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Diagnostic Proficiency Testing Centre: United Kingdom

Final Report 2020

prepared by
Mrs Joanne Croft

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Note: This annual report is intended for participants of the ERNDIM DPT UK scheme. The contents should not be used for any publication without permission of the Scientific Advisor.

The fact that your laboratory participates in ERNDIM schemes is not confidential, however, the raw data and performance scores are confidential and will only be shared within ERNDIM for the purpose of evaluating your laboratories performance, unless ERNDIM is required to disclose performance data by a relevant government agency. For details please see the terms and conditions on page18 and the ERNDIM Privacy Policy on www.erndim.org.

In 2020, 21 labs participated in the UK Diagnostic Proficiency Testing Scheme.

1. Geographical distribution of participants

For the first survey, 20 and second survey 21 laboratories submitted results.

Country	Number of participants
Australia	1
France	1
Ireland	1
New Zealand	2
Spain	1
→ United Kingdom	15

2. Design and logistics of the scheme including sample information

The scheme has been designed and planned by Joanne Croft as Scientific Advisor and coordinated by Xavier Albe as scheme organiser (sub-contractor on behalf of CSCQ), both appointed by and according to procedures laid down the ERNDIM Board.

CSCQ dispatches DPT EQA samples to the scheme participants and provides a website for on-line submission of results and access to scheme reports. Existing DPT scheme participants can log on to the CSCQ results submission website at:
https://cscq.hcuge.ch/cscq/ERNDIM/Initial/Initial.php

[1] If these scheme instructions are not Version 1 for this scheme year, go to **Error! Reference source not found.** for details of the changes made since the last version of this document.

2 surveys	Round 1: patients A, B and C
	Round 2: patients D, E and F

Origin of patients: all urine samples have been provided by the scheme organizers or other ERNDIM Scientific Advisors.

Patient A: Phenylketonuria – This sample was sent to all labs participating in the DPT scheme.
Patient B: MCADD
Patient C: MPS Type 6
Patient D: Aspartylglucosaminuria
Patient E: Prolidase deficiency
Patient F: Ornithine aminotransferase deficiency

The samples have been heat treated. They were pre-analysed in our institute after 3 days incubation at ambient temperature (to mimic possible changes that might arise during transport). In all six samples the typical metabolic profiles were preserved after this process.
Mailing : samples were sent by DHL, FedEx or the Swiss Post at room temperature.

3. Tests

Analyses of amino acids, organic acids, mucopolysaccharides, oligosaccharides and purines/pyrimidines were required in 2020.

4. Schedule of the scheme

- Feb 11 2020: shipment of samples of Survey 1 and Survey 2 and of the clinical data by e-mail
- March 9 2020: analysis start and website submission availability open for Survey 1
- June 1 2020: deadline for result submission (Survey 1) (extended due to COVID)
- June 8 2020 analysis start and website submission availability open for Survey 2
- June 29 2020: deadline for result submission (Survey 2)
- July 2 2020: report of Survey 1 by e-mail
- July 23 2020: report of Survey 2 by e-mail
- September 2 2020: UK DPT Workshop held on-line
- November 19 and 20 2020: ERNDIM SAB meeting held on-line
- December 2020: Annual report with final scoring issued by e-mail

5. Results

20 of 21 labs returned results for both surveys.

	Survey 1	**Survey 2**
Receipt of results	20	21
No answer	1	0

6. Web site reporting

The website reporting system is compulsory for all centres. Please read carefully the following advice:

- Selection of tests: **don't select a test if you will not perform it**, otherwise the evaluation program includes it in the report.
- Results
  - Give quantitative data as much as possible.
  - Enter the key metabolites with the evaluation **in the tables** even if you don't give quantitative data.
  - If the profile is normal: enter "Normal profile" in "Key metabolites".
  - **Don't enter results in the "comments" window**, **otherwise your results will not be included in the evaluation program.**
- Recommendations = **advice for further investigation**.
  - Scored together with the interpretative score.

- Advice for treatment are not scored.
- **Don't give advice for further investigation in "Comments on diagnosis"**: it will not be included in the evaluation program.

7. Scoring and evaluation of results

Information regarding procedures for establishment of assigned values, statistical analysis, interpretation of statistical analysis etc. can be found in generic documents on the ERNDIM website.
The scoring system has been established by the International Scientific Advisory Board of ERNDIM. Two criteria are evaluated: 1) analytical performance, 2) interpretative proficiency also considering recommendations for further investigations.

A	Analytical performance	Correct results of the appropriate tests	2
		Partially correct or non-standard methods	1
		Unsatisfactory or misleading	0
I	Interpretative proficiency & Recommendations	Good (diagnosis was established)	2
		Helpful but incomplete	1
		Misleading or wrong diagnosis	0

The total score is calculated as a sum of these two criteria. The maximum to be achieved is 4 points per sample. The scores were calculated only for laboratories submitting results.

