ASSESSMENT FOR CERTIFICATION OF COMPETENCE IN FETAL MORPHOLOGICAL EXAMINATION

LABORATORY LITTER ASSESSMENT – FRESH EXTERNAL AND VISCERAL EXAMINATION

Candidate Name: Mélanie Vaillancourt

SOCIETY OF Biology

THE INTERNATIONAL REGISTER OF FETAL MORPHOLOGISTS

ASSESSMENT FOR CERTIFICATION OF COMPETENCE IN FETAL MORPHOLOGICAL EXAMINATION

LABORATORY LITTER ASSESSMENT – FRESH EXTERNAL AND VISCERAL EXAMINATION

Candidate Name: Mélanie Vaillancourt

Name of Applicant (Laboratory):	Mélanie Vaillancourt, CitoxLab
Examination type assessed (species):	**FRESH EXTERNAL AND VISCERAL EXAMINATION** RAT
Date of assessment:	12 Oct 2017
Names of assessors:	Joyce Rendemonti Annie Martin

Specimens used for assessment: [insert Study code, litter and fetus ID in each box]

1	5	6	3

Key for abbreviations:

P – Needed prompting

PP – Needed frequent prompting

N – Nervous

VIP – Volunteered information previously

DK – Didn't know the answer

NC – Not consistent in technique

Assessor's Summary:

[delete or underline to highlight the appropriate description from the options below:]

ASSESSMENT FOR CERTIFICATION OF COMPETENCE IN FETAL MORPHOLOGICAL EXAMINATION

LABORATORY LITTER ASSESSMENT – FRESH EXTERNAL AND VISCERAL EXAMINATION

Candidate Name: Mélanie Vaillancourt

Competent / competent and focussed / engaged and focussed during the assessment, and demonstrated / effectively communicated a sound knowledge / an impressive understanding / of all aspects

- Seems really confident and in control.
- Does not seem nervous.
- Is responsible of training staff in the lab.

Assessor signatures Annie Martin / [illegible]

Date 12 Oct 2012

ASSESSMENT FOR CERTIFICATION OF COMPETENCE IN FETAL MORPHOLOGICAL EXAMINATION

LABORATORY LITTER ASSESSMENT – FRESH EXTERNAL AND VISCERAL EXAMINATION

Candidate Name: Mélanie Vaillancourt

COMMENTS FROM LABORATORY SPECIMEN EXAMINATION: [insert free text in boxes]

Talk through/procedure

Question	Acceptable Response	Response
Describe to me what you are doing; what do you see; what are you looking at?	Separation Moving Dissecting/clearing Turning specimen Examination from all sides Manipulation for clarification	Normally uses magnifying lamp for external. VIP Seems quite comfortable
What are you looking at now?		VIP

ASSESSMENT FOR CERTIFICATION OF COMPETENCE IN FETAL MORPHOLOGICAL EXAMINATION

LABORATORY LITTER ASSESSMENT – FRESH EXTERNAL AND VISCERAL EXAMINATION

Candidate Name: Mélanie Vaillancourt

Talk through/procedure

Question	Acceptable Response	Response
Describe what you see		VIP Goes through exams and explains ~~thou~~ in detail Knows structures well
Note how candidate is recording observations – as they are found or at the end of the examination?		
Confirm that specimen is being manipulated appropriately.		Yes, consistent

Consistency in procedural routines

Question	Acceptable Response	Response
Can you think what the importance of consistency in magnification across examiners might be?	Consistency is important so that all examiners see and record to the same level of detail.	Difficult b/c microscopes are not all the same, but keep consistent during the day individually.

ASSESSMENT FOR CERTIFICATION OF COMPETENCE IN FETAL MORPHOLOGICAL EXAMINATION

LABORATORY LITTER ASSESSMENT – FRESH EXTERNAL AND VISCERAL EXAMINATION

Candidate Name: Mélanie Vaillancourt

Consistency in procedural routines

Question	Acceptable Response	Response
Do you always use the same sequence and routine for examination? Why do you think that it is important?	Yes – don't miss anything, important for pattern recognition, subconscious alert.	Same quality between techs/examiners
Do you think it is necessary to look at structures from more than one aspect?	Yes - gain clear view of 3D structures, enable all structures/aspects of structures to be seen clearly.	more for internal exam
Which structures would you examine in situ before you go on to disturb the viscera?	E.g. position of heart in thorax, thymus, cranial vena cavae, diaphragm before thorax is opened, ureters before sectioning kidney, eye bulge	Kidneys

Terminology and recognition levels used

Question	Acceptable Response	Response
How do you ensure other examiners are using the same terms as you for the same observation?	User guides and recognition levels Discuss with colleagues	SOPs, training

ASSESSMENT FOR CERTIFICATION OF COMPETENCE IN FETAL MORPHOLOGICAL EXAMINATION

LABORATORY LITTER ASSESSMENT – FRESH EXTERNAL AND VISCERAL EXAMINATION

Candidate Name: Mélanie Vaillancourt

Terminology and recognition levels used

Question	Acceptable Response	Response
How do you decide whether or not to record observations? What could you do to make sure that you've chosen the most accurate term?	Reference material, user guides, laboratory recognition levels, background data Peer review/consistency check (examiner records should be traceable)	Record almost everything (including mechanical damage), per their internal procedure
Would you assign a severity level, why? How do you ensure other examiners are using the same severities as you for the same observation?	User guides and recognition levels Discuss with colleagues Reference material, user guides, laboratory recognition levels, background data Peer review/consistency check (examiner records should be traceable)	Yes (ureter dilation as an example) Techs ask Melanie; she is the reference, then she confirms with SD if needed.

