



EAZA
BIOBANK



CRYOARKS

ANIMAL BIOBANKING FOR RESEARCH AND CONSERVATION
ENHANCING FROZEN COLLECTIONS ACROSS THE UK

IN COLLABORATION WITH EAZA BIOBANK AND FROZEN ARK



JOINING THE CRYOARKS COMMUNITY

GUIDANCE FOR DATA ONLY SUBMISSIONS



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WELCOME TO THE CRYOARKS COMMUNITY!

CryoArks is a UK consortium of biobanks, zoos, museums and research institutes. We aim to enhance diversity, visibility, and availability of zoological samples in the UK, for research and conservation purposes. It is the **UK's first comprehensive zoological biobank initiative**, funded by BBSRC (Biotechnology and Biological Sciences Research Council).

As part of the UK's research and conservation community, we request **your participation** by inviting you to join the CryoArks initiative. Being part of CryoArks will help improve visibility of your sample collection, facilitate access to a wide range of sample collections, and reduce the need to re-sample from the field. This is very important at a time when species are under increasing threat and direct sampling becomes ever more difficult.

There are two ways to participate in CryoArks. You can donate samples (and associated data) to a CryoArks partner institution, for curation and management. CryoArks partner facilities are located at the Natural History Museum, National Museums Scotland and the Royal Zoological Society of Scotland. To do this, please contact us at enquiries@cryoarks.org.

Alternatively, you can become a **CryoArks Member**. As a member of the CryoArks community you agree to maintain your sample collection at your own facility, but allow the sample data to be shared included in the CryoArks Specify database and visible on the CryoArks web portal. Sample data will be shared with CryoArks under a Data Transfer Agreement and researchers can request access to your samples by submitting a sample application form, available from the CryoArks website.

This guidance is aimed at those who wish to become a **CryoArks Member** by submitting their sample data to CryoArks. We can also offer further advice and guidance about inventorying and managing your frozen sample collection and data. Please visit cryoarks.org for a full list of the learning resources available.

CONTRIBUTING SAMPLE COLLECTION DATA

CryoArks partners and members follow the standards and best practices set out by the International Society for Biological and Environmental Repositories (ISBER) and the Global Genome Biodiversity Network (GGBN). By becoming a CryoArks Member we ask that you agree:

1. **To submit your data under a CryoArks Data Transfer Agreement (DTA)**

This will outline your responsibilities as a collection holder/owner.

2. **To uphold best practices and standards required for maintaining biological repositories (as outlined by ISBER and GGBN)**

ISBER: isber.org/

GGBN: wiki.ggbn.org/ggbn/Documents

3. **That sample data supplied to CryoArks can be made visible on the publicly accessible CryoArks database**

Sample data supplied to CryoArks will be visible on a searchable, publicly accessible CryoArks database (Specify) as detailed in the DTA.

4. **To store your frozen collection in suitable facilities, capable of maintaining temperatures between -20°C to -196°C**

CryoArks can provide advice on how to archive samples for easy retrieval and make recommendations of suitable equipment.

5. **To monitor the conditions of your sample storage areas**

CryoArks can supply examples of monitoring forms and advise on suitable real time/remote monitoring systems if desirable.

6. To share samples requested by third parties via the CryoArks request procedure in a timely manner

We aim to supply samples within two months following approval by the CryoArks Sample Acquisition and Loans Committee. Requests will be forwarded to the CryoArks member for preparation. CryoArks members are responsible for agreeing their own terms of loan with the requesting researcher.

7. To keep accurate sample records and alert CryoArks when a sample has expired

It is important that the CryoArks database lists only samples that are available for researchers to request.

8. To submit accurate sample data to the CryoArks database

CryoArks can assist in formatting sample data for submission to the CryoArks database, but the collection owner is responsible for ensuring the data are of good quality.

9. To comply with UK GDPR and retain personal data supplied by CryoArks for the purpose of supplying requested samples only

Contact details for the requesting third party will be supplied by CryoArks to enable samples to be shipped. Discussions about shipment costs should be taken up between the supplying institution and the sample recipient.

10. To have the following institutional documentation in place:

- Material Transfer Agreement (MTA; where required)
- Loan agreement with Terms & Conditions
- Access and Benefits sharing policy

Examples of these documents can be found in the following section. CryoArks can also provide suitable work-flows for managing sample collections and processing requests.

SAMPLE DOCUMENTATION

Examples of documentation used by CryoArks partners and collaborating biobanks to manage collections are provided here. These are intended to assist CryoArks members in generating their own documents. These include:

1. Museum Material Transfer Agreement (MTA)

Suitable for accepting samples from field studies into a museum collection. Ensures the samples held in a collection are eligible for biobank use.

2. Zoo Material Transfer Agreement (MTA)

Used for accepting samples from captive animals (e.g. from zoos or aquaria) into a collection. Ensures samples held are eligible for biobank use and takes into consideration the requirements of the zoo and aquaria community. NB: Specific MTAs exist for direct submission to the **EAZA biobank** or **Frozen Ark**. Please visit their websites for further information.

3. Museum Loan Agreement

Includes terms and conditions required by museum institutions and outlines the agreement between the institutions borrowing and loaning the samples.

4. Zoo and Aquaria Loan Agreement

Includes terms and conditions for accessing samples from the zoo and aquaria community, through the EAZA biobank.

5. Shipping Inventory and Receipt

To track the shipment and receipt of loaned samples, ensuring full traceability.

6. Access and Benefits Sharing Policy

Institutional web page outlining requirements of compliance with the terms of the Nagoya Protocol on sample acquisition and use.

The following pages contain examples of documentation used by CryoArks partners and collaborating biobanks.

