

Epolleo Ethical Sharing Policy
For the Epolleo Diversity Platform, Operated by Epolleo, Inc.
Effective Date: 7-1-2025

Purpose and Overview The Epolleo ecosystem operates at the intersection of education, scientific research, innovation, and biodiversity preservation. To maintain the integrity, transparency, and sustainability of its microbial database and collaborative platform, this Ethical Sharing Policy outlines guidelines for ethical access, submission, usage, and commercialization of microbial data and materials. The policy is governed by the Ethics and Science Oversight Committee and applies to all participants, including educators, students, researchers, industry partners, and incubator collaborators.

1. User Accounts and Personal Data Protection User accounts and the safeguarding of personal data form the foundation of equitable participation in the Epolleo ecosystem. By ensuring all contributors are securely identified and protected under national and international privacy frameworks, Epolleo builds trust and encourages participation from a wide range of users. This framework guarantees that knowledge shared and generated within the platform remains secure, ethically managed, and accessible to participants from all walks of life.

- All users must register accounts with verified credentials.
 - Verification includes institutional affiliation, email confirmation, and identity validation.
 - This step ensures that only qualified individuals or institutions can contribute or access sensitive data, reinforcing platform trust.
 - Student users must be linked to a verified educator account.
 - This linkage promotes responsible mentorship and oversight in student participation, maintaining a safe learning environment.
 - Account access is role-based, limiting visibility and capabilities based on user type.
 - Role-based access ensures that each user accesses only the tools and data appropriate to their credentials, thereby preventing misuse and maintaining data integrity.
- Personal data will be managed in accordance with FERPA, COPPA, and GDPR standards.
 - No personal data will be shared with third parties without explicit consent.
 - This principle reinforces trust in the platform and protects against exploitation of personal or institutional information.
 - Data collection will be minimized to essential information only.
 - This reduces the risk of privacy breaches and aligns with the principle of data minimization, ensuring user respect.
 - Privacy notices will be presented at the time of data entry.
 - Clear communication empowers users with informed consent and transparency around data practices.

- Data is encrypted and stored securely.
 - Secure cloud storage utilizes multi-layer encryption.
 - This protects data against unauthorized access, ensuring digital safety and regulatory compliance.
 - Access logs will be maintained and reviewed regularly.
 - These logs create an audit trail for accountability and continuous improvement in data security.
 - Regular audits and penetration testing will be performed.
 - These measures help identify and fix vulnerabilities, safeguarding platform integrity and user trust.

2. Confidentiality and Intellectual Property (IP) Preserving the confidentiality of searches and campaigns while establishing clear guidelines for intellectual property rights ensures that contributors retain agency over their innovations. This policy fosters a fair and transparent environment where ideas can be safely shared, incubated, and developed into innovations. Equitable access to IP protections encourages collaboration across sectors and disciplines, enabling contributors of all sizes—from students to industry professionals—to participate meaningfully in the development of innovative solutions.

- All database search queries, and user-submitted screening protocols are treated as confidential.
 - Search metadata is anonymized and stored separately from user identities.
 - This ensures that individual research interests or strategies are protected, which fosters trust and encourages open exploration.
 - Epolleo does not permit public viewing or sharing of user-submitted data without the user's consent.
 - This protects contributors from intellectual theft and ensures ethical boundaries are respected.
 - Protocol files are encrypted and protected under intellectual property safeguards.
 - This preserves the confidentiality and originality of user research, enabling safe collaboration and contribution.
- Submitters may opt for full or partial confidentiality of their campaign details.
 - Users can choose tiered confidentiality settings during submission.
 - These settings enable contributors to control the visibility of their ideas, fostering diverse participation.
 - Confidential elements are marked and stored with restricted access.
 - This precaution secures sensitive intellectual input, especially for early-stage or sensitive investigations.
 - Only the Oversight Committee and technical review teams can access full campaign details.
 - This limits exposure to parties that need to know, reducing the risk of information misuse.

- IP rights for microbial discoveries are granted through Epolleo’s review process.
 - IP claims require documentation of novelty, utility, and proposed use.
 - This maintains scientific rigor and ensures that fair credit is given to the originator.
 - Co-ownership is encouraged in collaborative submissions.
 - Shared ownership incentivizes partnership across sectors and reinforces collective contribution.
 - Epolleo facilitates legal frameworks for formalizing IP agreements.
 - This ensures clear, enforceable rights that protect all stakeholders equitably.

3. Campaign Submission and Screening Protocols Campaign submission and screening processes are structured to support rigorous science, inclusive participation, and ethical oversight. By setting high standards for transparency and reproducibility, the ecosystem ensures that every participant contributes to a body of knowledge that is credible and useful across disciplines. This cultivates a collaborative research culture where educators, students, and professionals are all stakeholders in a shared scientific endeavor.