ASSESSMENT FOR CERTIFICATION OF COMPETENCE IN FETAL MORPHOLOGICAL EXAMINATION

LABORATORY LITTER ASSESSMENT – FRESH EXTERNAL AND VISCERAL EXAMINATION

Candidate Name: Mélanie Vaillancourt

Recognition of artefacts

Question	Acceptable Response	Response
How would you decide if real or artefact?	Is the structure an unusual colour (haemorrhage)? Background knowledge/experience Refer to PM data (specimen dropped?)	Pinched with tweasers Described how would be entered.
What procedural errors are likely to lead to artefacts?	Unsuitable mode of death (e.g. too much pentobarbitone or inappropriate site for injection) Flattening on one side of head or apparent forelimb flexure due to the way it was laid on tray/bench Digit/tail/pinna damage – cut edge, evidence of bleeding Blood vessel damage, trace the route to find each end	
Can you think of any observations which could be caused by an artefact?	Missing digits/tail/pinna, Intraabdominal/hepatic/subcutaneous haemorrhage, umbilical hernia, forceps damage to palate	

ASSESSMENT FOR CERTIFICATION OF COMPETENCE IN FETAL MORPHOLOGICAL EXAMINATION

LABORATORY LITTER ASSESSMENT - FRESH EXTERNAL AND VISCERAL EXAMINATION

Candidate Name: Mélanie Vaillancourt

Recognition of artefacts

Question	Acceptable Response	Response
Would you record artefacts? How would you record an artefact?	Explain how	Depends if affects subsequent exams (skeletals; example)

Correct identification of anomalies

Question	Acceptable Response	Response
What could you do to make sure that you've chosen the most accurate term?	Discuss/review findings with colleagues; refer to recognition levels/user manuals/training /reference material/background data.	guideline, confirmed with SD
Why have you used that term? (any observation with a recognition level, relative to the norm)	Give reason based on degree of displacement, normal variation. Based on symmetry; alignment; position in relation to other structures, normal variation	

ASSESSMENT FOR CERTIFICATION OF COMPETENCE IN FETAL MORPHOLOGICAL EXAMINATION

LABORATORY LITTER ASSESSMENT – FRESH EXTERNAL AND VISCERAL EXAMINATION

Candidate Name: Mélanie Vaillancourt

Correct identification of anomalies

Question	Acceptable Response	Response
How would you decide if you thought one pinna was displaced?	Give reason based on degree of displacement, normal variation, alignment; position in relation to other structures, normal variation; compare to normal specimen	SD confirms
What anomalies might you see in the head/ state region?.		Eye bulge, cleft palate
What anomalies might you see in the digit/ state region?		fused, missing (digit/ nail)
What anomalies might you see in the ...../state region? abdominal		Dilated ureters, heart anomalies, skin

" gonads absent, hermaphroditism

Demonstration of knowledge of consequence of findings (choose minimum of 3 from this section)

What else might you see with:		
Absent pollex [at external observation]	Other short digits/absent claws	

ASSESSMENT FOR CERTIFICATION OF COMPETENCE IN FETAL MORPHOLOGICAL EXAMINATION

LABORATORY LITTER ASSESSMENT – FRESH EXTERNAL AND VISCERAL EXAMINATION

Candidate Name: Mélanie Vaillancourt

Demonstration of knowledge of consequence of findings (choose minimum of 3 from this section)

What else might you see with:		
Absent tail [at external observation]	Imperforate anus. Check stomach contents/presence of meconium, patency of anus	Anal atresia, genital papilla
Dilated ureter	Renal pelvic cavitation, large urinary bladder, kinked ureter	Renal papilla dilation
Short lower jaw	Large/small/protruding tongue, absent incisors, size of oral cavity	
Distended abdomen	Fluid in abdominal cavity, changes in size, shape, position and presence of great vessels. Malrotated heart, formation of ventricular septum. Check stomach contents/presence of meconium, patency of anus. Form of liver, abdominal wall musculature, umbilical vessels.	Enlarged liver lobes
Flat cranium / occipital projection	Spina bifida (open or skin covered)	

ASSESSMENT FOR CERTIFICATION OF COMPETENCE IN FETAL MORPHOLOGICAL EXAMINATION

LABORATORY LITTER ASSESSMENT – FRESH EXTERNAL AND VISCERAL EXAMINATION

Candidate Name: Mélanie Vaillancourt

Demonstration of knowledge of consequence of findings (choose minimum of 3 from this section)

What else might you see with:		
Skin lesion/haemorrhage cranium / dorsal midline	Meningocoele/spina bifida (skin covered)	
Malrotated heart	Changes in size, shape, position and presence of great vessels. Formation of ventricular septum.	
Whole body oedema	Changes in size, shape, position and presence of great vessels. Malrotated heart, formation of ventricular septum. Form of liver, abdominal wall musculature, umbilical vessels. Kidney size and form (pelvic dilation, enlargement), cleft palate.	
What would you expect to record in association with low fetal weight	Thin, translucent, shiny fragile skin, oedema over snout, domed cranium, apparent change in size of eye bulge, non-eruption of incisors, poorly defined digits, apparently larger genital	Thoracic region : common truncus. Everything will be smaller / in proportion with the fetus.

