



**PAIN SCORING IN NON-
RODENTS: WHAT IS
KNOWN?
HOW TO PROCEED?**

**Mariella Debille (UGent, Ethical
Committee faculty of Veterinary
Medicine, BE)**

All grafics Mariella Debille VZW Van Staartjes

www.vanstaartjes.be

Scientist, artists and musicians hand in hand

PAIN SCORING IN NON-RODENTS

WHAT IS KNOWN? HOW TO PROCEED?

- **Species**
- **Individual sensitivity**
- **Acute pain**
- **Chronic pain**
- **Localisation**
- **Etc.**



I can smile



Mariella Debille (UGent, Ethical Committee faculty of Veterinary Medicine, BE)

All grafics Mariella Debille VZW Van Staartjes : Scientists, artists and musicians hand in hand www.vanstaartjes.be

PAIN SCORING IN NON-RODENTS WHAT IS KNOWN? HOW TO PROCEED?

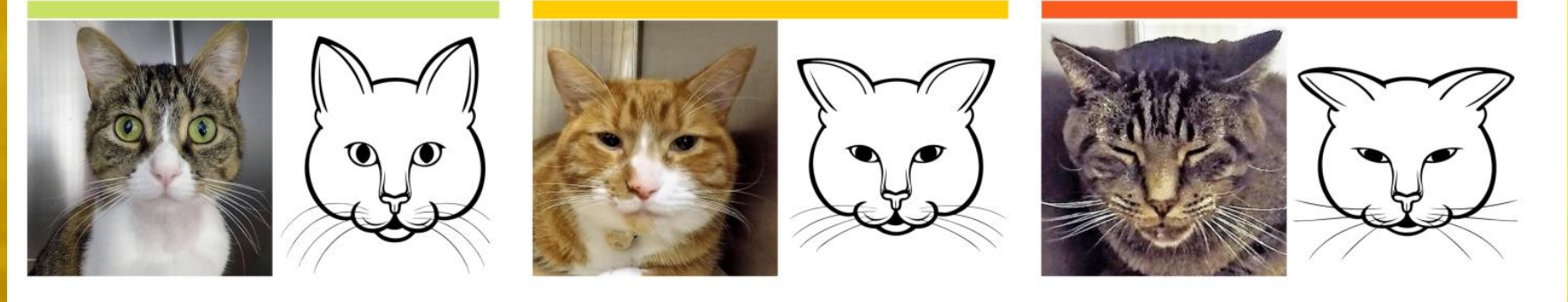
4 VET ÉVALUATION CLINIQUE DE LA DOULEUR

Date et heure: _____

Identification: _____

		:	:	:	:
Appréciation globale subjective	Pas de douleur	0	0	0	0
	↓	1	1	1	1
		2	2	2	2
Douleur intolérable	3	3	3	3	
Attitude générale	Parmi les symptômes suivants:				
	• présente des modifications respiratoires	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	• voussure le dos	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	• reste figé en posture antalgique	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	• s'agite, se plaint ou reste prostré au fond de la cage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	• ne se toilette plus	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	• regarde, mordille ou lèche sa patte	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	• urine ou défèque sous lui	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	• perd l'appétit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	- Aucun signe présent	0	0	0	0
- 1 seul présent	1	1	1	1	
- 2 à 4 présents	2	2	2	2	
- 5 à 8 présents	3	3	3	3	
Comportement interactif	Est attentif et répond aux caresses, à la voix	0	0	0	0
	Répond timidement	1	1	1	1
	Ne répond pas immédiatement	2	2	2	2
	Ne répond pas ou répond de façon agressive	3	3	3	3
Fréquence cardiaque	≤ 10 % augmentation	0	0	0	0
	11-30 % augmentation	1	1	1	1
	31-50 % augmentation	2	2	2	2
	> 50% augmentation ou non évaluable	3	3	3	3
Réaction à la manipulation de la zone opératoire	Pas de réaction visible ou audible	0	0	0	0
	- après 4 manipulations				
	Réaction(s) visible(s) ou audible(s)				
	- à la 4 ^e manipulation	1	1	1	1
- à la 2 ^e et 3 ^e manipulation	2	2	2	2	
- à la 1 ^{re} manipulation ou non évaluable	3	3	3	3	
Intensité de cette réaction	Aucune réponse	0	0	0	0
	Répond faiblement, essaye de se soustraire	1	1	1	1
	Tourne la tête ou vocalise	2	2	2	2
	Tente de fuir ou d'agresser ou non évaluable	3	3	3	3
SCORE TOTAL	1 à 5 : douleur légère				
	6 à 10 : douleur modérée				
	11 à 18 : douleur sévère				
TRAITEMENT					

offert par Vétoclinique



Université de Montréal

This factsheet was possible due to an unrestricted grant by

zoetis

Download the FGS App to learn more and practice your skills. Check our linktree for additional information.