Scoring and certificate of participation: scoring is carried by a second assessor who changes every year as well as by the scientific advisor. The results of DPT UK 2020 have been also scored by Dr George Ruijter, from the DPT Netherlands scheme. At the SAB meeting on 19/20th November 2020, the definitive scores have been finalized. The concept of critical error was introduced in 2014. A critical error is defined as an error resulting from seriously misleading analytical findings and /or interpretations with serious clinical consequences for the patient. Thus labs failing to make a correct diagnosis of a sample considered as eligible for this category will be deemed not to have reached a satisfactory performance even if their total points for the year exceed the limit set at the SAB. For 2020, the SAB have decided that no participants in the UK DPT scheme have made a critical error.

A certificate of participation will be issued for participation and it will be additionally notified whether the participant has received a performance support letter. This performance support letter is sent out if the performance is evaluated as unsatisfactory. Zero performance support letters will be sent by the Scheme Advisor for 2020. Any partial submitters will receive a letter from the ERNDIM Executive Administrator, Sara Gardner (1 participant this year).

7.1. Score for satisfactory performance

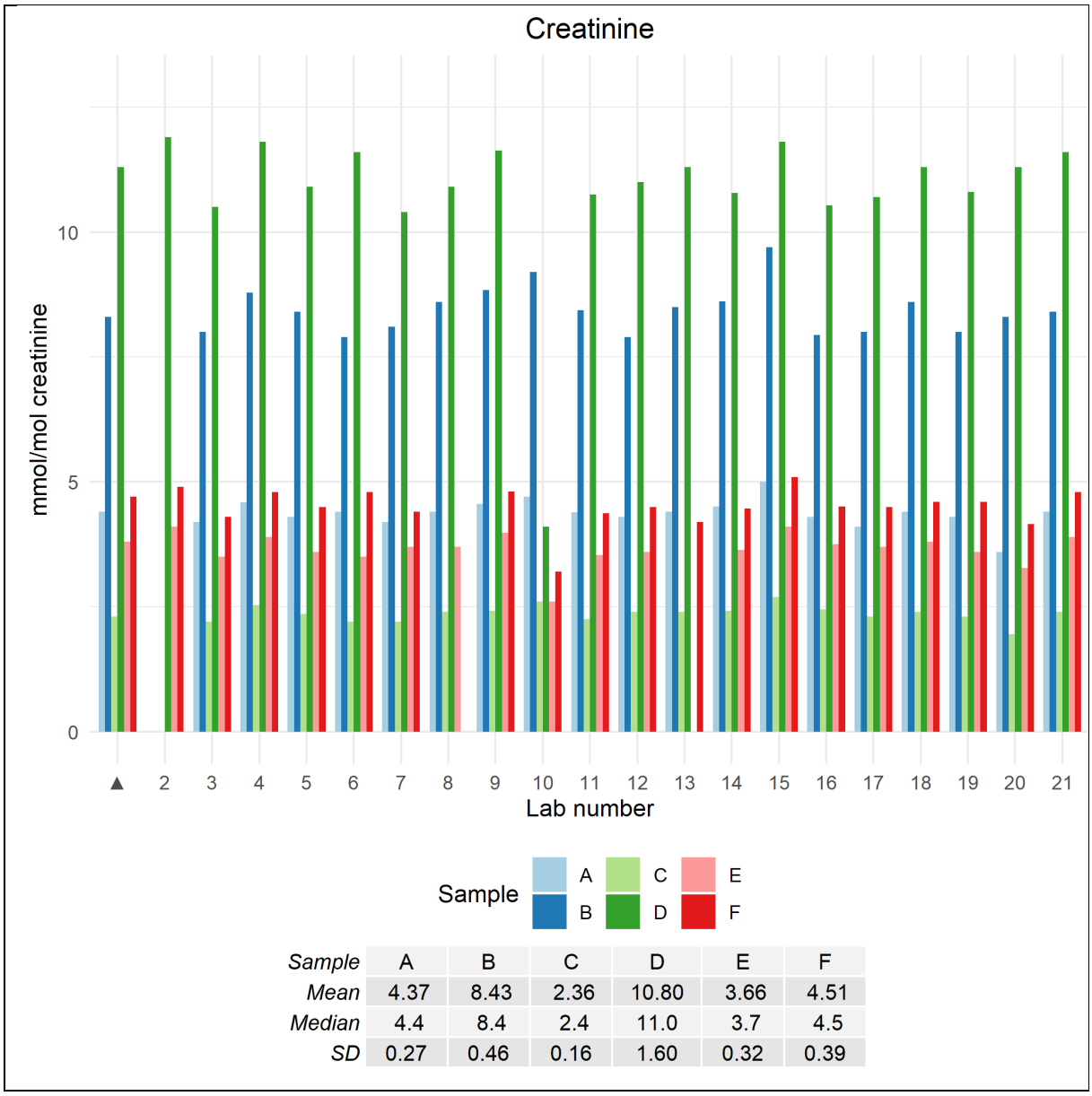
At least 15 points from the maximum of 24 (62%).

If your laboratory is assigned poor performance and you wish to appeal against this classification please email the ERNDIM Administration Office (admin@erndim.org), with full details of the reason for your appeal, within one month receiving your Performance Support Letter.

8. Results of samples and evaluation of reporting

8.1. Creatinine measurement for all samples

Creatinine concentrations provided for each sample by each participating laboratory are shown in the graph below. Agreement between laboratories is good.