ASSESSMENT FOR CERTIFICATION OF COMPETENCE IN FETAL MORPHOLOGICAL EXAMINATION

LABORATORY LITTER ASSESSMENT – FRESH EXTERNAL AND VISCERAL EXAMINATION

Candidate Name: Mélanie Vaillancourt

Demonstration of knowledge of consequence of findings (choose minimum of 3 from this section)

What else might you see with:		
	papilla, difficulty in determining external sex. Lungs not expanded, kidney – dilated pelvis/ureters, testes high, pronounced umbilical vessels [Check day of PM if whole litter affected]	
What might you find in association with high fetal weight	May be oedematous, thick skin, eruption of incisors [Check day of PM if whole litter affected]	
Dilated major blood vessel (aorta, pulmonary trunk)	Narrow/absent/malpositioned major blood vessel (aorta, pulmonary trunk), ventricular septal defect, malrotated heart, abnormal lung lobation, fluid in thoracic/abdominal cavities/oedema	accessory lung lobe absent, fused lung lobe Have not seen many

ASSESSMENT FOR CERTIFICATION OF COMPETENCE IN FETAL MORPHOLOGICAL EXAMINATION

LABORATORY LITTER ASSESSMENT – FRESH EXTERNAL AND VISCERAL EXAMINATION

Candidate Name: Mélanie Vaillancourt

Awareness of importance of communication lines as reaction to unusual findings

Question	Acceptable Response	Response
What would you do if you had never seen a finding before? What would you do if you were unsure how to describe an observation?	Describe what is seen, discuss/review findings with colleagues, refer to recognition levels/user manuals/training /reference material/background data	Check with training material / SD

ASSESSMENT FOR CERTIFICATION OF COMPETENCE IN FETAL MORPHOLOGICAL EXAMINATION

LABORATORY LITTER ASSESSMENT – FRESH EXTERNAL AND VISCERAL EXAMINATION

Candidate Name: Mélanie Vaillancourt

Additional comments

ASSESSMENT FOR CERTIFICATION OF COMPETENCE IN FETAL MORPHOLOGICAL EXAMINATION

LABORATORY LITTER ASSESSMENT – FRESH EXTERNAL AND VISCERAL EXAMINATION

Candidate Name: Mélanie Vaillancourt

Name of Candidate: Mélanie Vaillancourt

Royal Society of Biology

THE INTERNATIONAL REGISTER OF FETAL MORPHOLOGISTS

RAT FRESH EXTERNAL AND VISCERA IMAGES FOR CERTIFICATION

Name of Candidate: Mélanie Vaillancourt

Name of Applicant (Laboratory):	Mélanie Vaillancourt, CiToxLab
Examination type assessed (species):	**EXTERNAL AND VISCERAL RAT**
Date of assessment:	12Oct2017

Specimens used for assessment: [insert fetus ID in each box]

1	5	6	3		

Key for abbreviations:

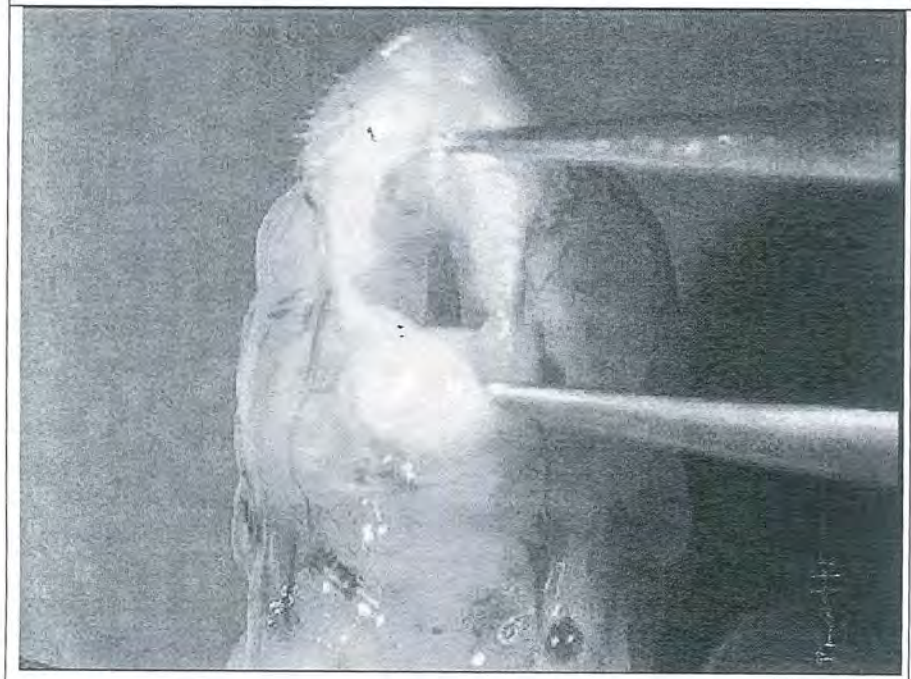
P – Needed prompting
N – Nervous
DK – Didn't know the answer
PP – Needed frequent prompting
VIP – Volunteered information previously
NC – Not consistent in technique