Steagall Laboratory
felinegrimacescale@umontreal.ca
www.felinegrimacescale.com

Feline Grimace Scale © Université de Montréal 2019

Dr. Tim Bosmans Clinique Head dep. Anaesthesiology
Fac. Veterinary Medicine Small animals UGent

Dr. Paulo Steagall

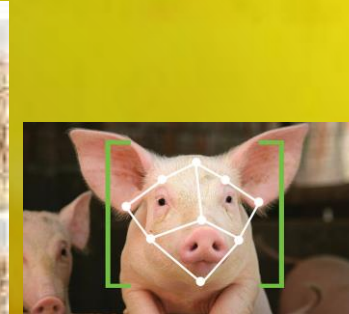
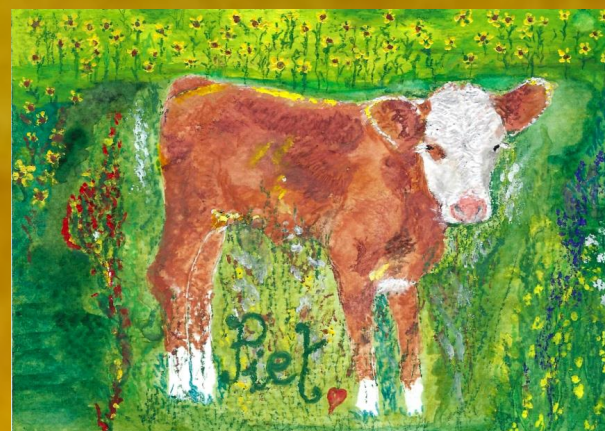
Mariella Debille (UGent, Ethical Committee faculty of Veterinary Medicine, BE)

All graphics Mariella Debille VZW Van Staartjes : Scientists, artists and musicians hand in hand www.vanstaartjes.be

PAIN SCORING IN NON-RODENTS WHAT IS KNOWN? HOW TO PROCEED?

<p>Stiffly backwards ears</p> <p>Not present (0) Moderately present (1) Obviously present (2)</p> <p>The ears are held stiffly and turned backwards. As a result, the space between the ears may appear wider relative to baseline.</p>	<p>Orbital tightening</p> <p>Not present (0) Moderately present (1) Obviously present (2)</p> <p>The eyelid is partially or completely closed. Any eyelid closure that reduces the eye size by more than half should be coded as "obviously present" or "2".</p>
<p>Tension above the eye area</p> <p>Not present (0) Moderately present (1) Obviously present (2)</p> <p>The contraction of the muscles in the area above the eye causes the increased visibility of the underlying bone surfaces. If temporal vessel tone is clearly visible should be coded as "obviously present" or "2".</p>	<p>Prominent strained chewing muscles</p> <p>Not present (0) Moderately present (1) Obviously present (2)</p> <p>Swallowing chewing muscles are clearly visible as an increased tension above the mouth. If chewing muscles are clearly prominent and recognizable the score should be coded as "obviously present" or "2".</p>
<p>Mouth strained and pronounced chin</p> <p>Not present (0) Moderately present (1) Obviously present (2)</p> <p>Strained mouth is clearly visible when upper lip is drawn back and lower lip closes a pronounced "chir".</p>	<p>Strained nostrils and flattening of the profile</p> <p>Not present (0) Moderately present (1) Obviously present (2)</p> <p>Nostrils look strained and tightly closed, the profile of the nose flattens and lips wrinkle.</p>

	Not present (0)	Moderate (1)	Severe (2)
Orbital tightening			
Ear & head position			
Flattening			