They are provided here as examples only, to demonstrate a possible basic structure of the documents your organisation may wish to include; however, they cannot foresee all possible situations and specific issues that may be relevant to your situation. As such, these documents are provided for reference only, without any express or implied warranty as to their suitability and should therefore be used at your own risk.

You are encouraged to produce your own version the required documents, and discuss them with Research Managers and other relevant personnel at your institution before use.

There is no requirement to use these specific examples for participation in CryoArks.



Material Transfer Agreement

This Agreement is made the day of 201[] between the Trustees of the Natural History Museum, Cromwell Road, London SW7 5BD (**the Museum**) and the donor (**the Donor**) named below. This Agreement constitutes a binding contract for the transfer of the items listed in Part 1 below to the Museum upon the terms and subject to the conditions attached at Part 2 (**the Terms and Conditions**).

PART 1 Donor and Items

Donor's name	
Donor's company number (if applicable)	[If applicable if not delete this box]
Donor's contact details	
Name of person authorised to act on behalf of the Donor	[If applicable if not delete this box]
Items	Those item(s) listed in Schedule 1 which are to be transferred to the Museum in accordance with this Agreement.
Item Data	The data to be supplied by the Donor to the Museum that relates to the Items including: [insert details – e.g. full collecting data and as deep a taxonomic determination as possible.]
Item Data Format	[insert details of the format you require the Item Data to be provided in]
Restrictions on Item Data Use	[Insert details or delete this text box]
Documentation	The documents relating to the Items which are listed at Schedule 2 and which are appended to this Agreement.
Delivery Arrangements	[insert details – e.g. date / time of delivery / which party bears the cost of transport, etc]



Part 2 Terms and Conditions

Definitions

1. Terms defined in Part 1 of this Agreement shall have the meaning specified in Part 1 when used in these Terms and Conditions.

Warranties and gift of the Items

2. The Donor warrants that it is the owner of the Items, and that it has full power to transfer ownership of the Items to the Museum.
3. The Donor hereby transfers title in the Items to the Museum.
4. The Donor warrants that the Items have not been:
 - a. stolen or looted from their rightful owners or country of origin;
 - b. obtained by violent means (including during an armed conflict in the country of origin);
 - c. obtained in violation of the legislation of their country of origin (i.e. obtained without the necessary permits);
 - d. exported illegally or illicitly from their country of origin; or
 - e. imported illegally or illicitly into the UK.
5. The Donor warrants that it will make no subsequent claim to ownership of the Items following the execution of this Agreement.
6. The Museum acknowledges that the Donor makes no warranty as to the condition of the Items.

Acceptance of the gift

7. The Museum hereby undertakes that it will accept the gift of the Items from the Donor, and will use and manage the Items in accordance with its policies, as updated from time to time, and will assume all costs of storage and preservation for the Items from the date of delivery to the Museum.
8. The Donor shall deliver or shall arrange for delivery of the Items in accordance with the Delivery Arrangements detailed at Part 1 (or as otherwise agreed in writing between the parties).



11. If any Restrictions on Item Data as specified in Part 1, the Museum shall comply with such restrictions.

Information and Data

12. The Donor acknowledges that the Museum is subject to the requirements of the Freedom of the Freedom of Information Act 2000 and shall assist and cooperate with the Museum to enable it to comply with its information disclosure obligations under the same.
13. Unless expressly agreed otherwise in writing between the Donor and the Museum, the Museum and any wholly owned subsidiary of the Museum shall be entitled to refer to the Donor by name as the donor of the Items, including but not limited to in response to enquiries. The Museum shall comply with its obligations under the Data Protection Act 1998 in processing personal data.

Intellectual Property

14. To the extent that the Donor owns the copyright or any other intellectual property rights in the Items, the Donor hereby assigns such rights to the Museum
15. Unless otherwise agreed in writing between the parties, the Donor hereby assigns to the Museum the copyright and any other intellectual property rights in the Item Data.

Law and Jurisdiction.

16. This Agreement shall be governed by and interpreted in accordance with the laws of England and the parties hereby submit to the exclusive jurisdiction of the English courts.

Execution

The parties shall sign below to record their intention to be bound to this Agreement. This Agreement shall take effect from the date of signature.



Schedule 1

Items

LIST AND/OR DESCRIBE THE ITEMS BEING DONATED

Schedule 2

Documentation

Copies of the relevant documentation as indicated below (please tick boxes or insert details) are attached to this Agreement. The Museum can only accept Items where the original permit(s) or other agreement(s) with the Country of Origin allows transfer to the Museum. Provided that copies of these permit(s) or other agreement(s) are made available to the Museum prior to or at the time of the transfer of the Items, the Museum will abide with any terms that were originally imposed on the Donor by the Country of Origin.

<input type="checkbox"/>	<i>Collecting permit</i>
<input type="checkbox"/>	<i>Export Permit</i>
<input type="checkbox"/>	<i>Import Permit</i>
<input type="checkbox"/>	<i>Mutually Agreed Terms (MAT)</i>
<input type="checkbox"/>	<i>Prior Informed Consent (PIC)</i>
<input type="checkbox"/>	<i>Letter informing Country of Origin of 3rd Party Transfer</i>
<input type="checkbox"/>	<i>Internationally Recognised Certificate of Compliance Number/s</i> _____
<input type="checkbox"/>	<i>CITES Registration code of supplier</i> _____
<input type="checkbox"/>	<i>Other (please specify e.g. hazard statement; conservation or preservation history)</i> _____



RZSS Material Transfer Agreement (BIOBANK)

At the Royal Zoological Society of Scotland's (RZSS) Edinburgh zoo, there are biobank facilities, dedicated to improving the storage of genetic samples and data, and their use in the conservation and research community. Samples and sample data at RZSS are managed by the biobanking initiatives described below:



The EAZA Biobank aims to establish dedicated biobanking facilities for the European zoo community and is a resource for genetically supporting population management and conservation research. Samples and data donated to the EAZA Biobank will belong to the EAZA community. More information about the EAZA Biobank can be found here: <https://www.eaza.net/conservation/research/eaza-biobank/>.