Sample	A	B	C	D	E	F
Mean	4.37	8.43	2.36	10.80	3.66	4.51
Median	4.4	8.4	2.4	11.0	3.7	4.5
SD	0.27	0.46	0.16	1.60	0.32	0.39

8.2. Patient A

Phenylketonuria

Patient details provided to participants

Adult patient investigated due to spastic paraparesis, leukodystrophy and hemolytic uremic syndrome

Patient details

Adult patient investigated due to spastic paraparesis, leukodystrophy and hemolytic uremic syndrome. Undiagnosed (and untreated) patient with phenylketonuria (PKU): he did not benefit from neonatal screening. No further information available.

Analytical performance

20 of 21 participants reported on this sample. 19/20 laboratories performed amino acids screening and/or quantitation. All reported increased phenylalanine. Of these, 16 provided a quantitative result for Phenylalanine (Mean = 77 µmol/mmol creatinine, Range = 66 – 90 µmol/mmol creatinine). Sheffield Children's NHS Foundation Trust reference range = 2 – 19 µmol/mmol creatinine (for > 13 years old). The remaining laboratory reported seeing phenylalanine on organic acid analysis.

All laboratories detected increased concentration of at least one of the metabolites associated with phenylketonuria by organic acid analysis (i.e. phenyllactic acid, phenylpyruvic acid, mandelic acid, phenylacetic acid, N-acetylphenylalanine).

Only 1 participant in the UK DPT scheme performed pterin analysis and reported normal biopterin and neopterin results.

Diagnosis / Interpretative proficiency

All participants included phenylketonuria in their diagnoses.

Recommendations

All 20 participants suggested plasma amino acids. Other recommendations provided are as below:

11/20 – genetic confirmation (*PAH* gene or BH4 metabolism)
14/20 – referral to metabolic clinician and/or dietetic team
11/20 – pterin analysis
9/20 – sibling/family member testing

Scoring

- Analytical
  - Increased concentration of phenylalanine – 1 mark
  - Increased concentration of at least one organic acid amongst phenyllactic acid, phenylpyruvic acid, mandelic acid, phenylacetic acid, N-acetylphenylalanine – 1 mark
- Interpretation
  - Phenylketonuria as first or alternative diagnosis – score 2 marks

Overall impression

Analytical and interpretive proficiency was excellent for this sample with all laboratories who submitted a result gaining 4 marks.

8.3. Patient B

Medium chain Acyl-CoA dehydrogenase deficiency.

Patient details provided to participants

Hypoglycaemia following episode of diarrhoea and vomiting

Patient details

This sample came from a patient with medium chain acyl-CoA dehydrogenase deficiency. No further information is available.

Analytical performance

20 of 21 participants reported on this sample. 20/20 participants scored 2 marks for analysis - all detected the increased abnormal organic acid metabolites (hexanoylglycine, phenylpropionylglycine and suberylglycine).

Diagnosis / Interpretative proficiency

20/20 participants gave MCADD as their primary diagnosis. 4/20 gave multiple acyl CoA dehydrogenase deficiency (MADD/GA2) as an alternative diagnosis.

Recommendations

- 20/20 - plasma/dried blood spot acylcarnitines
- 20/20 – genetic analysis of the *ACADM* gene
- 14/20 – urgent referral to metabolic team/consultant
- 10/20 – sibling testing (some mentioned future siblings)

Scoring

- Analytical
  - At least 2 of the abnormal metabolites associated with MCADD seen on organic acid analysis - hexanoylglycine, phenylpropionylglycine, suberylglycine – 2 marks
- Interpretation
  - MCADD – as first or alternative diagnosis – 2 marks

Overall impression

Analytical and interpretive proficiency was excellent for this sample with all laboratories who submitted a result gaining 4 marks.

8.1. Patient C

Mucopolysaccharidosis Type 6 - Maroteaux Lamy disease.

Patient details provided to participants

Dystosis multiplex and corneal clouding

Patient details

This sample came from a patient with MPS Type 6. No further information is available.

Analytical performance

20 of 21 participants reported on this sample. 16/20 participants scored 2 marks for analysis, with the remaining 4 scoring 1 mark. Those scoring 1 mark analysed the sample for glycosaminoglycans (GAG) and found an increased level but did not go on to perform GAG fractionation.

Diagnosis / Interpretative proficiency

16/20 participants scored 2 marks for interpretation, giving MPS 6 in their possible list of diagnoses. 4/20 participants scored 1 mark for interpretation. These were the 4 participants who also scored 1 mark for analysis as it is not possible to determine the type of MPS disorder without doing GAG fractionation.