- Campaign submissions must include clear objectives and benefit rationale.
 - Submissions should define scientific questions and expected outcomes.
 - This ensures that each campaign has a clear purpose and contributes constructively to the shared knowledge base.
 - Ethical implications of the proposed work must be disclosed.
 - This promotes transparency and safeguards the welfare of humans, animals, and the environment.
 - All educational submissions must align with age-appropriate curriculum standards.
 - This ensures student safety and encourages appropriate learning outcomes in school settings.
- Screening protocols must follow approved formats and standards.
 - Protocols must include materials lists, control strategies, and safety measures.
 - These components ensure reproducibility and lab safety, fostering scientific integrity.
 - Protocol reproducibility and sample traceability must be validated to ensure accuracy and reliability.
 - This strengthens the credibility and reliability of research results across different settings.
 - Media used must be environmentally sustainable.
 - This supports Epolleo’s mission of ecological responsibility and climate-conscious research.

- All campaigns are reviewed for transparency and scientific validity.
 - The Oversight Committee conducts an initial ethics review.
 - This step ensures alignment with Epolleo’s values before work is approved or shared.
 - Peer-review may be used for protocols seeking publication.
 - Peer feedback ensures scientific accuracy and enhances the collaborative review process.
 - Campaign data must be archived for reproducibility validation.
 - Long-term archiving enables others to verify and build upon past research transparently.

4. Database Search Conduct. The ability to search the Epolleo database is central to discovery and innovation. However, this access must be protected and managed to ensure fair use, user privacy, and ethical intent. By regulating who can search and how searches are reviewed, the policy maintains a level playing field for participants and prevents misuse. This fosters transparency and mutual respect, enabling users to explore biological diversity safely for the public good.

- Only pre-approved users may access search functions.
 - Verification requires an institutional affiliation, a research intent, and a background check.
 - This ensures users have valid reasons for searching and helps prevent abuse of the system.
 - Educators are granted limited search privileges appropriate for education settings.
 - This allows integration into curricula while minimizing exposure to sensitive or advanced research data.
 - Access is restricted to dropdown query fields to prevent the misuse of free text.
 - This prevents extraction of unauthorized data and ensures queries are linked to validated research needs.
- All searches must be submitted via formal application.
 - Users must provide scientific rationale for each search term.
 - This promotes purposeful searching and aligns data exploration with declared research goals.
 - Terms are reviewed and approved before access is granted.
 - This filter provides oversight and ensures responsible use of the database.
 - Requests are time-limited and tracked.
 - Tracking enables accountability and allows trends to be monitored for ethical compliance.

- Epolleo guarantees search query confidentiality.
 - All searches are encrypted at rest and in transit.
 - This technical protection prevents interception or tampering, preserving user confidentiality.
 - No search is visible to other users or third parties.
 - This ensures that exploratory or proprietary ideas are not prematurely revealed or exploited.
 - Breach of search confidentiality is grounds for immediate investigation.
 - Rapid response maintains the trust of all users and upholds platform integrity.
- Misuse of the database will result in disciplinary action.
 - Any unauthorized data scraping or export is prohibited.
 - Such misuse could compromise sensitive research and violate ethical or legal boundaries.
 - Violations may result in legal action and permanent suspension.
 - This deterrent maintains the credibility and lawful function of the ecosystem.
 - Users must agree to Terms of Responsible Use during registration.
 - Formal agreement educates users about expectations and codifies accountability.

5. Use of Microbes for Innovation Turning microbial data into real-world solutions is one of Epolleo’s most powerful offerings. Ensuring that this is done ethically and transparently—while recognizing contributors and protecting public and ecological health—creates a sustainable innovation pipeline. This balanced approach supports open access to discovery while preserving the integrity and equitable use of biological resources.

- Samples may be selected only after the alignment review is complete.
 - Requests must match previously approved search results.
 - This ensures microbial use is aligned with original research intentions, preventing misuse or misrepresentation.
 - Each microbial selection must undergo secondary verification.
 - This helps validate authenticity and accuracy before allowing downstream use.
 - Innovation intents must be documented and logged.
 - Recording purpose and scope helps monitor ethical alignment and fosters transparency.
- Notification and licensing are required for commercialization.
 - A formal notice of intent must be submitted to Epolleo.
 - This step initiates the process of legal and ethical review for the responsible commercialization of products.
 - A licensing agreement outlining scope and terms must be signed.
 - This protects all parties and formalizes obligations under shared-use and benefit principles.

