

ICLAS Policies and Procedures: ICLAS Genetic Reference Monitoring Program (GENRef)

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1 BACKGROUND

1.1 The ICLAS Animal Quality Network

The ICLAS Animal Quality Network (LAQ Network) was established in 2006 as a joint initiative of ICLAS and laboratories involved in the health monitoring and/or genetics of laboratory animals. The aim of the Network was to initiate and develop programs to fulfil ICLAS's objectives of improving and maintaining the quality of animals used in research and to raise awareness of the importance of high quality laboratory animals among the scientific community.

The Network's first initiative was the Performance Evaluation Program for Diagnostic Laboratories (PEP). This program focused on animal health and was designed to enable participating diagnostic laboratories to self-assess the sensitivity and specificity of their health monitoring assays. PEP has been running successfully since 2007 and more than 35 diagnostic laboratories worldwide have participated in the program. Full details of the ICLAS PEP Program can be found in the ICLAS document "ICLAS Policies and Procedures: ICLAS Performance Evaluation Program (PEP)"

1.2 Development of the GENRef Program

In parallel to the development of PEP, work began in 2008 on the development of a genetic monitoring program. The principle aim was to address the issues of genetic quality assurance arising from the dramatic increase in the number of rodent strains and stocks and use of genetically modified animals. Genetic quality assurance and the standardization of animal models were seen as crucial to ensuring consistency and reproducibility in experimental results both within and across research institutions.

The genetic monitoring program was to be developed in two phases: firstly, a focus on education and training to increase awareness of the importance of genetic quality monitoring; and secondly, the establishment of a self-assessment genetic monitoring program.

1.3 Education on the importance of genetic quality monitoring

As regards education and training, two papers were published in 2013, as follows:

"The case for genetic monitoring of mice and rats used in biomedical research" *Mammalian Genome* 24 (3-4): 89-94, authored by Fahey JR, Katoh H, Malcolm R and AV Perez; and

"Aspects of genetic monitoring in rodents" 12th FELASA-SECAL Congress, by Perez A and JR Fahey. Barcelona June 2013

Additionally, from 2010 onwards, presentations were given at various LAS conferences such as AALAS, AFLAS and FELASA.

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2 OVERVIEW OF THE GENRef PROGRAM

By 2015, with the educational phase completed, it was considered appropriate to begin the second phase and implement a self-assessment genetic monitoring program, in accordance with the following principles:

2.1 Objectives

Reference DNA from the most commonly used rodent breeds would be made available to enable research institutions worldwide (program participants) to check whether the specific strains of research animals they had developed were genetically sound and truly representative of their assumed genotype.

Like PEP, the GRP program would be self-financing. For each DNA shipment, program participants would pay a fee to cover production, shipping and administration costs.

The initial focus would be on the genetic monitoring of rodents (mice and rats), both inbred and outbred (or closed colony animals). The program would start with trials involving those research facilities currently performing rodent genetic monitoring and then be opened later to other institutions as they became confident in their capabilities.

2.2 DNA strains

The program would start by providing reference DNA from the 12 most common inbred strains/ sub-strains of laboratory mice, e.g. C57BL/6N, C57BL/6J, BALB/cJ, BALB/cN, C3He, 129S6, etc. As the program developed other mice strains and the most common rat strains would be incorporated.

2.3 DNA providers

DNA would be provided by internationally recognized breeders (donor breeders) – e.g. Jackson labs, Taconic Biosciences, CIEA.

2.4 DNA production

Donor breeders would be asked to isolate DNA from 4 mice of each strain (up to 4 strains) from the following organs: tail, lungs, heart and kidneys. DNA would be extracted by donor breeders and placed in tubes at concentrations of 25 ng/ul and a total of 10 uls or 250ngs/10 uls.

2.5 DNA confirmation

Donor breeders would send samples of DNA to another program donor breeder or ICLAS Network lab for confirmation.

2.6 DNA shipment and storage

Donor breeders would ship DNA to PEP Distribution centre in Barcelona where it would be stored and then shipped to program participants.

2.7 Management

As with PEP, the GRP program would be managed by the ICLAS Laboratory Animal Quality Network which would send annual reports to the ICLAS GB and general Assembly about the development of the program.

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2.8 Funding

The ICLAS Network for Laboratory Animal Quality would provide the funding necessary for the development phase of the program with the condition that the operational phase would be self-financing.

The costs of DNA production, confirmation and shipment to the Network's distribution centre would be covered by the breeders as a form of donation to the program. Their contribution would be acknowledged in all publications, web, etc. where the ICLAS GENRef program was announced/publicized. Administration costs or DC costs for storing and sending the samples would not be charged by the DC.

Participating institutions would pay a fee sufficient to cover the cost of shipping and administration and a small additional fee to support the continuity of the program.

All funds managed by the program would be paid into/from an ICLAS bank account supervised by the ICLAS LAQ Network and annually audited.

2.9 Laboratories and Institutions involved in the program and their functions

| LAQ Network Laboratories | Function |
|--|---|
| <ul style="list-style-type: none">• The Jackson Laboratory, USA• Taconic Biosciences, USA• Institute for Experimental Animals, Hamamatsu University School of Medicine, Japan (since 2019, substituted by RIKEN BioResource Center, Japan) | Definition and supervision of the program |
| LAQ Network Distribution Center | |
| SIAL, Universitat Autònoma de Barcelona | Storage and distribution of the DNA samples |
| Donor Breeders | |
| <ul style="list-style-type: none">• The Jackson Laboratory, USA• Taconic Biosciences, USA• Central Institute for Experimental Animals (CIEA), Japan | Donation of the animals or DNA |
| Participating institutions | |
| Any scientific institution from around the world | Request of DNA samples to perform in-house genetic monitoring program |

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3 IMPLEMENTATION OF THE GENRef PROGRAM

The ICLAS GENRef program was launched at the end of 2016, and has since provided reference DNA from the 12 most common inbred strains/ sub-strains of laboratory mice, e.g. C57BL/6N, C57BL/6J, BALB/cJ, BALB/cN, C3He, 129S6, etc. As the program develops other mice strains and the most common rat strains will be incorporated.

3.1 Samples

Sample concentration: each sample = 250 nanograms/10 microliters

Sample quantity: maximum of 1 sample of each strain per applicant

3.2 Fees:

Sample cost: €100 per sample

3.3 Shipping costs:

For labs participating in the ICLAS PEP program, DNA samples are sent with PEP specimens for an additional shipping cost of €100 for 1-12 samples.

For labs not participating in the ICLAS PEP program or who want their DNA specimens sent separately, shipping costs are as follows:

Europe: €800 for 1-12 specimens

Rest of the world: €1,300 for 1-12 specimens

Rest of the world if health and origin certificates are required: €1,600 for 1-12 specimens.