Recommendations

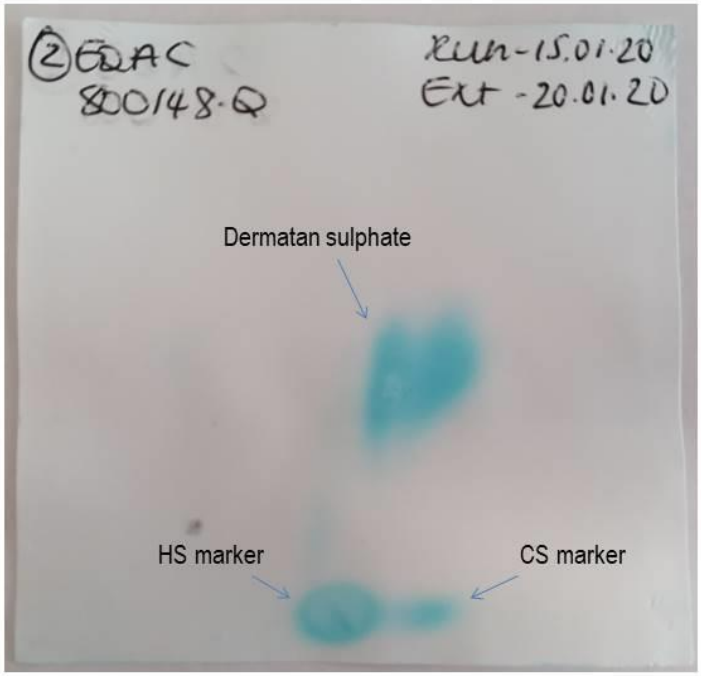
- 6/20 – GAG fractionation (not all those who hadn't done this test recommended that it should be done)
- 18/20 – Enzyme testing
- 14/20 – Molecular analysis
- 13/20 – Metabolic referral

Scoring

- **Analytical**
  - Increased dermatan sulphate – 2 points
  - Increased glycosaminoglycans with recommendation to do electrophoresis/fractionation – 1 point
- **Interpretation**
  - MPS6 (or MPS1, 2 or 6) – 2 points
  - MPS (but not defined or wrong one) – 1 point

Overall impression

Proficiency overall for this sample was good with 16 participants scoring 4 marks and the remaining 4 scoring 2 marks.