- Epolleo reserves the right to decline commercial use in conflict with public interest.
 - This allows the platform to uphold its mission of ethical, community-focused innovation.
- Innovations must meet ethical and sustainability standards.
 - Products must not pose a risk to public health or harm ecosystems.
 - Responsible innovation minimizes risk to people and the environment, fostering long-term sustainability.
 - Equitable access models must be included in commercialization proposals.
 - This ensures that benefits from innovation are shared with underserved or contributing communities.
 - All marketed uses must include visible attribution to Epolleo.
 - Public recognition helps build trust and celebrates collective contributions.

6. Incubator Relationships with Epolleo Incubator relationships represent a bridge between discovery and application. These partnerships are crafted to support mission-aligned innovation while maintaining equity, accountability, and transparency. By embedding ethical expectations and revenue-sharing into these collaborations, Epolleo ensures that benefits generated from the ecosystem are reinvested into the community and its shared goals.

- Innovators must apply through a formal EOI process.
 - Applicants must outline their team's expertise and provide preliminary data.
 - This provides evidence of capability and ensures that selected partners can make meaningful contributions to shared goals.
 - EOIs are reviewed quarterly by a technical and ethical panel.
 - Regular reviews maintain fairness, adaptability, and responsiveness to new ideas.
 - Preference is given to initiatives addressing global health and sustainability.
 - This prioritization aligns innovation efforts with Epolleo's mission-driven values.
- Approved partnerships include milestones and revenue sharing.
 - Key deliverables and timelines must be defined at the initiation stage.
 - Clear expectations guide progress and facilitate meaningful evaluation.
 - Quarterly reporting on progress is required.
 - Reporting enhances transparency and allows timely feedback and intervention if needed.
 - Royalty rates are based on value tier and type of application.
 - Tiered structures ensure fair returns that are proportionate to benefits gained.
- Participants must uphold all ethical standards.
 - All incubator teams are required to sign a code of conduct.
 - This formalizes shared ethical standards and creates a framework for accountability.
 - Participation may be revoked for violations of ethics or transparency.
 - This clause protects the integrity of the program and deters misconduct.

- Epolleo reserves the right to audit incubator projects at any time.
 - Spot checks help ensure that commitments to ethics and collaboration are being upheld in practice.

7. Microbe Request Protocols Requests for physical microbial samples are carefully managed to ensure safety, traceability, and accountability. This ensures that sensitive materials are used responsibly and that their origin and use remain transparent. These protocols enable equitable scientific exploration while maintaining high ethical and biosafety standards.

- Requests must link to a documented database search.
 - Requests without approved search history will be rejected.
 - This ensures the traceability of scientific intent and prevents the off-protocol use of biological materials.
 - Only microbes with safety classification tags may be requested.
 - Limiting access to classified samples protects users and prevents high-risk transfers of sensitive information.
 - Risk mitigation protocols must be described.
 - This requirement reinforces lab safety, especially when working with unknown or rare organisms.
- Requestors must sign a Material Transfer Agreement (MTA) prior to receiving any materials.
 - MTAs include terms for use, safety, and duration of holding.
 - Clearly defined terms establish boundaries and timelines for responsible stewardship, ensuring accountability and transparency.
 - MTAs specify obligations for disposal or return of samples.
 - This ensures that materials do not remain in circulation after project completion and do not pose future risks.
 - MTAs include clauses for downstream data sharing.
 - These clauses promote open science while ensuring contributors are credited and informed.
- Approval from the Oversight Committee is required for exports.
 - Cross-border transfers follow international biosafety regulations.
 - International rules safeguard biodiversity and protect local ecosystems from unintended exposure.
 - Recipient institutions must provide proof of compliance with storage and transportation requirements.
 - Compliance checks prevent biological leakage or misuse during shipment and storage.
 - Export licenses or permits must be submitted with the request.
 - Legal documentation verifies authorization and ensures compliance with cross-jurisdictional standards.

8. Royalties, Licensing, and Revenue Sharing Epolleo's royalty and licensing structure is designed to create a sustainable funding loop that supports the ecosystem long-term. By tying financial benefits to the ethical use and equitable distribution of microbial resources, this policy ensures that the value generated from these resources benefits the community, funds further education and conservation, and upholds a high standard of scientific stewardship.