CryoArks is a UK consortium of existing biobanks (the Frozen Ark and the EAZA biobank), museums (Natural History Museum, National Museums Scotland), Universities (Cardiff, Nottingham and Edinburgh) and zoo collections (RZSS). Together, they aim to enhance diversity, visibility, and availability of zoological samples in the UK and encourage the shared use of specimens for non-commercial research and conservation purposes. Samples and data donated to RZSS will be made available through the CryoArks initiative. More information about the CryoArks Biobank initiative can be found at www.cryoarks.org.

This Material Transfer Agreement describes the submission of SAMPLES and SAMPLE DATA for use by RZSS under the described biobank initiatives. Ownership of samples and data are transferred to RZSS for management by the following biobank initiative (please delete as appropriate): **EAZA Biobank / CryoArks / Both.**

This Agreement is made on theday of..... in the year between the **RZSS, Edinburgh Zoo, Corstorphine Road, Edinburgh EH12 6TS** and the **Contributor** of the sample(s) as detailed in Part 2.

This agreement constitutes and evidences a binding contract for the donation of the samples listed (Part 1), under the Terms and Conditions given (Part 2).



Part 1: Samples covered by this MTA

How many samples are being submitted under this MTA? _____

Please complete the following information for each sample submitted under this MTA. If more than two samples are being submitted, please attach all required sample information as a separate Excel file and tick here ☐.

	<i>Example</i>	Sample 1	Sample 2
Species name (required)	<i>Pygoscelis papua</i>		
Common name	<i>Gentoo penguin</i>		
Local ID (required)	PEN11/0317		
House name	NA		
Studbook number (required if there is one)	ABC12-34567		
Type of sample* (required)	Blood		
Approx. amount of sample (required)	0.5 ml		
Date of sampling (required if known)	17/07/17		
Embargo sample until (required)	NA		
Geographic origin	Edinburgh zoo, UK		
Captive / Wild	Captive bred		

* If the sample type is extracted genetic material (e.g. DNA), please provide the following information:

Date of extraction:			
Method of extraction:			
Elution buffer:			
Extracted by:			
Quantification:			
Quality checked by:			



Part 2: Consent for sample and data use

The sample(s) and data listed in Part 1 and covered by this MTA are being sent to the RZSS from the following institution/individual:

Contributor's Name	
Contributor's address	
Contributor's contact details	

Permission to donate the sample(s) and data covered by this MTA to RZSS for the purpose of the biobank(s) has been granted by the sample Owner (if different from above):

Owner's Name	
Owner's address	
Owner's contact details	

By donating the sample(s) to the biobank and signing this agreement, the **Contributor** is acknowledging that:

1. They are authorised to submit these samples on behalf of the sending institution and the sample Owner.
2. The ownership of the sample(s) listed in Part 1 is being transferred to RZSS for biobanking purposes.
3. The sample(s) provided and described is (are), to the best of their knowledge from the individuals(s) indicated in the accompanying information.
4. Consent has been given from the sample Owner to send the samples listed in Part 1 for the purpose(s) outlined in this MTA.
5. To the best of their knowledge, the samples are free of pathogens or where pathogenic material is known to be present, the sender has fully alerted RZSS staff.
6. The samples were collected in accordance with National Legislation and in compliance with international law (the Nagoya protocol and CITES).

Contributor Signature: _____ Date: _____

Name (Printed): _____ Position: _____



Terms and conditions for sample submission

Obligations of the contributor and warranties of submitted samples:

1. The Contributor of the sample(s) warrants to be acting on behalf of the legal owner of the sample(s), and to have the authority to transfer ownership of the sample(s) to RZSS.
2. When donating sample(s), the Contributor transfers the title of ownership to RZSS.
3. The Contributor warrants that the sample(s) have not been:
 - a. stolen or looted from their rightful owners or country of origin;
 - b. obtained by violent means;
 - c. obtained in violation of the legislation of their country of origin (i.e. obtained without the necessary permits);
 - d. exported illegally or illicitly from their country of origin; or
 - e. imported illegally or illicitly into the Contributor's country.
4. So far as possible, the Contributor warrants that the sample(s) was/were collected under the relevant permits and licenses required by national law at the time of collection.
5. It is the contributor's responsibility to notify RZSS in writing of any changes to their contact details.
6. So far as possible, the Contributor warrants that any suspected or confirmed infectious, transmissible disease(s) affecting the specimen from which the sample(s) originate has been reported to RZSS, and any reportable infectious diseases have been reported to the relevant authorities prior to sample transfer. Any conditions attached to the relevant animal health importation/exportation permits must be adhered to.
7. In the event a sample donated is found to be positive for a reportable infectious disease (e.g. via incidental sequencing), RZSS will inform the Contributor of the sample, who is responsible for ensuring national reportable disease requirements are adhered to. RZSS is not responsible for the reporting of said disease, or any consequences to the Contributing Institution resultant from the reporting of such diseases. *Please note that RZSS WildGenes is not a disease screening lab and we will not be actively screening for disease in the samples. It is your responsibility to ensure this (see 6.)*
8. When donating sample(s), the Contributor warrants that it will make no subsequent claim to ownership of the sample(s) following the execution of this Material Transfer Agreement.
9. RZSS acknowledges that unless otherwise stated, the Contributor makes no warranty as to the condition of the sample(s).