On request, DNA samples can be sent at room temperature to reduce shipping costs as stability has been proven although we recommend sending the samples with dry ice.

3.4 GENRef Participating Laboratories 2016-2019

| GENRef Participating Laboratories 2016-2019 | | | | |
|---|--------------------------|--------------------------|--------------------------|--------------------------|
| ♦ Not participating: | | | | |
| Participating Laboratory: | 2016 DNA strains ordered | 2017 DNA strains ordered | 2018 DNA strains ordered | 2019 DNA strains ordered |
| 008 Central Institute for Experimental Animals, (CIEA), Japan | (1,2,5,6) | ♦ | ♦ | ♦ |
| 018 CEMIB- Multidisciplinary Center, Brazil | (1-12) | (1-12) | (1-12) | (1-12) |
| 019 Guangdong Lab. Animal. Mon. Institute, Guangzhou, China | (1-12) | ♦ | ♦ | ♦ |
| 025 Division of Lab. Animal Mon. Inst., (NIDF), China | (1-12) | (1-12) | ♦ | (1-12) |
| 027 National Laboratory Animal Center, Mahidol University, Thailand | | (5,6) | (1,2,3,5,6,7,9,10,11) | ♦ |

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| | | | | |
|--|-------------------------|---------------|-----------|-----------|
| 028 Microbiological Detection Center, Nanjing University, China | | (1,5,6,7,8) | ♦ | ♦ |
| 041 GemPharmatech CO.,Ltd. China | | | | (5,7) |
| Total Participants | 4 | 4 | 2 | 3 |
| Total Strains | 40 | 31 | 21 | 26 |
| DNA strains/sub-strains available: | | | | |
| 1. C57BL/6NTac | 5. C57BL/6J (reg. #664) | 9. DBA/2Jcl | | |
| 2. BALB/cAnNTac | 6. BALB/cj (reg. #651) | 10.C3H/HeJcl | | |
| 3. C3H/HeNTac | 7. NOD/LtJ (reg. 1976) | 11. DBA/2NJcl | | |
| 4. 129S6/SvEvTac | 8. A/J (reg.#646) | 12. FVB/NJcl | | |

So far, only PEP participants have requested GENRef samples in order to take advantage of the reduced shipping costs.

3.5 LAQ Network annual income & expenditure on ICLAS bank account

There are two forms of financial reporting for LAQ Network programs: annual accounts covering the financial year January to December and indicative income and costs to estimate the cost of each individual program.

The following table shows all income and expenditure on the LAQ Network bank account in respect of PEP and GENRef from January to December for the years 2017 and 2018:

| Movements on LAQ Network bank account for 2017 and 2018 | | |
|---|------------------|------------------|
| | 2017 | 2018 |
| Income | EURO | EURO |
| Balance at 31st Dec brought forward from previous year | 47,025.17 | 50,650.35 |
| PEP Participant fees | 43,054.00 | 29,877.00 |
| GENRef Participant fees | 5,975.00 | 4,080.00 |
| Total Income | 96,054.17 | 84,607.35 |
| Expenditure | | |
| PEP Bank Charges | 183.00 | 278.37 |
| PEP Specimen production costs: Shipping costs of specimens to DC | 8,450.07 | 3,169.45 |
| GENRef Specimen production costs: Shipping costs of DNA specimens to DC | 5,952.39 | |
| PEP Specimen distribution costs from DC to participants | 27,918.37 | 34,167.85 |
| Meetings | | |
| DC Admin Costs | 2,899.99 | |
| Total Expenditure | 45,403.82 | 37,615.67 |
| + Balance at 31st December | 50,650.35 | 46,991.68 |

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3.6 Indicative income & expenditure for each GENRef Program

The problem with annual accounts is that they don't present a real picture of the financial state of the GENRef program because the income and expenditure of each program runs over two and sometimes 3 financial years. The following figures show indicative income and expenditure for each GENRef program from 2016 to 2019. As can be seen, for each year, the GENRef program has been in surplus.

| Indicative Income & Expenditure for GENRef programs from 2016- 2019 | | | | |
|---|------------------|------------------|------------------|------------------|
| | 2016 | 2017 | 2018 | 2019 |
| Number of Participants | 4 | 4 | 2 | 3 |
| Income | € | € | € | € |
| Balance brought forward | 0 | 3,895.00 | 937.61 | 2,972.61 |
| GENRef fees | 4,400.00 | 3,500.00 | 2,300.00 | 2,900.00 |
| Total Income | 4,400.00 | 7,395.00 | 3,237.61 | 5,872.61 |
| | | | | |
| Costs | | | | |
| Admin costs at €20 per participant | -80 | -80 | -40 | -60 |
| Bank charges at €25 per year | -25 | -25 | -25 | -25 |
| Distribution Shipping costs: DC to Participant | -400.00 | -400.00 | -200.00 | -300.00 |
| GENRef Specimen production costs: Shipping costs of DNA specimens to DC | | -5,952.39 | | |
| FELASA Meeting to promote GENRef | | | | -1,718.48 |
| Total costs | -505.00 | -6,457.39 | -265.00 | -2,103.48 |
| Balance | +3,895.00 | +937.61 | +2,972.61 | +3,769.13 |

4 MANAGEMENT OF THE GENRef PROGRAM

4.1 Task 1: Receive GENRef Applications

June -December Year 1: Participants usually send their GENRef application form with their PEP Application form in order to take advantage of the reduced shipping costs for the GENRef specimens when combined with PEP specimens in the same shipment.

Interested laboratories can download a GENRef Application Form from the ICLAS website;

<http://iclas.org/animal-quality-network/iclas-genetic-monitoring-reference-program>

Check applications are correctly completed and signed and dated (Appendix 1)

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4.2 Task 2: Update Shipping List

June -December Year 1: Update shipping list with information, as in Appendix 2.

4.3 Task 3: Send Invoices

June -December Year 1: Create and send invoices in PDF format to participants acknowledging receipt of their GENRef application.(Appendix 3).

4.4 Task 4: Check LAQN bank account

June -December Year 1: Check LAQN bank account (Appendix 4) to see which participants have paid their fee.

4.5 Task 5: Transfer bank data to Excel sheet

June-December Year 1: Transfer bank data to Excel sheet showing movements on LAQN Account number 2100 0424 31 02 00242020 Jan - Dec 2017 (Appendix 5)

4.6 Task 6: Send acknowledgement of f GENRef fee

June -December Year 1: To those participants who have paid their fee, send PDF acknowledgement of receipt of fee (Appendix 8) . Participation Certificates are not given to GENRef participants.

4.7 Task 8: Specimens are shipped to Participants

January- June Year 2: GENRef specimens are prepared and shipped from the DC to participants by World Courier in the same shipment as their PEP specimens.