Assessor signature Anaïs Martin

Date 12 Oct 2017

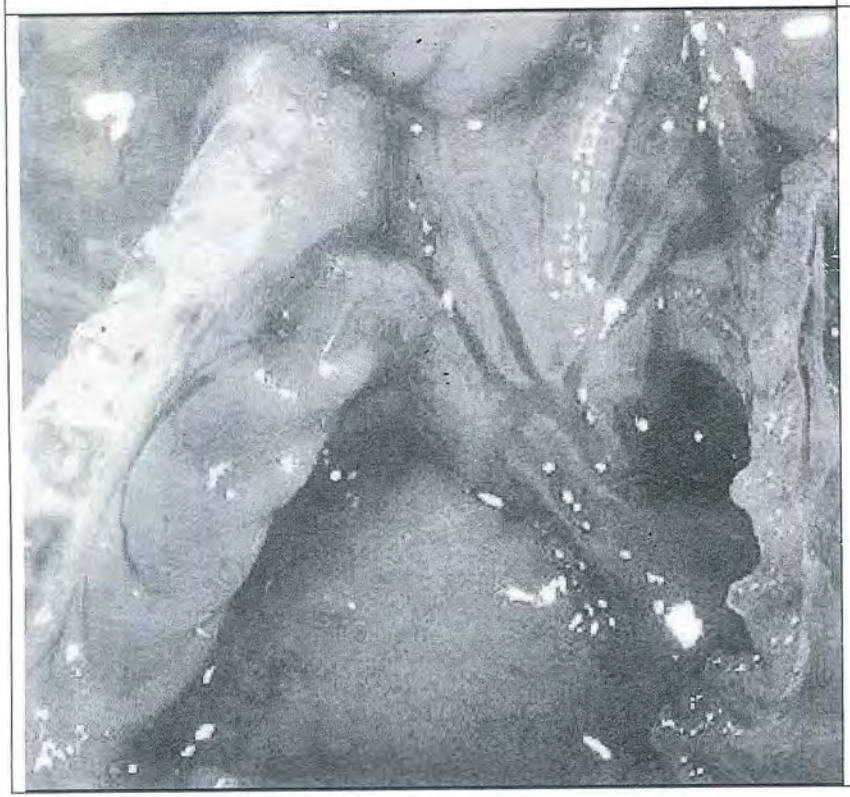
RAT FRESH EXTERNAL AND VISCERA IMAGES FOR CERTIFICATION

Name of Candidate: Mélanie Vaillancourt

Image 1	Questions	Answers given
	**What can you see?** • Cleft (secondary) palate **What else might you see/consider?** • Possible misshapen/ protruding tongue • Are there any problems with incisor sockets, lower jaw, maxillary region or eye sockets? **Other points** 1 • Are cleft palates always this easy to see? 2 • What other defects are often associated with cleft palate? 3 • Would you recommend that fetuses with such an observation were further examined skeletally or following Bouin's fluid fixation – why?	- Partial cleft - may have issues with esophagus 1 • Not, some may be too small 2 • cleft lip/muzzle defect • could have nasal septum missing 3 - would leave it to SD, but would not normally change it.

RAT FRESH EXTERNAL AND VISCERA IMAGES FOR CERTIFICATION

Name of Candidate: Mélanie Vaillancourt

Image 2	Questions	Answers given
	**What can you see?** • Thoracic situs inversus **Is there a possible alternative?** **What would confirm your diagnosis?** • Innominate artery on left side • Position of oesophagus • Orientation of heart • Lobulation of lungs **What else would you consider** • Check abdominal viscera to see if situs inversus is complete or partial	

RAT FRESH EXTERNAL AND VISCERA IMAGES FOR CERTIFICATION

Name of Candidate: Mélanie Vaillancourt

Image 3	Questions	Answers given
	**What can you see?** • Abdominal situs inversus **What would confirm your diagnosis?** • Stomach, spleen and pancreas on right side • Position of kidneys/adrenals • Lobulation of liver **What else would you consider** • Check thoracic viscera to see if situs inversus is complete or partial • Would you comment about a right sided umbilical artery in this specimen?	Reversed (without any hesitation) – confirm with location of other organs • VIP: maybe also in thoracic • Don't ~~not~~ really look at umbilical artery normally.