Obligations of RZSS and acceptance of the samples

10. RZSS undertakes that it will accept the donation of the sample(s) from the Contributor upon receipt of the sample(s), associated sample data and completed Material Transfer Agreement.
11. Samples donated to the biobank will be governed by the biobank initiative(s) selected in this agreement and may include use for non-commercial research.
12. RZSS will assume all costs of storage for the items from the date of delivery to RZSS WildGenes (Edinburgh zoo).
13. Transport of the sample(s) from the Contributor to RZSS WildGenes should be scheduled and agreed to in writing between the parties prior to shipment of the sample(s).
14. If RZSS ceases to exist, samples committed to the EAZA Biobank will default to another EAZA Biobank hub. Samples managed by CryoArks will default to the National Museums Scotland property (CryoArks partner).



Conditions of acceptance

15. It is a condition of acceptance of the sample(s) that:
 - a. the basic sample(s) data is/are provided to RZSS in a format defined in this Material Transfer Agreement; and
 - b. the basic data meets the minimum required standards as defined in this Material Transfer Agreement.
16. The sample data will be processed into the selected Biobank database that may be visible to the public.
17. If any restrictions apply to any sample(s), as indicated by the Contributor, RZSS shall comply with such restrictions.

Information and Data

18. Unless otherwise agreed to, in writing, between the Contributor and RZSS, RZSS shall be entitled to refer to the Contributor (and/or Owner) by name as the donor of the items, including but not limited to in response to enquiries. RZSS shall comply with its obligations under the Data Protection Act 1998 and GDPR 2018 in processing personal data.

Intellectual Property

19. To the extent that the Contributor owns the intellectual property rights in the sample(s), the Contributor assigns such rights to the selected Biobank.
20. Unless otherwise agreed to in writing between the parties, the Contributor hereby assigns to the selected Biobank, the copyright and any other intellectual property rights in the item data.
21. Unless otherwise agreed to in writing between the parties, the Contributor hereby acknowledges the right of the selected Biobank to share basic, relevant sample data from all submitted sample(s) with any of its professional collaborating partners.

Amendments

22. RZSS is authorised to update these Terms and Conditions at any time and will communicate such changes to the contact details supplied on this agreement.

Law and Jurisdiction

23. This Material Transfer Agreement shall be governed by Scots law and the Scottish courts shall have exclusive jurisdiction over any matter relating to it.



NATURAL SCIENCES RESEARCH MATERIAL
OUTGOING LOAN AGREEMENT BIOLOGICAL SAMPLES

Natural Sciences Section:
NMS Contact:

Loan No:
Period of loan from:
Until:

Loan application number:
Borrower's Name and Institution:
Receiving address:

The Board of Trustees of National Museums Scotland (NMS) agree to loan the undernoted samples in line with National Museums Scotland's Research Loan Terms and Conditions:

[illegible]

(add more rows if required)



The borrower is permitted to undertake the following activities to these samples:

	Permission given Y/N
Dissect/prepare	
Chemically treat	
Publication of results	
Transfer to third party for a specific purpose [e.g. extract/sequence DNA]	
Other [detail]	

The above permission is granted subject to the following specific conditions:

	Detail Conditions (where none enter N/A)
Cost(s) associated with sample preparation to be charged to borrower	Value £ _____
Specific storage conditions	
Access and Benefit sharing	

Copies of the following data/assets generated must be returned with any remaining samples (if applicable) on completion of the loan:

Summarise below [where none state N/A]

Transport details

Shipping method	Y/N
Post	
Courier	
Collection	
Other [detail]	

Transport costs	Y/N
Borrower covers outward and return	
Borrower covers outward only	
Borrower covers return only	

Issued by: [name, job title, section] (NMS)

Print name:	
Signature:	Date:



To be completed by the borrower prior to receipt of the loaned specimens/ samples

1. I have read and agree to abide by the National Museums Scotland Research Loan Terms and Conditions.
2. I have read and agree to abide by any additional terms and conditions specified in this agreement.
3. I understand that failure to comply with any of the above may result in sanctions being applied as defined in the NMS Research Loan Terms and Conditions.
4. I understand that NMS will hold (both electronically and on paper) the information provided below solely for the purpose(s) of managing the NMS collection and that the data will not be shared with any third party and will be held securely in accordance with current data protection legislation.
5. I acknowledge that NMS is subject to the requirements of the Freedom of Information Scotland Act 2002 and shall assist and cooperate with NMS to enable it to comply with its information disclosure obligations under the same.

Signature Date

Name in full (state title)
Position within institution
Name of institution
Address of institution
Telephone
Email

Please sign two copies of this form and return one copy to:

Name:
Email
Post National Museums Collection Centre
242 West Granton Road
Edinburgh, EH5 1JA

Retain the second copy for your reference.

NMS will ship your samples on an agreed date after receiving your signed copy of this agreement. The shipment will contain an inventory detailing the samples contained. Please check this carefully on receipt and alert your NMS contact if there are any discrepancies.



EAZA BIOBANK REQUEST FOR SAMPLE USE RELEASE AGREEMENT

PRINCIPAL INVESTIGATOR:

Name:

Contact information*:

INSTITUTION:

Authorized official:

SUMMARY SAMPLES REQUESTED:

Species:

Sample type:

Number of Samples:
(include volume per sample)

Project Title:

In consideration for the "Principal Investigator" listed above receiving the requested materials ("Sample(s)") from the EAZA Biobank, the Investigator hereby acknowledges and agrees to the following terms and conditions of the transfer of Sample(s) by the EAZA biobank to the Investigator:

Use of samples.

1. Sample(s) will only be used for the academic research purposes described in the "Application for Sample Use", which is included and made a part hereof.
2. The Sample(s) will be used solely by the Principal Investigator and others working under his/her direct supervision at the listed Institution. Sample(s) shall not be further distributed to others, either at the Institution or outside, without the prior consent of the EAZA Biobank.
3. These samples shall be used in accordance with any and all applicable federal, state, local and other laws and regulations, and to adhere to appropriate biosafety practices.