Sample C: 2D GAG electrophoresis

8.1. Patient D

Aspartylglucosaminuria

Patient details provided to participants

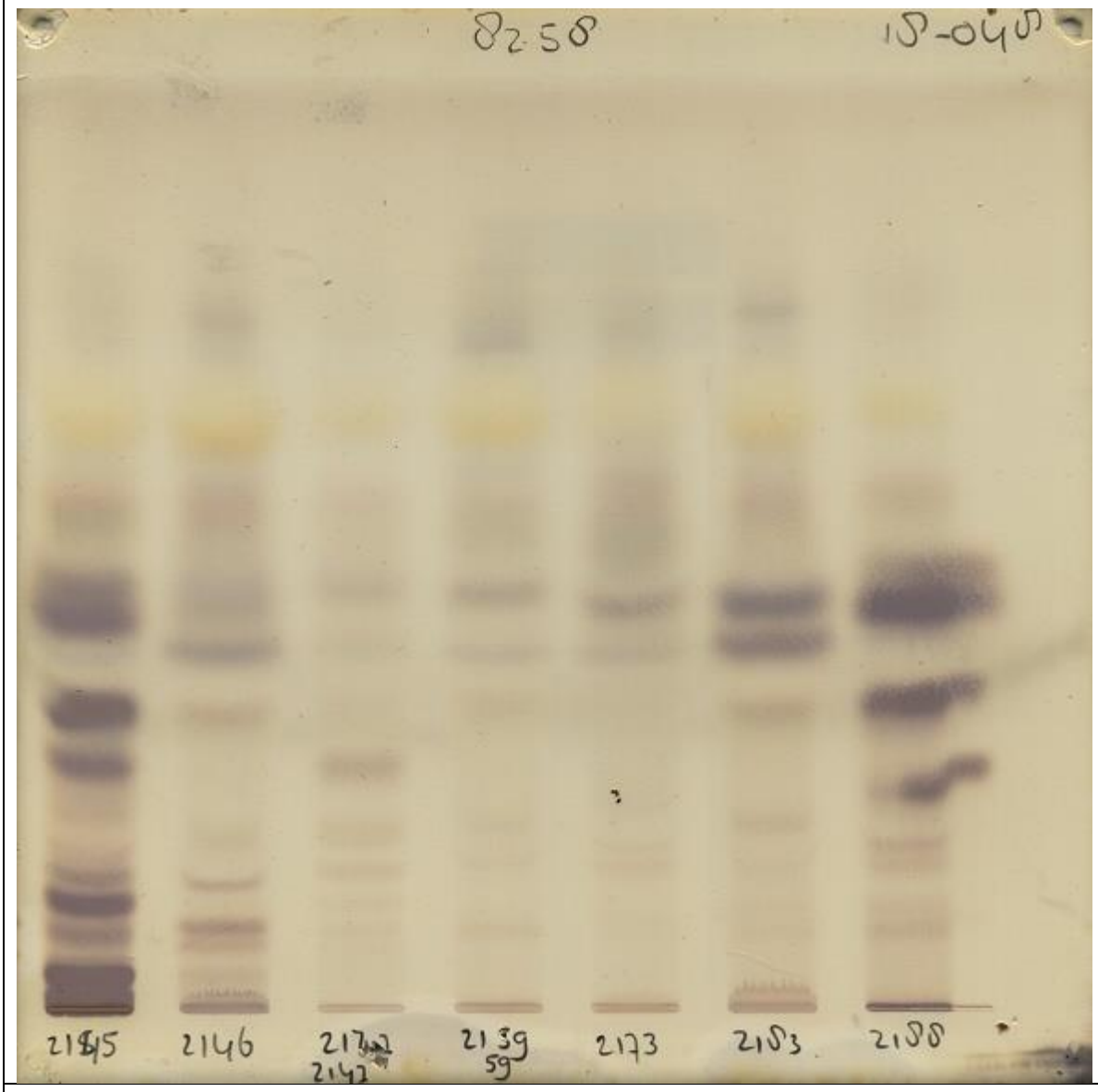
Delayed speech and facial dysmorphism

Patient details

This was the same urine which was previously distributed in the 2018 UK DPT scheme and classed as an educational sample that year.

Analytical performance

21 of 21 participants submitted results for this sample. 17 of 21 participants scored 2 marks for analysis. 1 participant scored 1 mark as they had detected abnormal bands on the oligosaccharide analysis but did not mention aspartylglucosaminuria as either their primary or alternative diagnosis. 3 participants scored 0 marks for analysis as they did not perform oligosaccharide analysis and did not detect aspartylglucosamine on amino acid analysis.



Sample D: oligosaccharide TLC using orcinol stain. Lane 2146 is an aspartylglucosaminuria sample. The bands closest to the application site are the characteristic ones. Lane 2159 is an unaffected patient aged 23 years, lane 2173 is an unaffected patient aged 45 years, lane 2183 is an unaffected patient aged 8 years and lane 2188 is an unaffected patient aged 10 days).

Aspartylglucosamine can also be detected by amino acid analysis. Using a Biochrom 30 amino acid analyser, aspartylglucosamine elutes just before urea. (For an example chromatogram please refer to the DPT Netherlands Annual Report 2013, Sample 2013 – 2E).

Diagnosis / Interpretative proficiency

17 of 21 participants scored 2 marks for interpretation. 2 participants scored 1 mark for interpretation - 1 advised oligosaccharide analysis, the other had performed oligosaccharide analysis but did not name the disorder. 2 participants scored 0 for interpretation.

Recommendations

- 6/21 – urine oligosaccharide analysis
- 15/21 – genetic confirmation
- 15/21- enzymatic confirmation
- 11/21 – refer to a metabolic clinician
- 5/21 - investigation of siblings/future siblings

Scoring

- **Analytical**
- Oligosaccharide analysis, abnormal profile, aspartylglucosaminuria – 2 marks
- Oligosaccharide analysis, abnormal profile, other oligosaccharide disorder – 1 mark
- Detecting aspartylglucosamine on amino acid analysis – 2 marks

- **Interpretation**
- Aspartylglucosaminuria– 2 marks
- Other oligosaccharide disorder – 1 mark
- Recommendation to do oligosaccharide analysis if not done – 1 mark

Overall impression

Analytical proficiency was 83%, interpretive proficiency 86% giving an overall proficiency of 84.5%. This is good and much better than in 2018 (see below).

Multiple distributions of similar samples

This sample was also distributed in the UK DPT scheme in 2018.

	2018	2020
Analytical performance	43 %	83 %
Interpretative performance	48 %	86 %
Overall performance	45 %	84.5 %

8.1. Patient E

Prolidase deficiency

Patient details provided to participants

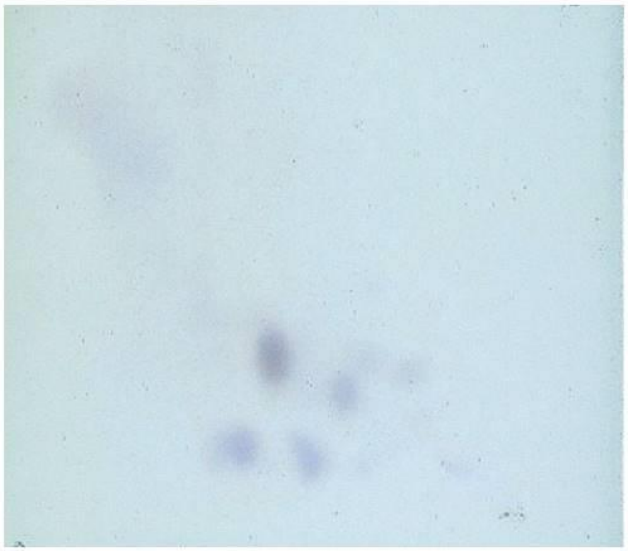
Increasing number of infections. Found to have pancytopenia and hepatosplenomegaly.