4.8 Task 8: Include GENRef participant data in LAQ Network Annual Report

June, Year2: Include GENRef participant data in LAQ Network Annual Report as shown in Section 4 of “ICLAS Laboratory Animal Quality Network (LAQ Network) Report 2019”, Appendix 7


4.9 Task 9: Prepare GENRef invoices and bank statements for ICLAS Auditor

June, Year2: Make PDF copies of all invoices and all GENRef related bank statements for the previous calendar year (Jan-Dec) . GENRef related bank statements can be downloaded from the CaixaBank LAQ Network current account, as shown in Appendix 4. Combine all documents in a single PDF binder and send to DC

5 APPENDICES

5.1 Appendix 1: Completed GENRef Application Form

Appendix 1: Completed GENRef Application Form

INTERNATIONAL COUNCIL FOR LABORATORY ANIMAL SCIENCE 

ICLAS ANIMAL QUALITY NETWORK

[Application to participate in the ICLAS GENReference Program](#)

| | |
|---|---|
| Name of lab/institution | Division of Laboratory Animal Monitoring, NIFDC, Beijing, CHINA |
| Name and mailing address of person to receive sample shipment: | HONG WANG No.31 HUATUO ROAD, DAXING DISTRICT Beijing 100050, CHINA |
| E-mail, tel. & fax. of person to receive sample shipment: | littstar@163.com , 86-10-53852659 |
| Contact person and e-mail address for invoice (if different from lab contact person): | |
| Name and e-mail address of person to receive copy of invoice (if required): | |
| Your lab's web address for link from ICLAS PEP web page: | www.nifdc.org.cn |
| Please briefly describe activities of your laboratory/institution: | This Lab can testing for microbiology (include Serology), genetics and helminthology. |

Program details
 Sample concentration: each sample = 250 nanograms/10 microliters
 Sample cost: €100 per sample + shipping costs
 Sample quantity: maximum of 1 sample of each strain per applicant
 Shipping costs:
 If your lab is participating in the ICLAS PEP program, your DNA samples will be sent with your PEP specimens for an additional shipping cost of €100 for 1-12 samples.
 If your lab is not participating in the ICLAS PEP program, shipping costs are as follows:
 Europe: €800 for 1-12 specimens
 Rest of the world: €1,300 for 1-12 specimens
 Rest of the world if health and origin certificates are required: €1,600 for 1-12 specimens

For information on the ICLAS PEP program, please go to:
<http://iclas.org/animal-quality-network/performance-evaluation-program-for-diagnostic-laboratories-pep>

Samples required (please put a X in the box next to the DNA sample you require):

| | | |
|---|---|--|
| <input checked="" type="checkbox"/> C57BL/6NTac | <input checked="" type="checkbox"/> C57BL/6J (registry#664) | <input checked="" type="checkbox"/> DBA/2JJcl |
| <input checked="" type="checkbox"/> BALB/cAnNTac | <input checked="" type="checkbox"/> BALB/cJ (registry#651) | <input checked="" type="checkbox"/> C3H/HeJJcl |
| <input checked="" type="checkbox"/> C3H/HeNTac | <input checked="" type="checkbox"/> NOD/LtJ (registry#1976) | <input checked="" type="checkbox"/> DBA/2NJcl |
| <input checked="" type="checkbox"/> 129S6/SvEvTac | <input checked="" type="checkbox"/> A/J (registry#646) | <input checked="" type="checkbox"/> FVB/NJcl |

Total number of samples required: Date of Application:

TERMS & CONDITIONS: Please note that the DNA samples you are applying for are provided on the condition that they will only be used for the purposes of genetic monitoring. Any other uses of this DNA for other studies or publications must be approved previously in writing by the ICLAS Laboratory Animal Quality Network.

Name and title (Prof. Dr. Mr. Ms.) of person making application:



Please return this form to: laqnetwork@ICLAS.org

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5.2 Appendix 2: GENRef Shipping List

| Appendix 2: GENRef Shipping List | | | | | | | | | | |
|---|--------|--|--|---|--|---------------|-------------------------------------|-------------------------|-------------------------------------|-----------|
| A | B | C | D | E | F | G | H | I | J | K |
| ICLAS 2019 GENRef orders to be sent with PEP Specimens: Directory & Shipping List | | | | | | | | | | |
| PEP Identificati | # 2019 | Name of Lab | Name and Address of person to receive shipment | E-mail, Tel & Fax of person to receive shipment | Specimens Required | | | | | |
| TOTALS | 2 | | | | | | | | | |
| PEP025DLA | 1 | Division of Laboratory Animal Monitoring, NIFDC, China | Hong Wang Division of Laboratory Animal Monitoring, National Institutes for Food and Drug Control, No.2 Tiantan Xili, Beijing 100050, CHINA | Email: lttstar@163.com Tel.: 86-10-67095403 Fax: 86-10-67028184 | Invoice 2019 GENRef-025DLA-01-2020 | | | | | |
| | | | | | <input checked="" type="checkbox"/> | C57BL/6NTac | <input checked="" type="checkbox"/> | C57BL/6J (registry#664) | <input checked="" type="checkbox"/> | DBA/2JJcl |
| | | | | | <input checked="" type="checkbox"/> | BALB/cAnNTac | <input type="checkbox"/> | BALB/cJ (registry#651) | <input checked="" type="checkbox"/> | C3H/HeJcl |
| | | | | | <input checked="" type="checkbox"/> | C3H/HeNTac | <input checked="" type="checkbox"/> | NOD/LtJ (registry#1976) | <input checked="" type="checkbox"/> | DBA/2Njcl |
| | | | | | <input checked="" type="checkbox"/> | 129S6/SvEvTac | <input checked="" type="checkbox"/> | A/J (registry#646) | <input checked="" type="checkbox"/> | FVB/Njcl |
| | | | | | Total number of samples required: 12 | | | | | |
| PEP041GPH | 1 | GemPharmatech CO.,Ltd. Nanjing, China | Xiaofeng Chen QC Supervisor GemPharmatech CO.,Ltd. 12 Xuefu Road, Jiangbei New Area District, Nanjing, 210061, P.R.China | Xiaofeng Chen chenxf@gempharmatech.com | Invoice 2019 GENRef-041GPH-09-2019 | | | | | |
| | | | | | <input type="checkbox"/> | C57BL/6NTac | <input checked="" type="checkbox"/> | C57BL/6J (registry#664) | <input type="checkbox"/> | DBA/2JJcl |
| | | | | | <input type="checkbox"/> | BALB/cAnNTac | <input type="checkbox"/> | BALB/cJ (registry#651) | <input type="checkbox"/> | C3H/HeJcl |
| | | | | | <input type="checkbox"/> | C3H/HeNTac | <input checked="" type="checkbox"/> | NOD/LtJ (registry#1976) | <input type="checkbox"/> | DBA/2Njcl |
| | | | | | <input type="checkbox"/> | 129S6/SvEvTac | <input type="checkbox"/> | A/J (registry#646) | <input type="checkbox"/> | FVB/Njcl |
| | | | | | Total number of samples required: 2 | | | | | |
| | | | | | = application not yet received | | | | | |
| | | | | | = fee received, OK to ship | | | | | |
| | | | | | = application received, invoice sent, fee not yet received | | | | | |