Ownership of Samples.

4. The EAZA Biobank retains the ownership or holding of the Sample(s) sent out on request, including any Sample(s) requested as modifications or additions to the original request thereto.
5. The Investigator will not give, sell, assign, distribute or transfer the samples to any third party without prior written consent.
6. Provision of Sample(s) to the Principal Investigator does not restrict the rights of the EAZA Biobank from distributing the same or similar Sample(s) to another requestor, or to publish any documents relating to the Sample(s).

Non-Disclosure of Confidential Information.

7. Any and all information provided to the Principal Investigator by the EAZA Biobank, regarding EAZA and the EAZA Biobank Sample(s), operations, employees, or to which the Principal Investigator obtains access in connection with the Request for Sample Use Application Form constitutes as "Confidential Information".



8. Confidential Information shall be treated confidentially and with the same level of care that the Investigator and the Institution use in maintaining their own Confidential Information. Information shall not be used for any purpose other than within the research purposes for which the Sample(s) were requested without explicit, prior written consent of the EAZA Biobank.

9. Confidential Information does not include any information which is already publicly available or known through lawful means, is generally known to the public through no breach or fault of the Investigator or is received by the Investigator from a third party who is free to make such disclosures without breaching any legal obligation to the EAZA Biobank.

Research Updates, Data, and Publication.

10. Updates: The requesting Investigator will provide reports or updates to the EAZA Biobank on at least an annual basis regarding their use of the Sample(s) requested and the progress of research and results involving the Sample(s).

11. EAZA Biobank right to use data: Upon request by the EAZA Biobank, the Investigator will provide the EAZA Biobank access to data collected or obtained for use in EAZA approved population management and conservation efforts. When relevant and after consultation with the EAZA Biobank, data will be deposited in an appropriate manner on NCBI "GenBank" or other relevant public databases following publication.

12. Publications: The Investigator will have the right to publish and disclose the results of any research involved the Sample(s). The EAZA Biobank Working Group retains the right to evaluate and consent to the manuscript prior to publication. Authorship in all publications will be determined on a case-by-case basis and in accordance with scientific principle. Copies of the publication(s) shall be made available to the EAZA Biobank at the time of acceptance of the publication(s). The Investigator agrees to acknowledge The EAZA Biobank, or other applicable parties, as the source of the Sample(s) and/or for its assistance, in all publications resulting from the Investigator's use of the Sample(s), when appropriate and subject in each instance to the EAZA Biobank's prior consent.

Release.

13. The Investigator acknowledges potential zoonotic hazards associated with handling the requested Sample(s) and necessary precaution should be taken, and appropriate equipment used, when handling the Sample(s).

14. The Investigator hereby acknowledges the EAZA Biobank is not responsible for any loss or damage resulting from the request for, transfer, use of, or exposure to Sample(s) from the EAZA Biobank.

Liability.

15. Except to the extent prohibited by law, the Investigator assumes all liability for damages which may arise from his/her use, storage, or disposal of the requested Sample(s).

16. The EAZA Biobank will not be liable to the Investigator for any loss, damage or injury, including death, or damage to property regardless of the cause thereof, resulting from the request for, transfer, use of, or exposure to Sample(s) from the EAZA Biobank.

Disclaimer of Warranty.

17. The EAZA Biobank makes no representations and extends no warranties of any kind, expressed or implied. There are no express or implied warranties of fitness of samples for any particular purpose, or that the use of the material will not infringe on any patent, copyright, trademark or other proprietary rights.

**Permits, Transfer and Shipment of Samples.**

18. The Investigator will obtain and bear the cost of all necessary permits pertaining to the receipt of the Sample(s). The cost of packing and shipping samples requested by the Investigator shall be assumed by the Investigator and/or by the Institution and not by the EAZA Biobank.

Sample Return and/or Disposal.

19. The Investigator will be responsible for proper handling, storage and use of the samples transferred to him/her by the EAZA Biobank and after use, will return any remaining material as agreed upon with the EAZA Biobank prior to transfer, or dispose of the Sample(s), or any excess material not returned, in accordance with all applicable national, local and other laws and regulations.

EAZA Biobank Terms of Service.

20. The Investigator has read the Terms of Service and Request for Sample Use Application Instructions issued by the EAZA Biobank and hereby agrees to abide by the terms and conditions thereof.

Governing Law.

21. This Agreement shall be governed by and interpreted in accordance with the laws of The Netherlands and the parties hereby submit to the exclusive jurisdiction of the Dutch courts.

Amendments.

22. EAZA is authorised to update these Terms and Conditions at any time and will publish any such changes through existing EAZA communication channels.

Approval

Please read and sign this agreement and acknowledge acceptance and send to biobank@eaza.net
Or send as a hard copy to the EAZA Biobank Coordinator

Signature of Investigator

Name of Investigator/ Title

Date

*By providing your contact information, you acknowledge and accept that this information may be shared with relevant parties associated with this request and you may be contacted regarding sample(s) requested and use thereof.



NATURAL SCIENCES OUTGOING RESEARCH LOAN BIOLOGICAL SAMPLES SHIPMENT INVOICE, INVENTORY AND RECEIPT

1) Ship to

Company Name: _____

Street Av.: _____

Town/Area Code: _____

State/Country: _____

Contact Name: _____

Tel No/E-mail: _____

2) Air waybill No (if applicable): *Carrier:* _____

No. of Pieces: _____

Total Weight: _____

Dimensions cms: _____

3) Full Description of Goods:

Zoological museum specimens *[insert method of packing here e.g. on dry ice Class 9 UN1845 or, in ethanol etc]* in accordance with dangerous goods transportation regulations Category B UN3373.