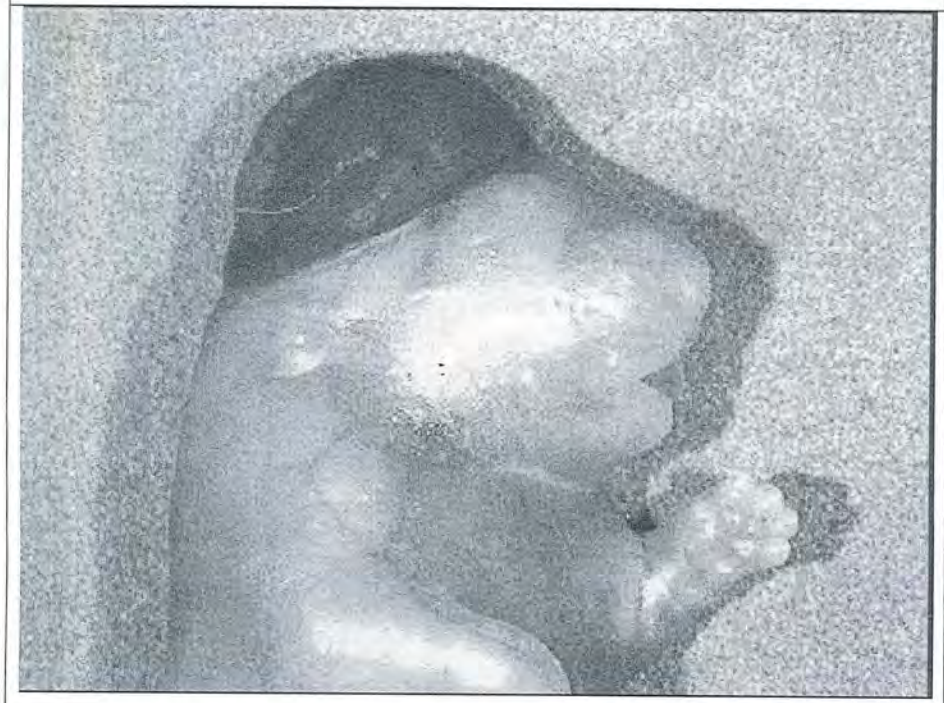
RAT FRESH EXTERNAL AND VISCERA IMAGES FOR CERTIFICATION

Name of Candidate: Mélanie Vaillancourt

Image 4	Questions	Answers given
	**What can you see?** • Eye bulge reduced in size (indicates possible micro/anophthalmia) • Shortened lower jaw • Misshapen/malpositioned pinna • Domed cranium • Pointed snout/naris **What else might you see/consider?** • Microstomia size of mouth • Microglossia size shape etc of tongue **What else would you consider** • Incisors/sockets, orbits • Would you recommend that fetuses with such an observation were further examined skeletally or following Bouin's fluid fixation – why?	

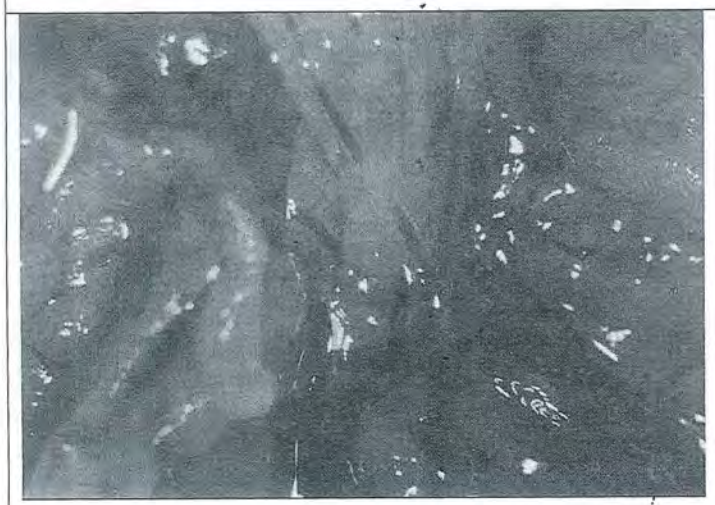
RAT FRESH EXTERNAL AND VISCERA IMAGES FOR CERTIFICATION

Name of Candidate: Mélanie Vaillancourt

Image 5	Questions	Answers given
	**What can you see?** • Eye bulge reduced in size (indicates possible micro/anophthalmia) • Protruding tongue • Exencephaly (large amount of brain exposed, absent cranial vault) **What classical teratogen causes this sort of defect in rats (but not rabbits)?** • Aspirin **What else would you consider?** • Check palate for cleft • Would you recommend that fetuses with such an observation were further examined skeletally or following Bouin's fluid fixation – why?	(was excited about finding) - muzzle might be short; would compare to normal - Digits shorter? — No — at SD discretion (said would be interesting to see skeleton)

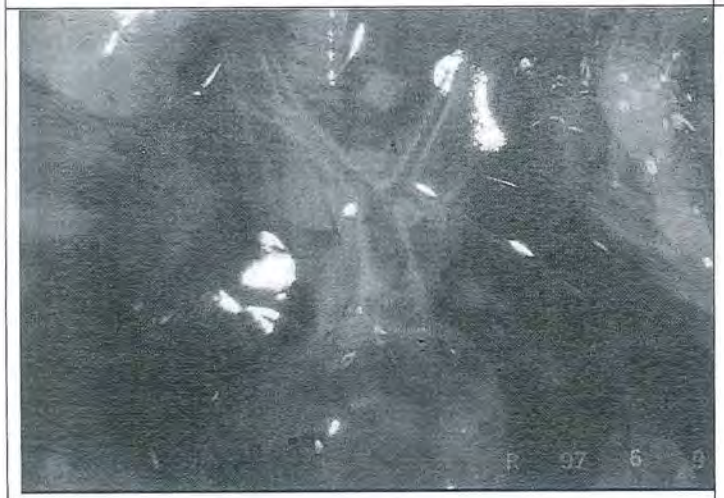
RAT FRESH EXTERNAL AND VISCERA IMAGES FOR CERTIFICATION

Name of Candidate: Mélanie Vaillancourt

Image 6	Questions	Answers given
	**What can you see?** • Retro-oesophageal right subclavian artery **What else would you consider?** • Are there any other defects usually associated with this observation? • Ventricular septal defect	Vessel going behind trachea/esophagus - could be ringed aorta? - could have right-sided aorta.

RAT FRESH EXTERNAL AND VISCERA IMAGES FOR CERTIFICATION

Name of Candidate: Mélanie Vaillancourt

Image 7	Questions	Answers given
	**What can you see?** • Transposition of great vessels • Possible pre-ductal coarctation of transposed aorta • Dextrocardia • Difficult to see right subclavian artery/descending aorta **What else would you consider?** • Are there any other defects usually associated with this observation?	