5.3 Appendix 3: GENRef Invoice

| | | | | | | | |
|--|--|--|-----------|-----------------|-----|--------------------|--------------|
| Appendix 3: GENRef Invoice | | | | | | | |
|  | | | | | | | |
| <p>INTERNATIONAL COUNCIL FOR LABORATORY ANIMAL SCIENCE</p> <p><i>ICLAS Network for the Promotion of Animal Quality in Research</i></p> | | | | | | | |
| <p>NETWORK MEMBERS</p> <p>Central Institute for Experimental Animals, Japan</p> <p>Charles River Laboratories (RADS), USA</p> <p>Cerberus Sciences, Australia</p> <p>German Cancer Research Center, Germany</p> <p>Institute for Experimental Animals, Hamamatsu University School of Medicine, Japan</p> <p>International Council For Laboratory Animal Science</p> <p>QM Diagnostics, Radboud University Medical Centre, Netherlands</p> <p>IDEXX RADIL, Missouri, USA</p> <p>SIAL Laboratory, Universitat Autònoma de Barcelona, Spain</p> <p>Taconic Health Diagnostic Laboratory, USA</p> <p>The Jackson Laboratory, USA</p> | <p>Hong Wang Division of Laboratory Animal Monitoring, NIFDC, National Institutes for Food and Drugs Control No.31 HUATUO ROAD DAXING DISTRICT Beijing 102629, CHINA</p> <p>22 January 2020</p> <p>Ref: ICLAS 2019 Genetic Monitoring Reference Program</p> <p>GENRef Order Reference: GENRef-025DLA-01-2020</p> <p>Dear Hong Wang,</p> <p>Further to your application to participate in the ICLAS 2019 Genetic Monitoring Reference Program, please remit a fee of EUR 1,300 in respect of the DNA samples ordered in your attached 2019 GENRef application form.</p> <p>This fee has been calculated as follows:</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">Cost of samples: 12 samples @ €100 per sample:</td> <td style="text-align: right; width: 20%;">EUR 1,200</td> </tr> <tr> <td>Shipping costs:</td> <td style="text-align: right;">100</td> </tr> <tr> <td>Total cost:</td> <td style="text-align: right; border-top: 1px solid black;">1,300</td> </tr> </table> <p>Please note that any amendments to the original certificates will cost an additional €100 per amendment. Please pay in EURO € by bank transfer to the following account:</p> <p>ACCOUNT NAME: International Council for Laboratory Animal Science</p> <p>BANK: Caja de Ahorros y Pensiones de Barcelona,</p> <p>ACCOUNT NUMBER: 2100 0424 31 020024 2020</p> <p>IBAN: ES27 2100 0424 3102 0024 2020</p> <p>SWIFT: CAIX ES BB</p> <p>IMPORTANT: Please state your GENRef Order Reference number to facilitate payment identification. If you have any queries about this invoice please contact me at laqnetwork@iclas.org</p> <p>Yours sincerely,</p>  <p>Andrew Hudson ICLAS LAQ Network Administrator</p> | Cost of samples: 12 samples @ €100 per sample: | EUR 1,200 | Shipping costs: | 100 | Total cost: | 1,300 |
| Cost of samples: 12 samples @ €100 per sample: | EUR 1,200 | | | | | | |
| Shipping costs: | 100 | | | | | | |
| Total cost: | 1,300 | | | | | | |
| <p>ICLAS LAQ Network Room V0-141, Veterinary Faculty, Edifici V, Universitat Autònoma de Barcelona, 08193 Bellaterra, Spain http://www.ICLAS.org E-mail: LAQNetwork@ICLAS.org</p> | | | | | | | |

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5.4 Appendix 4: CaixaBank movements of LAQ Network current account

Appendix 6: CaixaBank movements of LAQ Network current account

| Description | Date | Value date | More data | Amount | Balance | C |
|---------------------|------------|------------|----------------------------------|-------------|-------------|---|
| TRANSFERENC. DIV. | 08/07/2020 | | KRIBB | + 1.560,00 | + 33.712,95 | T |
| TRANSF.DIVISAS | 03/07/2020 | | Wiebke Kohl | + 1.560,00 | + 32.152,95 | T |
| TRANSF.DIVISAS | 03/07/2020 | | CHARLES RIVER LABORATOIRE FRANCE | + 1.350,00 | + 30.592,95 | T |
| DEP. MAINT. COMM. | 01/07/2020 | | | - 12,00 | + 29.242,95 | |
| TRANS. COMM. RCVED. | 16/04/2020 | | WANG HONG | - 18,00 | + 29.254,95 | |
| TRANSFERENC. DIV. | 16/04/2020 | | WANG HONG | + 1.285,00 | + 29.272,95 | T |
| TRANS. COMM. RCVED. | 16/04/2020 | | NATIONAL APPLIED RESEARCH LABORA | - 18,00 | + 27.987,95 | |
| TRANSFERENC. DIV. | 16/04/2020 | | NATIONAL APPLIED RESEARCH LABORA | + 2.250,00 | + 28.005,95 | T |
| DEP. MAINT. COMM. | 01/04/2020 | | | - 12,00 | + 25.755,95 | |
| ALIEN TRANS.FEE | 06/03/2020 | | | - 54,22 | + 25.767,95 | |
| invoices 96400391 | 06/03/2020 | | world courier | - 13.554,44 | + 25.822,17 | |
| TRANSFERENC. DIV. | 11/02/2020 | | VRL SHARED SERVICES LLC | + 2.150,00 | + 39.376,61 | T |
| ALIEN TRANS.FEE | 07/02/2020 | | | - 54,44 | + 37.226,61 | |
| invoices 96400027 | 07/02/2020 | | world courier | - 13.610,73 | + 37.281,05 | |
| TRANSF.DIVISAS | 05/02/2020 | | The Francis Crick Institute Limi | + 2.150,00 | + 50.891,78 | T |
| TRANSFERENC. DIV. | 03/02/2020 | | EXPRESS BIOTECH INTERNATIONAL IN | + 1.560,00 | + 48.741,78 | T |