Patient details

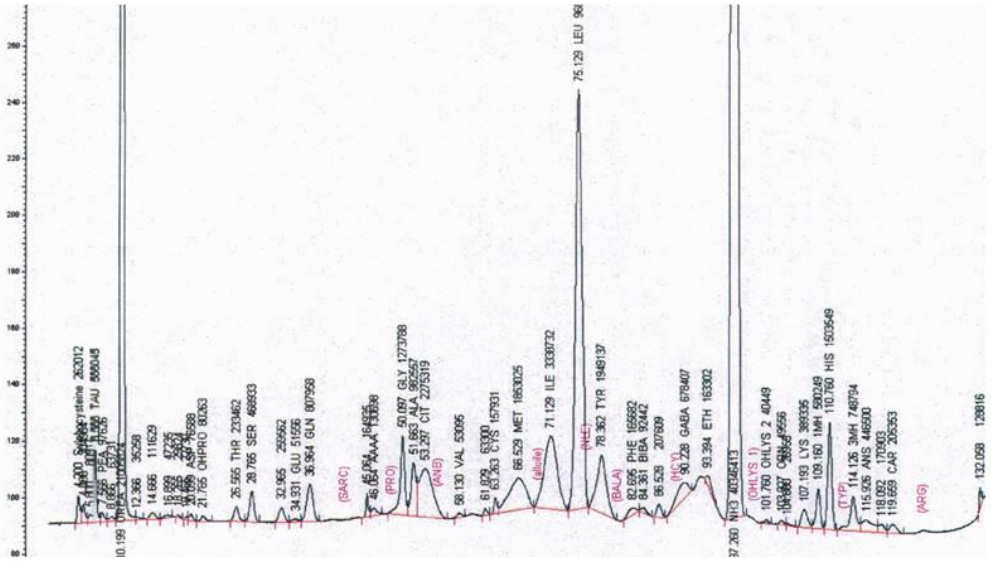
At eighteen months of age this male child developed several symptoms with increasing number of infections, pancytopenia and vasculitis. Hepatomegaly associated with increased transaminases was also observed. At the beginning the patient was suspected of having hemophagocytic lymphohistiocytosis (HLH). A diagnosis was made at 2.5 years of age and confirmed by molecular genetic testing.

Analytical performance

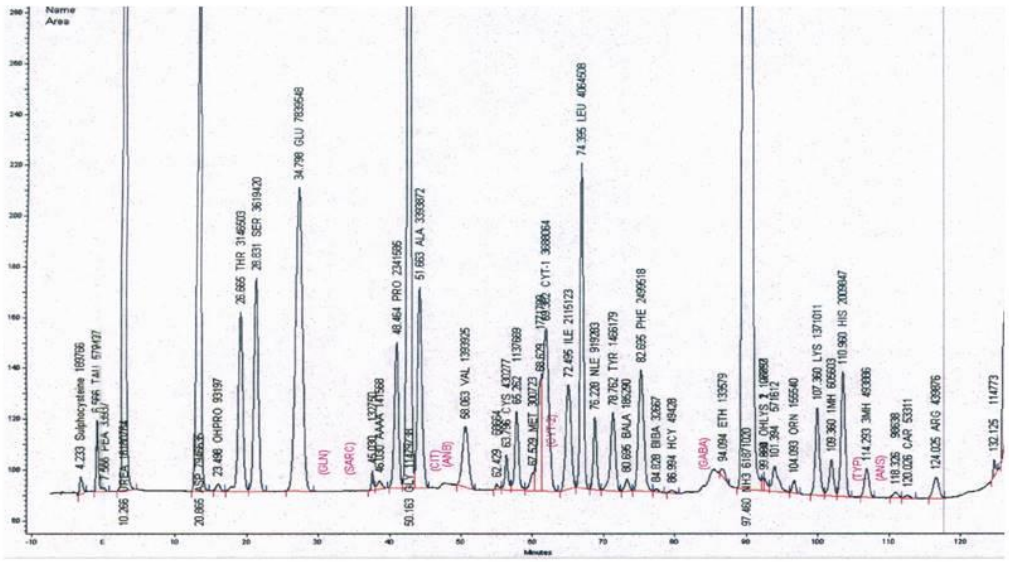
All 21 participants returned a result for this sample. 16 of 21 participants scored 2 marks for analysis. 5 of 21 participants scored 0 marks for analysis. These either did not do amino acid analysis or reported an interference on amino acid analysis making it difficult to interpret.



Prolidase sample : 2D thin layer chromatography



Prolidase sample: Biochrom chromatogram Pre-hydrolysis



Prolidase sample:Biochrom chromatogram post-hydrolysis

Diagnosis / Interpretative proficiency

16 of 21 participants scored 2 marks (these were the laboratories who also scored 2 marks for analysis). 5 of 21 participants scored 0 marks for analysis.

Recommendations

Excluding those labs who did not reach the correct diagnosis:

- 9/16 – enzyme activity to confirm diagnosis
- 15/16 – mutation analysis (*PEPD* gene) to confirm diagnosis
- 4/16 – repeat urine for amino acid analysis following hydrolysis
- 9/16 – ensure under care of metabolic team
- 5/16 – testing of siblings/family members

Scoring

Analytical

- Identification of glycyl-proline or dipeptides – 2 marks
- Identification of an increase in glycine and proline after hydrolysis – 2 marks
- Sample deterioration – 0 marks
- No significant abnormality – 0 marks

Interpretation

- Prolidase deficiency (or iminodipeptiduria) – 2 marks

Overall impression

Overall proficiency for this sample was disappointing, especially as a similar sample was distributed in 2016 and proficiency this year compared to then has not improved. It has been previously judged by the ERNDIM SAB that Prolidase deficiency is not eligible for critical error due to the difficult nature of identifying this condition.