For scientific study only – Non-infectious, non-toxic, non-hazardous, no commercial value. Inert biological specimens, non-pathogenic, and without economic value, for use in academic research.

4) Total value for Customs: £

5) Name & Address of Sender:	<i>Sender name</i>
	<i>Address Line 1:</i> National Museum Collection Centre
	<i>Address Line 2:</i> 242 West Granton Road
	<i>Address Line 3:</i> Edinburgh,
	<i>Address Line 4:</i> EH5 1JA
	<i>Tel No/Email:</i>



6) Reason for Export: For scientific study only

7) Declaration:

I declare that the above information is true and correct to the best of my knowledge.

For and on behalf of the National Museum Scotland.

Name (in print): _____

Signature: _____

Position in Company: _____

Date: _____

8) Specimens contained in this consignment

Loan Application Reference: _____

For uses under the Terms and Conditions on Loan Agreement No: _____

Item	Sample ID/Barcode	Family/Species	Sample type	Notes	CITES Listed Y/N

(Mark here if an additional sample list is attached ☐)

To the borrower

Please take the time to inspect this shipment and compare the contents listed to those detailed in the Loan Agreement (referenced above).

Complete two copies of the following 'Receipt (out)' form and return one to the National Museums Scotland. Retain the second copy for your records.

Please inform a member of National Museum Scotland staff **as soon as possible** to confirm receipt of the parcel and let them know if the items do not reach you in a suitable condition or if you identify any discrepancies.



RECEIPT (OUT)

National Museums of Scotland Ref (Loan Agreement Number):

The items detailed in Section 8 of this document are being supplied by for and on behalf of the National Museums of Scotland:

Signed:

Print name:

Official title:

Date:

The items detailed in Section 8 of this document were received for and on behalf of the Borrower:

Signed:

Print name:

Official title:

Date:

One copy to be retained by the borrower, the other to be retained by National Museums of Scotland.

Access and Benefit Sharing: Convention on Biological Diversity and the Nagoya Protocol

Our diverse collections include natural sciences specimens containing genetic material which we collect, manage and care for in line with the laws and regulations relating to Access and Benefit-sharing, arising from the Nagoya Protocol and Convention on Biological Diversity.

The [Nagoya Protocol](#) is an international agreement designed to ensure fair and equitable access and benefit sharing (ABS) for the use of genetic resources. The Protocol requires all users conducting research and development of genetic resources and associated traditional knowledge, to demonstrate due diligence to ensure access and use is undertaken in accordance with the legislation of the country the resources originated from.

Our collections acquisition, access and management procedures follow the CETAFs [Code of Conduct & Best Practices on Access and Benefit-sharing](#).

It is the responsibility of all internal and external individual users / researchers of our natural sciences collections to comply with the Protocol.

For more information, please see the following guidance:

- [Nagoya Protocol on Access and Benefits Sharing](#)
- [DEFRA Guidance](#)
- [Guidance on Compliance Measures for Users](#)

Collections Due Diligence

We are committed to developing our collections in compliance with all applicable laws and to the principles set out in [Combating Illicit Trade: Due Diligence Guidelines for Museums, Libraries and Archives on Collecting and Borrowing Cultural Material \(DCMS 2005\)](#) as well as the wider Statement of Principles published by the National Museum Director's Council on the [Spoliation of works of art during the Holocaust and World War II period](#).

We undertake provenance research and due diligence when acquiring, lending, borrowing and displaying collections, and adhere to the following principles:

- We will not accept a loan or acquisition of any object or specimen without confirmation that the donor, vendor or lender has valid and legal title to retain and transfer the object.
- We will exercise due diligence to establish the legal status of objects under consideration, making every reasonable effort to investigate and clarify the provenance of an object or specimen.
- We will document and preserve information obtained about the provenance of an object.

National Museums Scotland is an approved institution for the provision of immunity from seizure and acts within the parameters set out by the Department for Culture Media and Sport. More information on immunity from seizure and a list of objects protected from seizure can be found [here](#).

Online at nms.ac.uk/collections-research/our-research/collections-and-research-policies/

CRYOARKS INFORMATION RESOURCES

Sample curation begins when a sample is first collected. CryoArks encourages individual institutions to adopt best practices for acquiring and maintaining their frozen sample collections. Further resources to support this are available on the CryoArks website (cryoarks.org). These include:

CryoArks information flyers

These explain the CryoArks biobank initiative and provide details of the CryoArks website and contacts. A version for zoos and aquaria containing details of the EAZA Biobank sample collection protocol, is available.

Guidance on how to inventory your sample collection

This guides collection managers through the process of reviewing and documenting the contents of a frozen sample collection.

Initial and thorough data collection sheet templates

These provide a structure to document an inventoried collection.

Guidance on how to train your team to conduct and inventory

This guides collection managers through the training needed to review and document the contents of a frozen sample collection.

CryoArks data template (and guidance on how to use it)

A comprehensive and editable Excel spreadsheet that includes fields commonly used in university, zoo and museum databases. This is the template that underpins the CryoArks database. Collections are welcome to use it for their own databasing requirements or to list samples intended for submission to a CryoArks hub.

Sampling protocol posters and freezer box labels

Designed to be displayed in areas where sample collectors work. This aims to encourage researchers to consider biobanking requirements during routine sampling or fieldwork.

FREQUENTLY ASKED QUESTIONS

Samples and storage

What type of sample/data are held in the CryoArks database?

Frozen tissues, blood and DNA are the main sample types. CryoArks will also accept other samples e.g. cell lines, mixed environmental samples, DNA storage cards, etc., and can advise on suitable storage facilities for the storage of animal cell lines and gametes. Whole voucher specimens are valuable too and may also be submitted. Data includes the sample information, owner details and restrictions on use (e.g. Access and Benefit Sharing requirements).