- IP requests require documentation of proof-of-concept.
 - Applicants must submit testing results and risk assessments.
 - This validates feasibility and mitigates the risk of premature or harmful commercialization.
 - Submission must include an intended benefit-sharing model.
 - Ensures communities or contributors connected to a sample are recognized and rewarded.
 - Final decision rests with the Ethics and Commercial Review Subcommittee.
 - Oversight ensures proposals align with Epolleo's values and ethical standards.
- Licensing terms include scope and reinvestment clauses.
 - Royalties vary based on the uniqueness of the microbe and its intended use.
 - A tiered system promotes fairness and encourages work on high-impact applications.
 - Licenses may be non-exclusive or exclusive depending on impact.
 - This flexibility enables both open science initiatives and focused private innovation.
 - A percentage of revenues is directed to ecosystem maintenance.
 - Reinvestment supports the long-term operation, transparency, and accessibility of the Epolleo platform.
- Royalties support Microbe Valley's core initiatives.
 - Funds support the expansion and accessibility of the LMS platform.
 - This ensures that education remains a core, sustainably supported component of the ecosystem.
 - Conservation and curation costs are offset by licensing revenues.
 - This model maintains high-quality sample preservation without relying solely on grants.
 - Annual transparency reports are issued to the public.
 - Regular updates foster public trust and demonstrate responsible financial stewardship.

9. Student and Educator Protections Students and educators are at the heart of Epolleo's mission. Their protection ensures that learning and discovery are fostered in a safe, respectful, and empowering environment. These protections encourage meaningful engagement with real-world science while shielding participants from exploitation or unintended consequences of participation.

- Student contributions are anonymized unless consent is provided.
 - All student metadata is scrubbed before storage.
 - This protects the identities of minors and ensures data privacy for vulnerable users.
 - Parental consent forms must be submitted before any data can be used.
 - This ensures ethical handling of minor contributions in compliance with legal standards.
 - Students retain non-commercial recognition rights for contributions.
 - This supports student agency and encourages pride in their scientific contributions.
- Teachers are protected under educational safe harbor.
 - Teacher activities within curriculum boundaries are indemnified.
 - This legal protection enables educators to integrate Epolleo into their lesson plans confidently.
 - Access to sensitive samples or data is limited.
 - Ensures student learning environments remain age-appropriate and safe.
 - Teacher consent is required before sharing classroom projects publicly.
 - This ensures that educators remain informed and empowered in protecting their students' intellectual property.
- Educational data is protected from commercial use.
 - No student-collected data may be licensed without committee approval.
 - This safeguards against exploitation and ensures that educational activities remain focused on learning and development.
 - Educational materials must be cited before any reuse.
 - This encourages proper attribution and recognition for teaching content developed through Epolleo.
 - Industry partners cannot use student work for branding without consent.
 - This protects the integrity of educational contributions from being used for commercial marketing without approval.

10. Alignment with Global Ethical Standards Epolleo's global outlook is anchored in internationally recognized ethical frameworks that prioritize biodiversity, indigenous knowledge, and equitable access. By aligning with the Nagoya Protocol and similar frameworks, Epolleo commits to a genuinely global, justice-oriented approach to innovation—where expertise and benefits are shared and protected fairly across communities and generations.

- Adherence to Nagoya Protocol and related frameworks.
 - All sample sourcing includes geolocation and host metadata.
 - This ensures sample provenance is recorded, supporting ethical sourcing and traceability.
 - Compliance with Access and Benefit-Sharing (ABS) laws is mandatory.
 - This upholds international agreements that promote fair returns for provider countries and communities.
 - Proof of Prior Informed Consent (PIC) must be submitted for relevant samples.
 - Ensures stakeholders have granted informed permission before their biological resources are accessed or used.

- Indigenous rights are upheld in all campaigns.
 - Campaigns on indigenous land require tribal co-authorship.
 - This recognizes Indigenous Peoples as equal contributors and protects their sovereignty and knowledge.
 - Traditional Knowledge (TK) is protected and respected.
 - Safeguards cultural heritage and prevents unauthorized use of sacred or communal knowledge.
 - Benefit-sharing plans must involve local communities.
 - Encourages equitable distribution of rewards from research outcomes that rely on community resources.
- Anti-exploitative practices are strictly enforced.
 - Sample acquisition without proper consent is prohibited.
 - This enforces accountability and prevents biopiracy.
 - The commercial use of culturally significant strains is prohibited without prior authorization.
 - Protects the integrity of sacred biological heritage and requires community approval before commercialization.
 - Regular third-party ethics audits are conducted.
 - Independent review ensures compliance with both local laws and international ethical standards.

Enforcement and Oversight The Ethics and Science Oversight Committee oversees this policy. Violations may result in termination of access, revocation of IP rights, or legal action. All users must review and accept this policy prior to engagement with the Epolleo ecosystem.

Effective Date: 7-1-2025

Review Date: Annual, or as needed based on policy updates or new regulations.