RAT FRESH EXTERNAL AND VISCERA IMAGES FOR CERTIFICATION

Name of Candidate: Mélanie Vaillancourt

Image 8	Questions	Answers given
	**What can you see?** • Anasarca (oedema) • Shortened lower jaw **What else might you see/consider?** • Microstomia • Microglossia • Eye bulge difficult to assess because of oedema, a reduction in size may indicate possible micro/anophthalmia) • Heart/vessel defect(s) **What else would you consider** • Incisors/sockets, orbits • Would you recommend that fetuses with such an observation were further examined skeletally or following Bouin's fluid fixation – why?	

RAT FRESH EXTERNAL AND VISCERA IMAGES FOR CERTIFICATION

Name of Candidate: Mélanie Vaillancourt

THE INTERNATIONAL REGISTER OF FETAL MORPHOLOGISTS

RAT FRESH EXTERNAL AND VISCERA IMAGES FOR CERTIFICATION

Name of Candidate: Mélanie Vaillancourt

Name of Applicant (Laboratory):	Mélanie Vaillancourt, CiToxLab
Examination type assessed (species):	**EXTERNAL AND VISCERAL RAT**
Date of assessment:	12Oct2017

Specimens used for assessment: [insert fetus ID in each box]

R1	R5	R6	R3		

Key for abbreviations:

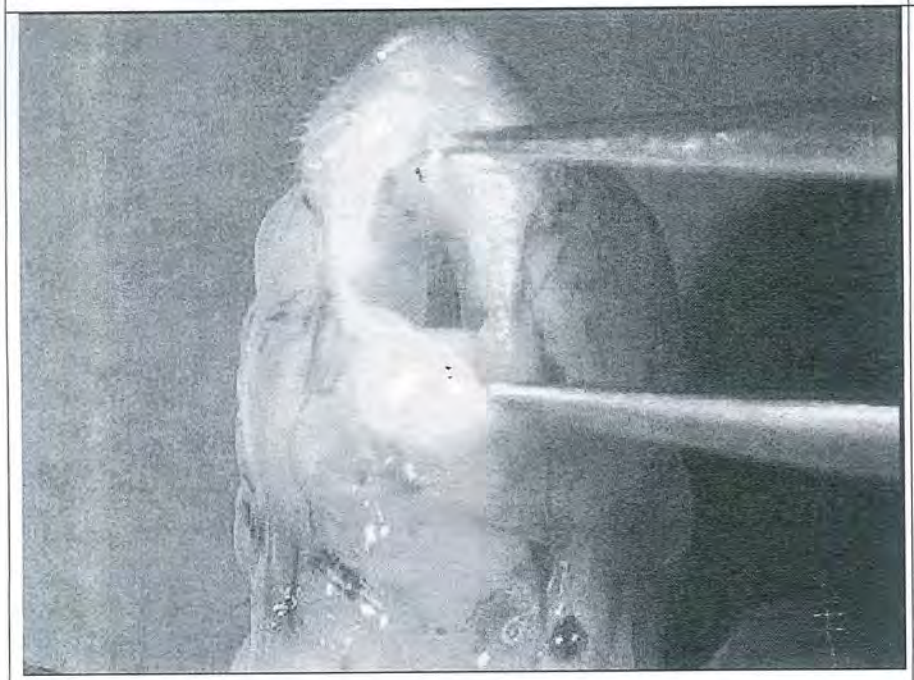
P – Needed prompting
N – Nervous
DK – Didn't know the answer
PP – Needed frequent prompting
VIP – Volunteered information previously
NC – Not consistent in technique

