which the hybrid is recognized as a new form of agency, an entity that transcends the concept of the "monster,"

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<sup>3</sup> Conducting a bioethical analysis of the implications of genetic intervention falls outside the scope of this essay. To specifically address Pérez Morales (2024a).

opening a debate about the rights, responsibilities, and implications of creating life through advanced technologies.

In this sense, GFP Bunny is one of the multiple examples within bioartistic practice where we can find the imprint of both medieval alchemical tradition and contemporary discourses on the natural and artificial, offering reflection on the possible reconciliation of opposites: biology and technology, the organic and the synthetic. The work not only highlights the potential of BioArt to generate new forms of existence but also questions the ethical limits of what can and should be created, becoming a platform for discussing the morality of intervention in life itself.

On the other hand, Marc Quinn's work *At Last, I'm Perfect* (2002) presents a profound reflection on the permanence and transformation of the human body through the manipulation of its material components. The piece consists of a diamond created from the carbon atoms extracted from a hair of the artist himself. The process of creating the work is a deeply symbolic and technical act that fuses biological manipulation with industrial creation. The project began with the collection of a hair from the artist, a deeply personal and human element. This hair, composed primarily of carbon, underwent a process of carbonization and graphitization to extract the carbon atoms that would then be used to create a diamond.

Figure 2: Marc Quinn. *At Last I'm Perfect*. 2002, 1.2-carat yellow diamond made with carbon from the artist's body



Open access at: <http://marcquinn.com/artworks/single/at-last-im-perfect>

First, the hair was carbonized, meaning it was heated to extremely high temperatures to decompose it, releasing the carbon atoms. Then, this carbon was processed and transformed into graphite, a structurally more stable form of carbon. This graphite was used to cultivate the diamond in a specialized laboratory, where pressure and temperature conditions were replicated to mimic those that exist miles below the Earth's surface. This laboratory process not only imitates the natural formation of diamonds but also symbolizes humanity's capacity to intervene in natural processes to create something durable and eternal. Furthermore, this carbonization and graphitization process, which converts human hair into a synthetic diamond, establishes a parallel with medieval alchemy: the transmutation of organic matter into a purified, immortal, and aesthetically perfect form.

The result is a diamond that contains carbon that was once part of the artist's body, a material testament to the transience of human life and the ability of technology to preserve and freeze matter in an apparently immortal form. "Normally, carbon atoms in a living thing like a human being, when that being dies, are liberated from the body by burning or decomposition, and re-enter the carbon chain, firstly probably as carbon dioxide. Every carbon atom in your body has been part of other bodies – human, animal, or plant – since the formation of the planet. There are a few things which take carbon atoms and permanently

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bind them into a configuration that does not break down and re-enter the carbon chain, but freezes them forever. These are certain kinds of plastic, but more especially the diamond. Diamonds are carbon atoms which have been placed under great heat and pressure, miles beneath the surface of the earth. Until recently they were only naturally occurring things. But now, using machines which recreate the heat and pressure of the center of the earth, a real diamond can be grown in a laboratory. I contacted one such lab and asked them to make a diamond from atoms which had once been in my body, in this case hair. The hair was carbonized and then graphitized and used to grow the diamond. The result is *At Last I'm Perfect*, a real diamond which contains some atoms which were once in my body. Taken out of the carbon chain to stay in icy splendour forever, another kind of frozen self-portrait. Of course, the title is ironic, since it's only with the possibility of change and transformation that there can be life. This kind of perfection is really death." - Marc Quinn (2006)

This diamond, with its perfect crystalline structure, is a palpable example of how technology can transform an organic material into something synthetic and perpetual, on one hand. On the other hand, the very selection of materials and the manner in which this process takes place reminds us of the transmutation of base metals into gold, under the idea of transforming something "base" into something "noble." This can be related to the diamond creation process, where the aim is to transform an organic material, namely hair (something base, as it comes from a human), into a precious stone (the diamond). However, the irony behind the work is that, despite being a "symbol of perfection," the creation of this diamond stems from the death of the organic matter that was once part of a living being, in addition to separating those grams of carbon from the usual flow and movement they follow. Therefore, while the diamond is eternal in its form, its creation is an act that symbolizes death and the cessation of any possibility of change or evolution. Thus, it seems that perfection is achieved through descent, exclusion, and solitude. *At Last, I'm Perfect* relates, for this reason, to the notion that true perfection can only exist when the process of transformation and change ceases.

The artwork is not just a commentary on the impermanence of human life, but also a reflection on the alchemical conception of "perfection" as a closed, immutable, and finished state. In BioArt, this type of "perfection" is presented as a simulacrum of life, a static capture of what, in the alchemical process, was proposed as a final achievement, but which in contemporary practice reveals itself as an echo of death. It is perfection that denies the possibility of change and, thus, of life.