How much of a sample does there need to be?

Ideally, a minimum of 100µL aqueous gDNA, 100µL blood and/or 1cm³ tissue should be available, but we understand the volume may be less. We encourage listing all samples you wish to make available to the wider research community.

How many samples per species should be available?

Any number of samples can be submitted but ideally multiple samples should be available, including different body tissues (e.g. blood, heart, muscle, liver etc.). Collections may also include population genetics surveys, some of which include samples taken from many hundreds of individuals of a single species. We recognise the value of these sample/data combinations.

What should the samples be stored in (storage medium etc.)?

Tissue samples should be stored frozen or in a small amount of >95% analytical grade ethanol. Aqueous DNAs in sterile distilled water, TE buffer or freeze dried (please specify). Blood should be stored in EDTA not heparin. Other storage media may also be welcome depending on sample type and will be considered on a case-by-case basis.

Can I send/list whole animal bodies to the biobank?

We would like to know if you have whole body specimen “vouchers” linked to the tissue/DNA in your collection. Alternatively, you can donate whole bodies to a CryoArks museum partner (NMS or NHM) where they will be accessioned into the museum’s collection and a sample will be taken for the biobank.

What facilities do I need to store Biobank samples?

You will need to have access to a freezer between -20°C and -80°C , or -196°C (Liquid Nitrogen) storage facilities. The facility should be one that is monitored to ensure it remains at the correct temperature; ideally in real-time with a 24/7 alarm system to alert staff when there is a freezer failure.

How old can the samples be?

Samples should have been transferred to frozen storage as soon as possible after they were collected. Fresh samples are preferable but we also appreciate the value of some older samples. Those with an unknown storage history can also be submitted if the quality of the genetic content can be demonstrated.

Who can help me organise my sample collection?

There are guidance documents available at cryoarks.org that will help you organise your samples and data. Within the UK, CryoArks may also be able to arrange for someone to help you sort through your sample collection. For more information, contact enquiries@cryoarks.org

How much sample data do I need to have to submit it to CryoArks?

Where possible, the mandatory fields on the CryoArks Data Template should be made available. These will be stated on the accompanying Data Transfer Agreement and details can be found on the CryoArks website. We understand that some legacy collections will not have all of the required data and we are happy to discuss this on a case-by-case basis.

Sample and data ownership

If I submit my sample data to the biobank but retain ownership of the samples, can I still use the samples for my own purposes?

Yes of course! Terms and conditions for the submission of data only will be agreed in advance using the CryoArks Data Transfer Agreement (DTA).

I don't know where the samples came from originally, can I still biobank them or the data?

In many cases yes, after some provenance checks agreed on the DTA (not knowingly sourced unethically, etc.) and with all gaps in provenance and source origin recorded for transparency.

The samples in my freezers don't belong to me, can I still submit the data as part of the collection?

No. You should contact the owner of the samples to obtain consent for biobanking before submitting the data or donating the samples.

Do I have to give up ownership of the samples/data?

No. If you are submitting data only to the CryoArks database you do not have to give up ownership. If you decide to donate your samples to CryoArks, you transfer ownership to a CryoArks partner. If you would like a CryoArks partner to store your samples without transferring ownership, charges may be applied to store the samples in the future.

Who will own the samples if I donate them to the biobank?

Samples that are donated to a CryoArks partner will be owned by that institution and will be managed according to CryoArks standards and the institutions management policies and procedures.

Sample access and use

If I submit the sample data only to the Biobank, can I donate the samples later?

Yes. The data can be submitted first with a Data Transfer Agreement (DTA), then samples can be transferred at a later date under a Material Transfer Agreement (MTA) if you choose to donate the samples.

Who will decide who can have access to my samples and/or data?

Applications for sample use will be reviewed by the CryoArks Samples Acquisitions and Loans Committee. If you retain the right to have the final permission on usage, the Committee will make a recommendation to you on the basis of the application form.

Can I access my samples if I donate them to the biobank?

Samples that are donated to CryoArks partner institutions can be accessed by completing a sample request form on the CryoArks website, or by submitting a copy of the request to enquiries@cryoarks.org. If there is sufficient quantity, you can also donate part of the sample and retain the remainder for your own use.

If I am asked to supply samples for a CryoArks application, can I refuse?

If the request violates the principles you set out on the Data Transfer Agreement (DTA) when submitting the sample data, then yes.

If I change my mind, can I withdraw my sample data after it has been submitted?

Yes. On receipt of a formal written request, CryoArks will delete your data from the database and inform you when this has been done.

Who will pay for sample shipment if I need to send samples out?

Details of the costs involved in preparing and shipping samples should be agreed between the supplying institution and the loanee. Where large numbers of samples and/or specific shipment terms are requested, the sample recipient will be expected to cover all associated costs. These details should be agreed

Who will be able to see my sample data?

The Data Transfer Agreement (DTA) will outline the terms under which your data can be made available on the publicly accessible CryoArks database. This means that any data you chose to make available will be visible by anyone using the database. Data embargo periods can be set up and lifted on agreed dates as requested by the data owner.

How can I track research outcomes and benefits produced from the samples I send out (for my institutional MTA compliance and Key Performance Indicators)?

CryoArks will request information about any submission of data to public databases, publications, grant applications and biobank citations resulting from the use of your sample data and/or samples. This information will be referenced on the CryoArks database. Further communications about sample data use can be agreed between the supplying institution and the sample loanee on the associated institutional loan agreement (a template of this is available in this pack).

Documentation

What documentation do I need to have in place to manage my samples according to CryoArks standards?