Assessor signature

Date 12Oct2017

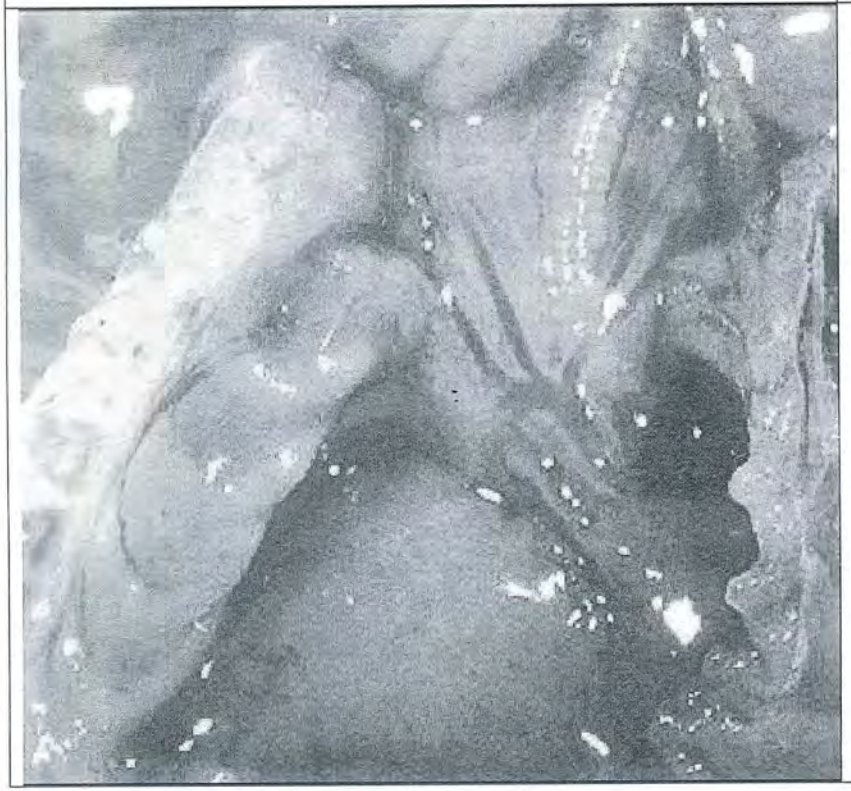
RAT FRESH EXTERNAL AND VISCERA IMAGES FOR CERTIFICATION

Name of Candidate: Mélanie Vaillancourt

Image 1	Questions	Answers given
	**What can you see?** • Cleft (secondary) palate **What else might you see/consider?** • Possible misshapen/ protruding tongue • Are there any problems with incisor sockets, lower jaw, maxillary region or eye sockets? **Other points** • Are cleft palates always this easy to see? • What other defects are often associated with cleft palate? • Would you recommend that fetuses with such an observation were further examined skeletally or following Bouin's fluid fixation – why?	palate usually goes all the way NO. some are very small, very small crack. – Meckel, cleft lip, trachea something with Williams SD usually will make a switch, I don't like switching it

RAT FRESH EXTERNAL AND VISCERA IMAGES FOR CERTIFICATION

Name of Candidate: Mélanie Vaillancourt

Image 2	Questions	Answers given
	**What can you see?** • Thoracic situs inversus **Is there a possible alternative?** **What would confirm your diagnosis?** • Innominate artery on left side • Position of oesophagus • Orientation of heart • Lobulation of lungs **What else would you consider** • Check abdominal viscera to see if situs inversus is complete or partial	

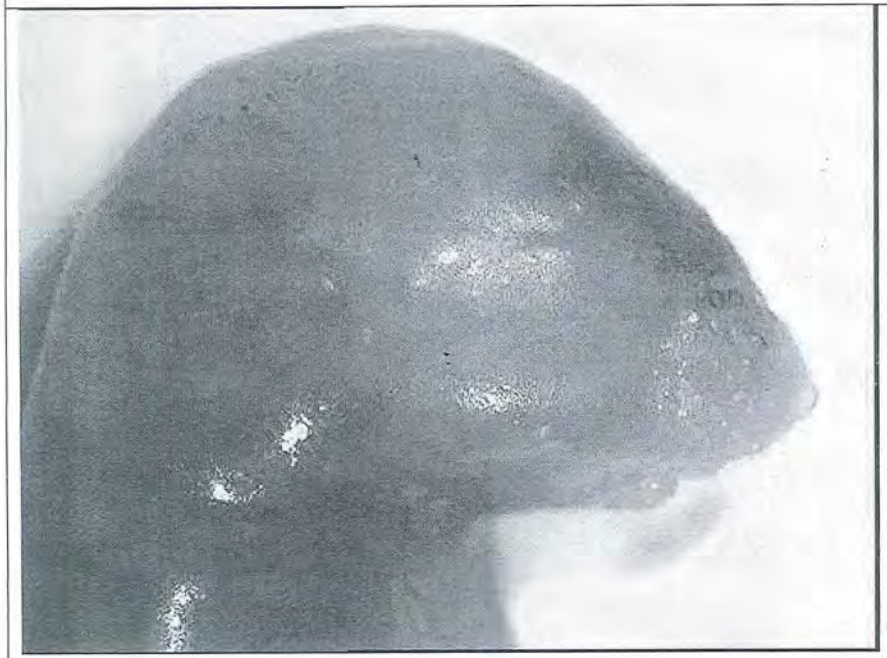
RAT FRESH EXTERNAL AND VISCERA IMAGES FOR CERTIFICATION

Name of Candidate: Mélanie Vaillancourt

Image 3	Questions	Answers given
	**What can you see?** • Abdominal situs inversus **What would confirm your diagnosis?** • Stomach, spleen and pancreas on right side • Position of kidneys/adrenals • Lobulation of liver **What else would you consider** • Check thoracic viscera to see if situs inversus is complete or partial • Would you comment about a right sided umbilical artery in this specimen?	Everything is Reversed Every area should be reversed. We don't call umbilical artery If requested I would call it.