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In this sense, the work is not only inscribed within a tradition of alchemical thought, but also highlights the philosophical implications of creating "new" forms of life, wherein the desire for perfection may come into conflict with the very possibility of transformation, growth, and life itself. Through the creation of a diamond from his own hair, Quinn produces a work that engages with the desire for immortality, positioning itself within the contemporary debate on the nature of life and death, and on how technological interventions can alter—and, in some cases, nullify—what we understand as "life" in the biological sense.

The process of transformation inherent in medieval alchemical practice is grounded in the idea that transmutation is not merely a physical change, but an inner renewal that leads to a new form of existence. In this context, BioArt functions as a living metaphor for such transformation. Both Kac and Marc Quinn incorporate the notion of *coniunctio mysterium* in their works, integrating elements of biology with advanced technological techniques to create entities that transcend conventional nature.

In GFP Bunny, the introduction of a fluorescent protein not only alters the animal's external appearance but also symbolizes a profound shift in the perception of what it means to be a living organism. The piece invites reflection on genetic manipulation as a means to reimagine nature, recalling the alchemical quest for the *lapis philosophorum* – the philosopher's stone that enables both transmutation and spiritual elevation. Kac's intervention reveals itself as an act of faith in the transformative power of art – an esoteric proposal that transcends mere technique to embrace a vision of the sublime and the transcendent. In the modern social realm, biotechnological chimeras operate analogously: their very presence challenges our categories of identity, species, and ethics. The GFP Bunny is not a visual whim, but a moral revelation—one that provokes the questioning of the sacredness of the natural.

In *At Last, I'm Perfect*, Marc Quinn employs an alchemical process in which hair, a biological element, is transformed into a diamond—a symbol of eternal perfection in the alchemical tradition. This act of transmutation reflects the idea of *coniunctio*, or the union of opposites: life becomes something immutable. Yet this perfection is ironic, as it is tied to death. Thus, Quinn also literalizes the pursuit of the *lapis philosophorum*, aiming for perfection and immortality through transmutation.

The convergence of BioArt, alchemy, and esotericism is grounded in art's capacity to transform our perception of the world. The figure of the Chimera acts as a bridge that connects the ancestral legacy of alchemy with the contemporary reality of BioArt. At this

intersection, transformation becomes the driving force behind a new aesthetic and ethical framework, in which intervention in life is interpreted not as a violation of the natural, but as an expansion of its possibilities.

The dialogue established between the works of Eduardo Kac and Marc Quinn opens a space for reflection on the mutable nature of identity. Biotechnology, by enabling the direct manipulation of life processes, challenges the boundaries between the human, the animal, and the synthetic. This dissolution of limits aligns with esoteric philosophy, which affirms the hidden unity of existence and sees in duality the seed of a higher integration. Both projects, in their own ways, offer a rereading of the body and of matter, inviting us to rethink the very nature of life.

### **Summary of Findings**

The analysis of the Chimera and the alchemical, culminating in their relation to BioArt, leads us to recognize that classical symbols and medieval practices possess a relevance that transcends time. Far from being mere remnants of a mystical past, these archetypes reveal profound aspects of human nature and the universe, as they pose fundamental questions about identity, transformation, and the integration of opposites.

The Chimera, in its hybrid condition, serves as a mirror of the complexity inherent in being and in the cosmos. Its ability to fuse contradictory elements into a dynamic totality invites us to reconsider our conceptions of what is possible, and to open ourselves to the idea that true transformation arises precisely when barriers are broken and space is made for the new and the unexpected. At the same time, alchemy, as a proto-science, finds in the fusion of material elements a way of thinking, understanding, and embracing hybridity—both at a physical existential level and at a spiritual and metaphysical one, with all that this entails.

At the intersection of esotericism, alchemy, and BioArt, we find a convergence of forms of knowledge that enriches our understanding of the world and of ourselves. It also reveals the thread that unifies classical and medieval traditions and thought with highly contemporary practices. The exploration of these fused domains allows us to glimpse new ways of relating to matter, life, and creation, challenging the rigidity of traditional categories and opening the path to a more integral and dynamic vision of existence.

With this analysis, I aim to encourage the continued exploration of the limits of identity and matter, highlighting BioArt as a fertile ground for the investigation and reinterpretation of classical concepts. The convergence of technique and symbolism, of

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science and philosophy, translates into a philosophical, aesthetic, and ethical proposal that questions and redefines the boundaries of existence.

In this way, I consider that the hypothesis proposed at the beginning of the text is confirmed: that BioArt is an artistic movement that draws from alchemical inspiration, resulting in chimerical creations which, in turn, foster a rich return to and updating of classical and medieval studies. Both the theoretical framework and the analyzed artworks clearly demonstrate this.

Let this be an invitation to hybridize the classical and medieval worlds with our contemporary reality—an invitation to create our own historical chimera.

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