CryoArks partners and member institutions (those submitting sample data only to the CryoArks database) are, in so far as possible, expected to follow ISBER and GGBN best practice guidelines for the management of biological sample collections. As a minimum, we advise that institutions have their own Material Transfer Agreement (MTA) and Loan Agreement in place to document samples coming in to and going out of their collection. CryoArks members are also required to ensure that their institution is aware of and implements biological resource handling in accordance with the Nagoya Protocol on Access and Benefit-sharing.

FURTHER RESOURCES

Please visit cryoarks.org/resources for more information and guidelines about sample collection and management.

CryoArks also has a collection of bite sized training videos available on our [YouTube channel](#).

For further information about general best practice guidelines, visit the ISBER and GGBN websites.

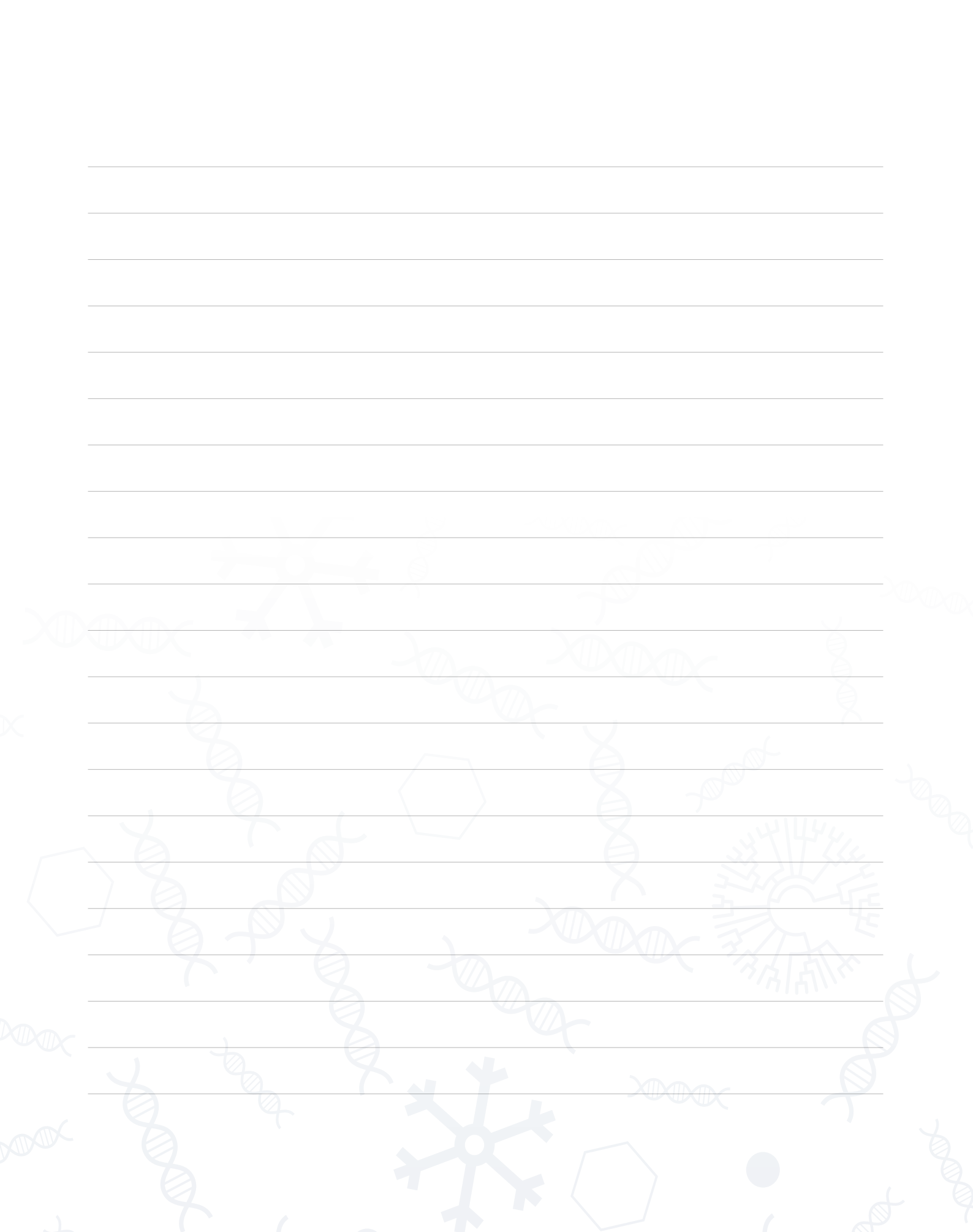
If you have any other queries relating to the submission of data or samples to the CryoArks initiative, or would like to discuss further sharing of the information available on our platforms, please contact us at enquiries@cryoarks.org.

Within the UK, the CryoArks Biobank Initiative is collaborating with:

The European Association of Zoos and Aquaria (EAZA) Biobank to collect and manage samples from zoo and aquaria animals. For more information, please visit the [EAZA website](https://eaza.net/conservation/research/eaza-biobank/) (eaza.net/conservation/research/eaza-biobank/).

The Frozen Ark to collect, preserve and store tissue, gametes, viable cells and DNA samples from endangered animals for use in both conservation programmes and to enable society to benefit itself and all life on Earth. For more information, please visit frozenark.org.

NOTES



Handwriting practice lines consisting of 20 horizontal gray lines.



Acknowledgements

CryoArks would like to thank Hollie Lane for her help in producing this document.

PARTNER INSTITUTIONS



IN COLLABORATION WITH



CRYOARKS IS FUNDED BY



DESIGN AND LAYOUTS BY:

Studio™
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We hope you have found this information pack helpful and that you will consider joining the cryoarks community!

HOW TO GET IN TOUCH

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 **CRYOARKS**