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5.5 Appendix 5: Excel sheet showing movements on LAQN bank account

Appendix 5: Excel sheet showing movements on LAQN Account number 2100 0424 31 02 00242020 Jan - Dec 2017



| 1 | Movements on LAQN Account number 2100 0424 31 02 00242020 Jan - Dec 2017 | | | | | | | | | |
|----|--|--------|--------------|---------|-----------------------------|--------------|---|-----------|-----------|--|
| 2 | Prog. Year | Prog. | Invoice year | Code | Description | Payment date | Description | Amount | Balance | |
| 3 | | | | | | | | | | |
| 4 | | | | | | | | | | |
| 5 | 2017 | PEP | 2017 | 2.2.1 | PEP Participants Fees | 13/12/2017 | PEP0238XP XpressBio, Maryland, USA EXPRESS BIOTECH INTERNATIONAL IN | 1,560.00 | 50,650.35 | |
| 6 | | PEP | 2017 | 4.2.2 | Bank Charges | 08/12/2017 | PEP025DLA Division of Lab An Monitoring, NIFDC, China WANG HONG part of €3,635 | -15.00 | 49,090.35 | |
| 7 | 2017 | PEP | 2017 | 2.2.1 | PEP Participants Fees | 08/12/2017 | PEP025DLA Division of Lab An Monitoring, NIFDC, China WANG HONG part of €3,635 | 2,335.00 | 49,105.35 | |
| 8 | 2017 | GENRef | 2017 | 4.1 | GENRef Part. fees | 08/12/2017 | GENRef025DLA-11-2017 WANG HONG part of €3,635 | 1,300.00 | 46,770.35 | |
| 9 | | PEP | 2017 | 4.2.2 | Bank Charges | 30/11/2017 | CHARLES RIVER LABORATORIES JAPAN | -15.00 | 45,470.35 | |
| 10 | 2017 | PEP | 2017 | 2.2.1 | PEP Participants Fees | 30/11/2017 | CHARLES RIVER LABORATORIES JAPAN | 2,150.00 | 45,485.35 | |
| 11 | | | 2017 | 4.2.2 | Bank Charges | 10/11/2017 | PEP014NLA National Animal Lab Center, Taipei, Taiwan NATIONAL APPLIED RESEARCH | -15.00 | 43,335.35 | |
| 12 | 2017 | PEP | 2017 | 2.2.1 | PEP Participants Fees | 10/11/2017 | PEP014NLA National Animal Lab Center, Taipei, Taiwan NATIONAL APPLIED RESEARCH | 2,264.00 | 43,350.35 | |
| 13 | 2017 | | 2016 | 3.6.4 | DC Admin Charges | 06/11/2017 | UAB Invoice Admin charges | -2,899.99 | 41,086.35 | |
| 14 | | | | | | 06/11/2017 | Cert Origin Bank charges 11062017 | -7.15 | 43,986.34 | |
| 15 | 2017 | PEP | 2017 | 3.6.1.3 | Specimen production costs | 06/11/2017 | WC Invoice 0096390210 Charles River USA -> DC | -1,787.07 | 43,993.49 | |
| 16 | 2017 | PEP | 2017 | 2.2.1 | PEP Participants Fees | 24/10/2017 | PEP032MML PEP Microbiological Monitoring Lab., Korea 2000 0000-KRIBB | 1,560.00 | 45,780.56 | |
| 17 | | | | | | 09/10/2017 | Cert Origin Bank charges 10092017 | -4.81 | 44,220.56 | |
| 18 | 2017 | PEP | 2017 | 3.6.2 | Specimen production costs | 09/10/2017 | WC Invoice 0096389967 DC -> PEP025DLA Division of Laboratory Animal Monitoring, NIFDC | -1,201.60 | 44,225.37 | |
| 19 | 2017 | PEP | 2017 | 2.2.1 | PEP Participants Fees | 09/10/2017 | PEP011CLR CHARLES RIVER LABORATOIRE FRANCE | 1,350.00 | 45,426.97 | |
| 20 | | | 2017 | 4.2.2 | Bank Charges | 06/10/2017 | PEP005MVM ComPath SOUTH AUSTRAL HEALTH AND MEDICAL | -15.00 | 44,076.97 | |
| 21 | 2017 | PEP | 2017 | 2.2.1 | PEP Participants Fees | 06/10/2017 | PEP005MVM ComPath SOUTH AUSTRAL HEALTH AND MEDICAL | 2,145.00 | 44,091.97 | |
| 22 | 2017 | PEP | 2017 | 2.2.1 | PEP Participants Fees | 03/10/2017 | PEP021ANL AnLab Ltd, Czech Republic | 1,560.00 | 41,946.97 | |
| 23 | | | 2017 | 4.2.2 | Bank Charges | 01/10/2017 | PEP002HUK ENVIGO RMS (UK) LIMITED | -12.00 | 40,386.97 | |
| 24 | 2017 | PEP | 2017 | 2.2.1 | PEP Participants Fees | 10/08/2017 | PEP002HUK ENVIGO RMS (UK) LIMITED | 2,150.00 | 40,398.97 | |
| 25 | 2016 | PEP | 2017 | 4.2.2 | Bank Charges | 31/07/2017 | CENTRAL INSTITUTE FOR EXPERIMENT | -15.00 | 38,248.97 | |
| 26 | 2016 | GENRef | 2016 | 4.1 | GENRef Part. fees | 31/07/2017 | GENRef-008CIE-11-2016 CENTRAL INSTITUTE FOR EXPERIMENT | 490.00 | 38,263.97 | |
| 27 | | | | | | 28/07/2017 | Cert Origin Bank charges 07282017 | -5.33 | 37,773.97 | |
| 28 | 2017 | PEP | 2017 | 3.6.2 | Specimen distribution costs | 28/07/2017 | WC Invoice 009638935 DC -> PEP018 CEM Brazil | -1,381.25 | 37,779.30 | |
| 29 | | | | | | 26/07/2017 | Cert Origin Bank charges 07262017 | -3.95 | 39,110.55 | |
| 30 | | | | | | 26/07/2017 | Cert of Origin F17002462 | -45.00 | 39,114.50 | |
| 31 | 2017 | PEP | 2017 | 2.2.1 | PEP Participants Fees | 20/07/2017 | PEP030IBG Vet Med Labor GmbH | 2,150.00 | 39,159.50 | |
| 32 | 2017 | PEP | 2017 | 2.2.1 | PEP Participants Fees | 13/07/2017 | PEP020HIT ENVIGO RMS SRL | 2,150.00 | 37,009.50 | |
| 33 | 2017 | PEP | 2017 | 2.2.1 | PEP Participants Fees | 07/07/2017 | PEP027NMU NATIONAL LABORATORY ANIMAL CENTE | 1,350.00 | 34,859.50 | |
| 34 | 2017 | GENRef | 2017 | 4.1 | GENRef Part. fees | 07/07/2017 | GENRef-027NMU-06-2017 NATIONAL LABORATORY ANIMAL CENTE | 300.00 | 33,509.50 | |
| 35 | 2016 | PEP | 2017 | 3.6.2 | Specimen distribution costs | 05/07/2017 | Cert Origin Bank charges 07052017 | -3.95 | 33,209.50 | |
| 36 | 2016 | PEP | 2017 | 3.6.2 | Specimen distribution costs | 05/07/2017 | Certificate of Origin F17002270 | -45.00 | 33,213.45 | |
| 37 | 2017 | PEP | 2017 | 4.2.2 | GENRef Bank Charges | 01/07/2017 | PEP-GENRef-018CEM 2016 (FUNDACAO DE DESENVOLVIMENTO DA U) | -12.00 | 33,258.45 | |
| 38 | 2016 | GENRef | 2017 | 4.1 | GENRef Part. fees | 24/05/2017 | PEP-GENRef-018CEM 2016 (FUNDACAO DE DESENVOLVIMENTO DA U) (part of EUR 3,250) | 1,300.00 | 33,270.45 | |
| 39 | 2016 | PEP | 2017 | 2.2.1 | PEP Participants Fees | 24/05/2017 | PEP018CMB (FUNDACAO DE DESENVOLVIMENTO DA U) (part of EUR 3,250) | 1,950.00 | 31,970.45 | |
| 40 | 2017 | PEP | 2017 | 2.2.1 | PEP Participants Fees | 21/06/2017 | PEP034GDL UNIVERSITEIT UTRECHT | 1,350.00 | 30,020.45 | |
| 41 | 2017 | PEP | 2017 | 3.6.2 | Specimen distribution costs | 27/04/2017 | WC Invoices 0096388278 DC -> PEP010DYN (part of EUR 608.94) | -368.45 | 28,670.45 | |
| 42 | 2017 | PEP | 2017 | 3.6.2 | Specimen distribution costs | 09/06/2017 | WC Invoices 0096388279 DC -> PEP035BEU (part of EUR 608.94) | -240.49 | 29,038.90 | |
| 43 | 2017 | | 2017 | 2.2.1 | PEP Participants Fees | 24/05/2017 | PEP0388XB SUZHOU XISHAN BIOTECH INC | 1,560.00 | 29,279.39 | |
| 44 | 2017 | PEP | 2017 | 3.1.5 | Bank Charges | 24/05/2017 | PEP0009CSC STEVENSON SCIENTIFIC SERVICES PT | -15.00 | 27,719.39 | |