Multiple distributions of similar samples

A prolidase sample was last distributed in the UK DPT scheme in 2016 (Sample C) with proficiency being slightly better than this year.

	2016	2020
Analytical performance	82 %	76 %
Interpretative performance	82 %	76 %
Overall performance	82 %	76 %

8.1. Patient F

Ornithine aminotransferase deficiency.

Patient details provided to participants

Visual impairment not corrected with glasses.

Patient details

This patient was born to consanguineous parents. He was noted to have visual impairment in the first few years of life which was not improved with wearing glasses. He also has mild developmental delay. The diagnosis of ornithine aminotransferase/gyrate atrophy was made at the age of 5 years.

Analytical performance

All 21 participants submitted a result for this sample. All participants scored 2 marks for analysis. All provided a quantitative result for ornithine (Mean = 134.5 µmol/mmol creatinine, Median = 128 µmol/mmol creatinine, Range = 110 – 246 µmol/mmol creatinine. Sheffield Children's Hospital ref. range = 0 – 7 µmol/mmol creatinine).

Diagnosis / Interpretative proficiency

21 of 21 participants scored 2 marks for interpretation. All participants correctly gave ornithine aminotransferase/gyrate atrophy as their primary diagnosis. 3 of 21 also mentioned HHH syndrome as an alternative diagnosis (though one stated this was unlikely as no increase in homocitrulline).

Recommendations

- 18/21 – plasma amino acids
- 19/21 – mutation analysis (*OAT* gene)
- 15/21 – ensure under care of metabolic clinician /team
- 4/21 – refer for opthalmological testing
- 7/21 – plasma ammonia (though unlikely to be increased in this age of child)
- 3/21 – enzyme studies on cultured fibroblasts

Scoring

Analytical

- Increased ornithine – 2 marks

Interpretation

- Ornithine aminotransferase (or gyrate atrophy) as either first or alternative diagnosis – 2 marks

Overall impression

Proficiency for this sample was excellent.

Multiple distributions of similar samples

A similar sample was distributed in the UK DPT scheme in 2018 when 2 participating laboratories failed to detect the increased ornithine. Performance this year is improved.

	2018	2020
Analytical performance	90 %	100 %
Interpretative performance	90 %	100 %
Overall performance	90 %	100 %

9. Scores of participants

All data transfer, the submission of data as well as the request and viewing of reports proceed via the DPT-CSCQ results website. The results of your laboratory are confidential and only accessible to you (with your username and password).The anonymous scores of all laboratories are accessible to all participants and only in your version is your laboratory highlighted in the leftmost column.

Detailed scores – **Round 1**

Lab n°	Patient A Phenylketonuria			Patient B MCADD			Patient C MPS Type 6			
	A	I	Total	A	I	Total	A	I	Total	Total
1	2	2	4	2	2	4	2	2	4	12
2	--	--	--	--	--	--	--	--	--	0
3	2	2	4	2	2	4	2	2	4	12
4	2	2	4	2	2	4	2	2	4	12
5	2	2	4	2	2	4	2	2	4	12
6	2	2	4	2	2	4	2	2	4	12
7	2	2	4	2	2	4	1	1	2	10
8	2	2	4	2	2	4	2	2	4	12
9	2	2	4	2	2	4	2	2	4	12
10	2	2	4	2	2	4	2	2	4	12
11	2	2	4	2	2	4	2	2	4	12
12	2	2	4	2	2	4	2	2	4	12
13	2	2	4	2	2	4	2	2	4	12
14	2	2	4	2	2	4	1	1	2	10
15	2	2	4	2	2	4	2	2	4	12
16	2	2	4	2	2	4	1	1	2	10
17	2	2	4	2	2	4	2	2	4	12
18	2	2	4	2	2	4	2	2	4	12
19	2	2	4	2	2	4	1	1	2	10
20	2	2	4	2	2	4	2	2	4	12
21	2	2	4	2	2	4	2	2	4	12

Detailed scores – Round 2

Lab n°	Patient D Aspartylglucosaminuria			Patient E Prolidase deficiency			Patient F Ornithine aminotransferase deficiency			
	A	I	Total	A	I	Total	A	I	Total	Total
1	2	2	4	2	2	4	2	2	4	12
2	2	2	4	2	2	4	2	2	4	12
3	2	2	4	2	2	4	2	2	4	12
4	0	1	1	2	2	4	2	2	4	9
5	2	2	4	2	2	4	2	2	4	12
6	2	2	4	2	2	4	2	2	4	12
7	2	2	4	2	2	4	2	2	4	12
8	1	1	2	2	2	4	2	2	4	10
9	2	2	4	2	2	4	2	2	4	12
10	0	0	0	0	0	0	2	2	4	4
11	0	0	0	0	0	0	2	2	4	4
12	2	2	4	0	0	0	2	2	4	8
13	2	2	4	2	2	4	2	2	4	12
14	2	2	4	2	2	4	2	2	4	12
15	2	2	4	2	2	4	2	2	4	12
16	2	2	4	2	2	4	2	2	4	12
17	2	2	4	0	0	0	2	2	4	8
18	2	2	4	2	2	4	2	2	4	12
19	2	2	4	2	2	4	2	2	4	12
20	2	2	4	2	2	4	2	2	4	12
21	2	2	4	0	0	0	2	2	4	8