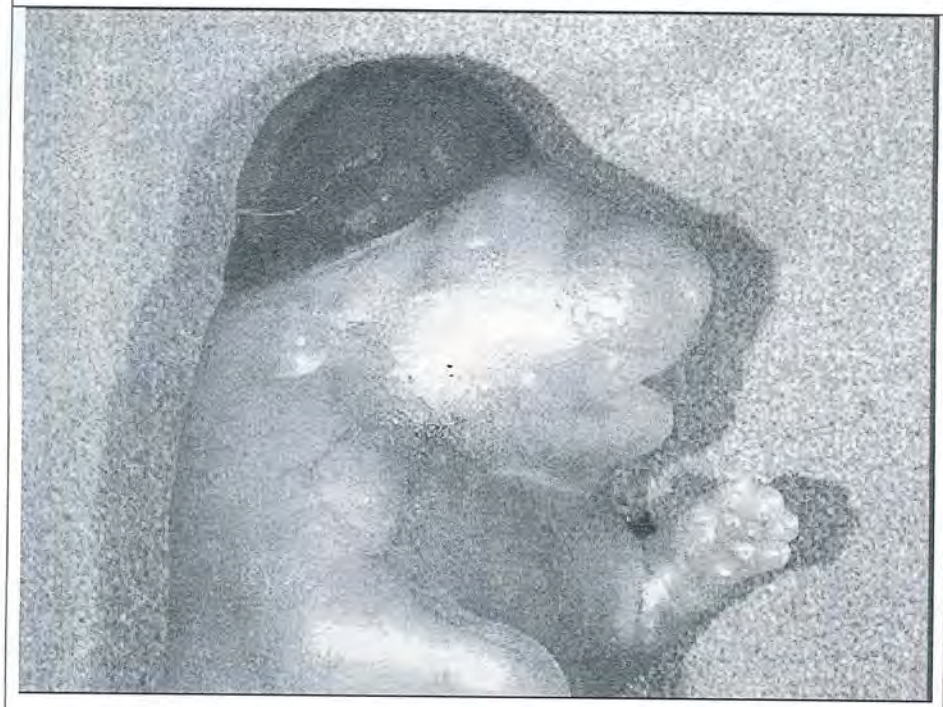
RAT FRESH EXTERNAL AND VISCERA IMAGES FOR CERTIFICATION

Name of Candidate: Mélanie Vaillancourt

Image 4	Questions	Answers given
	**What can you see?** • Eye bulge reduced in size (indicates possible micro/anophthalmia) • Shortened lower jaw • Misshapen/malpositioned pinna • Domed cranium • Pointed snout/naris **What else might you see/consider?** • Microstomia size of mouth • Microglossia size shape etc of tongue **What else would you consider** • Incisors/sockets, orbits • Would you recommend that fetuses with such an observation were further examined skeletally or following Bouin's fluid fixation – why?	

RAT FRESH EXTERNAL AND VISCERA IMAGES FOR CERTIFICATION

Name of Candidate: Mélanie Vaillancourt

Image 5	Questions	Answers given
	**What can you see?** • Eye bulge reduced in size (indicates possible micro/anophthalmia) • Protruding tongue • Exencephaly (large amount of brain exposed, absent cranial vault) **What classical teratogen causes this sort of defect in rats (but not rabbits)?** • Aspirin **What else would you consider?** • Check palate for cleft • Would you recommend that fetuses with such an observation were further examined skeletally or following Bouin's fluid fixation – why?	might have a membrane over it might have some slight issues. It's hard to see Study Director would make the decision to switch it. I don't want to bias the study

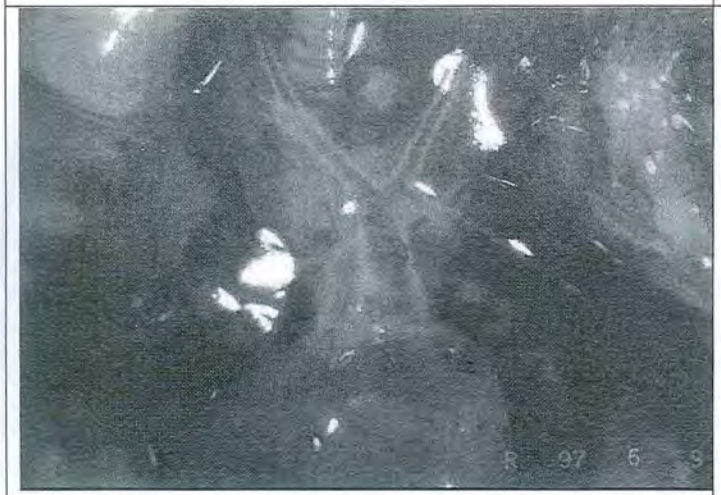
RAT FRESH EXTERNAL AND VISCERA IMAGES FOR CERTIFICATION

Name of Candidate: Mélanie Vaillancourt

Image 6	Questions	Answers given
	**What can you see?** • Retro-oesophageal right subclavian artery **What else would you consider?** • Are there any other defects usually associated with this observation? • Ventricular septal defect	Crossed to behind the trachea Could have R A Sided Aorta or a Ringed Aorta

RAT FRESH EXTERNAL AND VISCERA IMAGES FOR CERTIFICATION

Name of Candidate: Mélanie Vaillancourt

Image 7	Questions	Answers given
	**What can you see?** • Transposition of great vessels • Possible pre-ductal coarctation of transposed aorta • Dextrocardia • Difficult to see right subclavian artery/descending aorta **What else would you consider?** • Are there any other defects usually associated with this observation?	

RAT FRESH EXTERNAL AND VISCERA IMAGES FOR CERTIFICATION

Name of Candidate: Mélanie Vaillancourt

Image 8	Questions	Answers given
	**What can you see?** • Anasarca (oedema) • Shortened lower jaw **What else might you see/consider?** • Microstomia • Microglossia • Eye bulge difficult to assess because of oedema, a reduction in size may indicate possible micro/anophthalmia) • Heart/vessel defect(s) **What else would you consider** • Incisors/sockets, orbits • Would you recommend that fetuses with such an observation were further examined skeletally or following Bouin's fluid fixation – why?	

SOCIETY OF Biology

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Applicant feedback form

Name: Mélanie Vaillancourt

Company name: CiToxLAB

Assessment type/Date: Fresh visceral Rats

Overall did you find the assessment easy or difficult?	Easy
Were there any parts of the assessment that 'worked' better than others?	Fresh exam is easier than pictures
Were the questions clear enough?	Yes and if not clarified easily
Did the protocol explain clearly what was expected of you in the assessment?	Yes
Did you receive sufficient information prior to the assessment/ was the supporting paperwork clear and informative? (e.g. application form)	Yes
Was the format of the assessment explained clearly to you/ and in a logical sequence? (on the day)	Yes
Could anything have been done to improve the format/content of the assessment?	Pictures but still hard to make it better
Based on your experience would you recommend the assessment to your colleagues?	Yes
How did this assessment compare to previous assessments (if applicable)	Easier
Any other comments	Best assessors !

Thanks!