Colour code

= PEP fee payments

= GENRef fee payments

5.6 Appendix 6: Acknowledgment of receipt of GENRef fee

| Appendix 6: Acknowledgment of receipt of GENRef fee | | | | | | | |
|---|---|--|-----------|-----------------|-----|--------------------|--------------|
|  | | | | | | | |
| <p>INTERNATIONAL COUNCIL FOR LABORATORY ANIMAL SCIENCE</p> <p><i>ICLAS Network for the Promotion of Animal Quality in Research</i></p> | | | | | | | |
| <p>NETWORK MEMBERS</p> <p>Central Institute for Experimental Animals, Japan</p> <p>Charles River Laboratories (RADS), USA,</p> <p>Cerberus Sciences, Australia</p> <p>German Cancer Research Center, Germany</p> <p>Institute for Experimental Animals, Hamamatsu University School of Medicine, Japan</p> <p>International Council For Laboratory Animal Science</p> <p>QM Diagnostics, Radboud University Medical Centre, Netherlands</p> <p>IDEXX RADIL, Missouri, USA</p> <p>SIAL Laboratory, Universitat Autònoma de Barcelona, Spain</p> <p>Taconic Health Diagnostic Laboratory, USA</p> <p>The Jackson Laboratory, USA</p> | <p>Hong Wang Division of Laboratory Animal Monitoring, NIFDC, National Institutes for Food and Drugs Control No.31 HUATUO ROAD DAXING DISTRICT Beijing 102629, CHINA</p> <p>11 May 2020</p> <p>Ref: Acknowledgement of ICLAS 2019 Genetic Monitoring Reference Program fee payment</p> <p>GENRef Order Reference: GENRef-025DLA-01-2020</p> <p>Dear Hong Wang,</p> <p>We acknowledge with thanks receipt of EUR 1,300 from Division of Laboratory Animal Monitoring, NIFDC in respect of 12 DNA samples re your order reference: GENRef-025DLA-01-2020:</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">Cost of samples: 12 samples @ €100 per sample:</td> <td style="text-align: right; border-bottom: 1px solid black;">EUR 1,200</td> </tr> <tr> <td>Shipping costs:</td> <td style="text-align: right; border-bottom: 1px solid black;">100</td> </tr> <tr> <td>Total cost:</td> <td style="text-align: right;">1,300</td> </tr> </table> <p>Thank you for supporting ICLAS.</p> <div style="text-align: center;">  </div> <p>Andrew Hudson ICLAS LAQ Network Administrator</p> | Cost of samples: 12 samples @ €100 per sample: | EUR 1,200 | Shipping costs: | 100 | Total cost: | 1,300 |
| Cost of samples: 12 samples @ €100 per sample: | EUR 1,200 | | | | | | |
| Shipping costs: | 100 | | | | | | |
| Total cost: | 1,300 | | | | | | |
| <p>ICLAS LAQ Network Room V0-141, Veterinary Faculty, Edifici V, Universitat Autònoma de Barcelona, 08193 Bellaterra, Spain http://www.ICLAS.org E-mail: LAQNetwork@ICLAS.org</p> | | | | | | | |

ICLAS Policies and Procedures: ICLAS Genetic Reference Monitoring Program (GENRef)

5.7 Appendix 7: LAQ Network Annual Report

ICLAS Laboratory Animal Quality Network (LAQ Network) Report 2019

1. Network Members

| Network Members | |
|---|--|
| Patri Vergara, (Network Coordinator) | Veterinary Faculty, Universitat Autònoma de Barcelona, Spain |
| Cynthia Pekow, USA (ICLAS President) | University of Washington, USA |
| William Shek | Charles River Laboratories (RADS),USA |
| Atsushi Yoshiki | RIKEN BioResource Center, Japan |
| Martin Toft | QM Diagnostics, Radboud University, Netherlands |
| Cynthia Besch-Williford | IDEXX RADIL, Missouri, USA |
| Ana Perez | Humodigen, USA |
| Greg Ballard | The Jackson Laboratory, USA |
| Nobuhito Hayashimoto (ICLAS Governing Board member) | Central Institute for Experimental Animals, Japan |
| Bob Stevenson | Cerberus Sciences, Australia |

2. LAQ Network Programs

The Network currently runs two programs: the Performance Evaluation Program for Diagnostic Laboratories (PEP) and the Genetic Quality Monitoring Program (GENRef).