Total scores

Lab n°	A	B	C	D	E	F	Cumulative score	Cumulative score (%)	Critical error
1	4	4	4	4	4	4	24	100	
2	--	--	--	4	4	4	12	50	
3	4	4	4	4	4	4	24	100	
4	4	4	4	1	4	4	21	88	
5	4	4	4	4	4	4	24	100	
6	4	4	4	4	4	4	24	100	
7	4	4	2	4	4	4	22	92	
8	4	4	4	2	4	4	22	92	
9	4	4	4	4	4	4	24	100	
10	4	4	4	0	0	4	16	67	
11	4	4	4	0	0	4	16	67	
12	4	4	4	4	0	4	20	83	
13	4	4	4	4	4	4	24	100	
14	4	4	2	4	4	4	22	92	
15	4	4	4	4	4	4	24	100	
16	4	4	2	4	4	4	22	92	
17	4	4	4	4	0	4	20	83	
18	4	4	4	4	4	4	24	100	
19	4	4	2	4	4	4	22	92	
20	4	4	4	4	4	4	24	100	
21	4	4	4	4	0	4	20	83	

Performance

	Number of labs	% total labs
Satisfactory performers (≥ 60 % of adequate responses)	20	95
Unsatisfactory performers (< 60 % adequate responses and/or critical error)	1	5
Partial and non-submitters	1	5

Overall Proficiency

Sample	Diagnosis	Analytical (%)	Interpretation (%)	Total (%)
DPT-US-2020-A	Phenylketonuria	100	100	100
DPT-US-2020-B	MCADD	100	100	100
DPT-US-2020-C	MPS Type 6	90	90	90
DPT-US-2020-D	Aspartylglucosaminuria	83	86	85
DPT-US-2020-E	Prolidase deficiency	76	76	76
DPT-US-2020-F	Ornithine aminotransferase deficiency	100	100	100

10. Annual meeting of participants

The annual meeting of participants could not take place this year due to the COVID pandemic. The DPT workshop was held on line on the 2nd September 2020. There were more participants able to join the meeting than normal due to it being held on line. Whether this is something we will be able to provide in future years is a matter for discussion.

We remind you that attending the annual meeting/DPT workshop is an important part of the proficiency testing. The goal of the program is to **improve** the competence of the participating laboratories, which includes the critical review of all results with a discussion about improvements.

11. Information from the Executive Board and the Scientific Advisory Board

- The next ERNDIM Annual meeting will be held during the ERNDIM Workshop which will be in Rome on the 21/22 October 2021. This meeting is organised once every 4 years when there is a global ICIEM meeting outside of Europe.

- **Urine samples**: we remind you that every year, each participant must provide to the scheme organizer at least 300 ml of urine from a patient affected with an established inborn error of metabolism or “normal” urine, together with a short clinical report. If possible, please collect 1500 ml of urine: this sample can be sent to all labs participating to one of the DPT schemes. Each urine sample must be collected from a single patient (don’t send urine spiked with pathological compounds). Please don’t send a pool of urines, except if urine has been collected on a short period of time from the same patient. For “normal” urine, the sample must be collected from a symptomatic patient.

As soon as possible after collection, the urine sample must be heated at 50 °C for 20 minutes. Make sure that this temperature is achieved in the entire urine sample, not only in the water bath. Send the urine by rapid mail or express transport to:

Mrs Joanne Croft
Dept of Clinical Chemistry
Sheffield Children's NHS Foundation
Trust, Western Bank
Sheffield, S10 2TH
United Kingdom
Tel: +44(0)114 271 7000 Ext 17267
Fax: +44(0)114 276 6205
Email: Joanne.Croft@sch.nhs.uk

Please send us an e-mail on the day you send the samples.

12. Reminders

We remind you that to participate to the DPT-scheme, you must perform at least:

- Amino acids
- Organic acids
- Oligosaccharides
- Mucopolysaccharides
- Purines and pyrimidines

If you are not performing one of these assays, you can send the samples to another lab (cluster lab) but you are responsible for the results.
Please send quantitative data for amino acids and, as much as possible, for organic acids.

13. Proposed Schedule for 2021

Sample distribution	9 February 2021
Start of analysis of Survey 2021/1 Website open	March 8
Survey 2021/1 - Results submission	March 29
Survey 2021/1 - Reports	April
Start of analysis of Survey 2021/2	June 7
Survey 2021/2 – Results submission	June 28
Survey 2021/2 - Reports	July
Annual meeting of participants	October, Rome
Annual Report 2021	December

14. ERNDIM certificate of participation

A combined certificate of participation covering all EQA schemes will be provided to all participants who take part in any ERNDIM scheme. For the DPT scheme this certificate will indicate if results were submitted and whether satisfactory performance was achieved in the scheme.

Date of report, 30th April 2021

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End