3. PEP

3.1 Fees and Specimen production costs applied since 2017:

Microbiology only program: €1,350.00

Serology only program: €1,560

Combination program: €2,150.00.

Costs: payments to producer laboratories to cover specimen production costs:

Sera specimens: €40 per aliquot

Microbiology specimens: €4 per aliquot

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3.2. PEP Participants.

| PEP Participating Laboratories: 2008-2019 | | | | | | | | | | | | |
|--|-----------------|---------------------|---------------|---------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--|
| | ● Serology only | □ Microbiology only | ■ Combination | ◆ Not participating | | | | | | | | |
| Participating Laboratories | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | |
| 001 Biolytix AG, Switzerland | ■ | ■ | ■ | ◆ | ◆ | ◆ | ■ | ■ | ◆ | ◆ | ◆ | |
| 002 Harlan Laboratories UK | | | | | ■ | ■ | ■ | ■ | ■ | ■ | ◆ | |
| 003 QM Diagnostics, Netherlands | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | |
| 004 Mic. Diagnostics, Germany | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | |
| 005 MVMS, Australia | ● | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | |
| 006 Un.of Miami-Comp.Pat.Lab, USA | ● | ● | ● | ● | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | |
| 007 The Jackson Lab, USA | ■ | ■ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | |
| 008 CIEA, Japan | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | |
| 009 Cerberus Sciences, Australia | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | |
| 010 Dynamimed S.L. Spain | | | | | | | ● | ● | ● | ● | ◆ | |
| 011 Charles River Lab., France | ● | ■ | ■ | ■ | ■ | ■ | □ | □ | □ | □ | □ | |
| 012 BioDoc, Hanover, Germany | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | |
| 013 Taconic, Rockville, USA | | ■ | ■ | ◆ | ◆ | ■ | ■ | ■ | □ | □ | ◆ | |
| 014 National An. Lab Center,Taipei,Taiwan | | | ● | ■ | ■ | ■ | ■ | ■ | ◆ | ■ | ■ | |
| 015 Charles River Laboratories, Japan, | | | ● | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | |
| 016 IDEXX RADIL, Missouri, USA | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | |
| 017 Charles River Laboratories, USA, | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | |
| 019 Guangdong Lab An Mon. Institute, China | | | | ■ | ◆ | ■ | ◆ | ◆ | ■ | ◆ | ◆ | |
| 018 CEMIB, Brazil | | | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | |
| 020 Harlan Laboratories SRL, Italy | | | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | |
| 021 AnLab Ltd, Czech Republic | | | | | ■ | ● | ● | ● | ■ | ● | ● | |
| 022 National An. Lab Center, Tainan, Taiwan | | | | | ■ | ● | ◆ | ■ | ◆ | ◆ | ◆ | |
| 023 XpressBio, Maryland, USA | | | | | ● | ● | ● | ● | ■ | ■ | ● | |
| 024 GIM Gesellschaft.,Mikroökologie mbH, | | | | | □ | □ | □ | □ | □ | ◆ | ◆ | |
| 025 Division of Laboratory Animal Monitoring, | | | | | | □ | ■ | ■ | ■ | ■ | □ | |
| 026 GVG Diagnostics GmbH, Germany | | | | | ■ | ◆ | ◆ | ■ | ◆ | ◆ | ◆ | |
| 027 NLAC, Mahidol University, Thailand | | | | | | ■ | ■ | ■ | ■ | □ | □ | |
| 028 Model An. Res Center, China niversity, China | | | | | | ■ | ◆ | ◆ | ■ | ◆ | ◆ | |
| 029 Laboratory Animal Monitoring Center, China | | | | | | ■ | ◆ | ◆ | ◆ | ■ | ◆ | |
| 030 IDEXX Bioresearch, Germany | | | | | | | ■ | ■ | ■ | ■ | ■ | |
| 031 Belki-Biotechnologies, Russia | | | | | | | | □ | ◆ | ◆ | ◆ | |
| 032 Micro. Monitoring Lab., Korea | | | | | | | | | ● | ■ | ● | |
| 033 Vebio Laboratory, France | | | | | | | | | ■ | ◆ | ◆ | |
| 034 Universiteit Utrecht, Netherlands | | | | | | | | | □ | □ | ◆ | |
| 035 Biosait Europe SLU, Spain, Barcelona, Spain | | | | | | | | | □ | ◆ | ◆ | |
| 036 Daegu-Gyeongbuk Med, Korea | | | | | | | | | ■ | ■ | ■ | |
| 037 Taiwan University, Lab. Taiwan | | | | | | | | | ● | ◆ | ◆ | |
| 038 Suzhou Xishan Biotech Inc. China (VRL Asia) | | | | | | | | | | ● | ◆ | |
| 039 The Francis Crick Institute BRF., UK | | | | | | | | | | | ■ | |
| 040 VRL Maryland, LLC, USA | | | | | | | | | | | ■ | |
| Total Serology only | 4 | 2 | 4 | 2 | 2 | 4 | 4 | 4 | 4 | 4 | 4 | |
| Total Microbiology only | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 3 | 5 | 4 | 3 | |
| Total Combination | 6 | 9 | 1 | 1 | 16 | 18 | 1 | 1 | 2 | 1 | 15 | |
| Total Participants | 10 | 11 | 14 | 13 | 19 | 24 | 23 | 25 | 29 | 26 | 22 | |

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4. PEP Network Laboratories:

| Specimen production laboratories | Representatives |
|---|--|
| Central Institute for Experimental Animals, Japan | Nobuhito Hayashimoto |
| Charles River Laboratoires (RADS), USA | William Shek (PEP Scientific Director) |
| QM Diagnostics, Radboud University, Netherlands | Arletta van Lent-Bol |
| IDEXX RADIL, Missouri, USA | Cynthia Besch-Williford |
| Cerberus Sciences, Australia | Bob Stevenson |
| LAQ Specimen Distribution Center | |
| SIAL Laboratory, Universitat Autònoma de Barcelona) | Patri Vergara (Network Chair) |

5. PEP & GENRef income & Expenditure on ICLAS bank account Jan-Dec 2018

| | 2017 | 2018 |
|---|------------------|------------------|
| | EURO | EURO |
| Income | | |
| Balance at 31st Dec brought forward from previous year | 47,025.17 | 50,650.35 |
| PEP Participant fees | 43,054.00 | 29,877.00 |
| GENRef Participant fees | 5,975.00 | 4,080.00 |
| Total Income | 96,054.17 | 84,607.35 |
| | | |
| Expenditure | | |
| PEP Bank Charges | 183.00 | 278.37 |
| PEP Specimen production costs: Shipping costs of specimens to DC | 8,450.07 | 3,169.45 |
| GENRef Specimen production costs: Shipping costs of DNA specimens to DC | 5,952.39 | |
| PEP Specimen distribution costs from DC to participants | 27,918.37 | 34,167.85 |
| Meetings | | |
| DC Admin Costs | 2,899.99 | |
| Total Expenditure | 45,403.82 | 37,615.67 |
| | | |
| + Balance at 31st December | 50,650.35 | 46,991.68 |

6. PEP Indicative Income & Expenditure for 2018 PEP Program

The problem with yearly accounts is that they don't present a real picture of the financial state of PEP because the income and expenditure of each program runs over two and sometimes 3 financial years. The following figures show indicative income and expenditure for the 2018 program.

| PEP Indicative Income & Expenditure for 2017 and 2018 programs | | |
|--|------|------|
| | EURO | EURO |
| | 2017 | 2018 |
| Number of Participants | 26 | 22 |
| Income | | |

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| | | |
|---|------------------|------------------|
| Participant fees | 50,340.00 | 42,540.00 |
| Total Income | 50,340.00 | 42,540.00 |
| | | |
| Expenditure | | |
| Bank Charges | 141.00 | 152.20 |
| Admin Costs | 2,900.00 | 2,900.00 |
| Meetings /Presentations | | |
| Specimen production costs discounted from fees | 8,600.00 | 4,720.00 |
| Specimen production costs: shipping to DC | 1,787.07 | 3,165.45 |
| Specimen distribution costs: DC to participants | 35,479.70 | 30,020.00 |
| Total Expenditure | 48,907.77 | 40,957.65 |
| | | |
| Balance | +1,432.23 | +1,582.35 |

7. Genetic Monitoring Reference Program (GENRef)

Launched at the end of 2016, the ICLAS GENRef program provides reference DNA from the 12 most common inbred strains/ sub-strains of laboratory mice, e.g. C57BL/6N, C57BL/6J, BALB/cJ, BALB/cN, C3He, 129S6, etc. As the program develops other mice strains and the most common rat strains will be incorporated.

4.1 GENRef Program Details

7.1 Samples:

Sample concentration: each sample = 250 nanograms/10 microliters

Sample quantity: maximum of 1 sample of each strain per applicant

7.2 Fees:

Sample cost: €100 per sample

7.3 Shipping costs:

For labs participating in the ICLAS PEP program, DNA samples are sent with PEP specimens for an additional shipping cost of €100 for 1-12 samples.

For labs not participating in the ICLAS PEP program or who want their DNA specimens sent separately, shipping costs are as follows:

ICLAS Policies and Procedures: ICLAS Genetic Reference Monitoring Program (GENRef)

Europe: €800 for 1-12 specimens

Rest of the world: €1,300 for 1-12 specimens

Rest of the world if health and origin certificates are required: €1,600 for 1-12 specimens.

On request DNA samples can be sent at room temperature to reduce shipping costs as stability has been proven although we recommend sending the samples with dry ice.

7.4 GENRef Participating Laboratories

| GENRef Participating Laboratories 2016-2018 | | | | |
|---|--------------------------------|--------------------------------|--------------------------------|--|
| ♦ Not participating: | | | | |
| Participating Laboratory: | 2016 DNA strains ordered | 2017 DNA strains ordered | 2018 DNA strains ordered | |
| 008 Central Institute for Experimental Animals, (CIEA), Japan | (1,2,5,6) | ♦ | ♦ | |
| 018 CEMIB- Multidisciplinary Center, Brazil | (1-12) | (1-12) | (1-12) | |
| 019 Guangdong Lab. Animal. Mon. Institute, Guangzhou, China | (1-12) | ♦ | ♦ | |
| 025 Division of Lab. Animal Mon. Inst., (NIDF), China | (1-12) | (1-12) | ♦ | |
| 027 National Laboratory Animal Center, Mahidol University, Thailand | | (5,6) | 1,2,3,5,6,7,9, 10,11 | |
| 028 Microbiological Detection Center, Nanjing University, China | | (1,5,6,7,8) | ♦ | |
| Total Participants | 4 | 4 | 2 | |
| Total Strains | 40 | 31 | 21 | |
| DNA strains/sub-strains available: | | | | |
| 1. C57BL/6NTac | 5. C57BL/6J (reg. #664) | 9. DBA/2Jc1 | | |
| 2. BALB/cAnNTac | 6. BALB/cJ (reg. #651) | 10. C3H/HeJc1 | | |
| 3. C3H/HeNTac | 7. NOD/LtJ (reg. 1976) | 11. DBA/2NJc1 | | |
| 4. 129S6/SvEvTac | 8. A/J (reg.#646) | 12. FVB/NJc1 | | |

8. Objectives for 2019

A meeting of all Network members took place on June 10th, 2019 in Prague, where both programs were thoroughly discussed.

Summary of decisions:

Performance Evaluation Program: main week points identified:

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- 1) Serology program: there is a need for production of more sera samples and to diversify the list of microorganisms available. Although these problems are difficult to tackle, several solutions were discussed. As a starting point, a short list of organisms that should be added to PEP stock will be prepared.
- 2) Microbiology program: although the problem is not so acute, it was also discussed that instead of providing samples of isolated DNA it would be more relevant to provide a diluted sample where the microorganism could be isolated either by traditional microbiology methods or by molecular techniques. Some labs still do not do DNA testing.
- 3) In both programs, labs producing PEP samples must complete a common data sheet with details about the sample (origin, organ etc) to facilitate testing by participants.
- 4) SOPs for PEP sample preparation and retesting will be revised.
- 5) A new database will be created.
- 6) Feedback from participants will be encouraged and a form allowing them to report their results will be prepared. These data will be presented anonymously to all participants.

For the GENRef Program it was agreed that the program needed to be better advertised and for this the following actions were agreed:

- Ana Perez would give a presentation of the ICLAS GENRef program at the FELASA Congress Scientific Program to increase awareness.
- A publication on how the GENRef program works, how it can be applied at an institution was agreed as the next step. Some points to be included will be : What this program does to assist with quality assurance of lab animals (Inbred strains); Who needs it (labs versus individuals); How to use it; What equipment do labs need, what tests should be run, what samples to take from the in-house colony, how many animals to test. Example cases should be given on how labs have successfully used the program; strain information; markers to differentiate from other sub-strains, etc.
- Publication should be open access, so that we can provide links available on ICLAS and other web pages.

Patri Vergara,
LAQ Network Coordinador
June 2019