I can smile

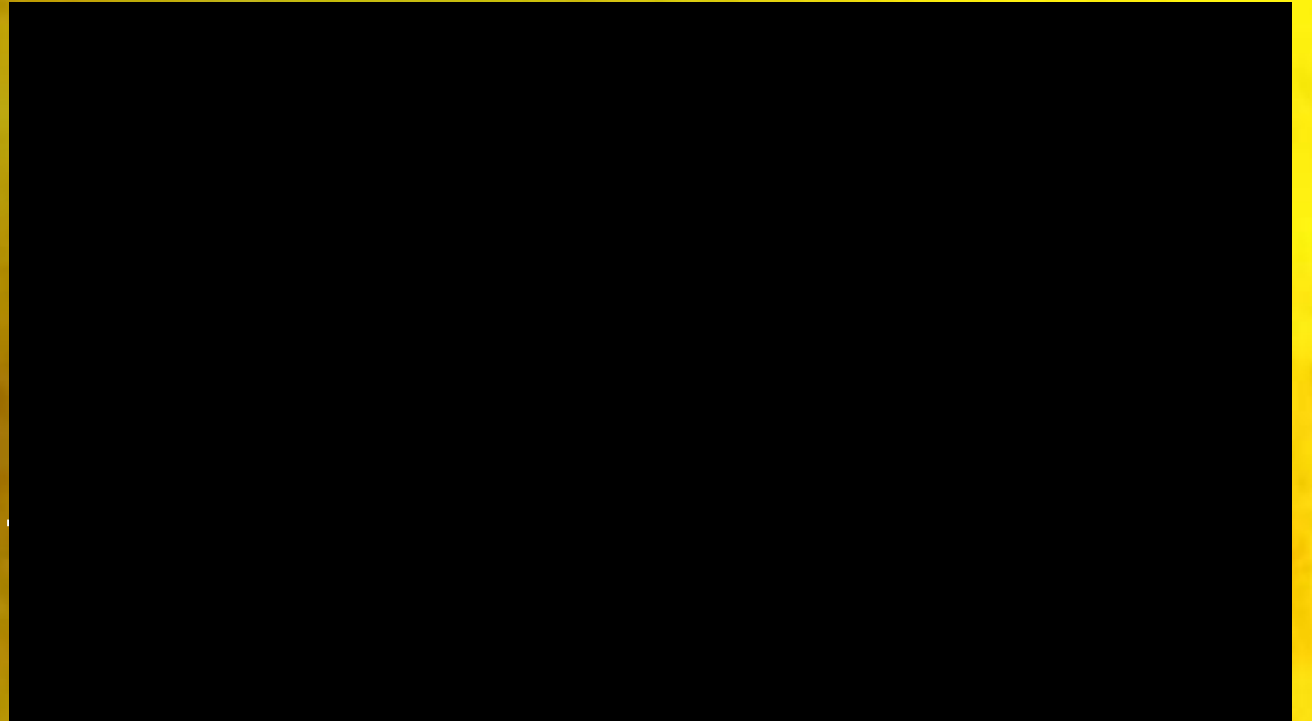
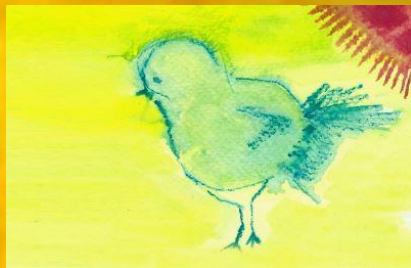
(a)	(b)
(c)	(d)
(e)	(f)
(g)	(h)

<p>Ear position</p> <p>Not present (0) The ears are kept forward</p> <p>Moderately present (1) The ears are slightly moved backwards, the distance between the ear tip increase</p> <p>Obviously present (2) When the animal is in pain, the ears are drawn back from forward position</p>		
<p>Orbital tightening</p> <p>Not present (0) The eyes are open, white can be visible</p> <p>Moderately present (1) The orbital area is narrowed, eyes are semi-closed and not focused on the environment or closed with eyelids are squeezed together</p>		
<p>Cheek tightening / Nose bulge</p> <p>Not present (0) No snout bulge neither cheek tension is visible</p> <p>Moderately present (1) A bulge of skin is apparent on the snout in response to increased tension in the cheek, wrinkles are not visible</p> <p>Obviously present (2) A bulge of skin is apparent on the snout in response to cheek tightening, wrinkles are clearly visible</p>		

Mariella Debille (UGent, Ethical Committee faculty of Veterinary Medicine, BE)

All graphics Mariella Debille VZW Van Staartjes : Scientists, artists and musicians hand in hand www.vanstaartjes.be

PAIN SCORING IN NON-RODENTS WHAT IS KNOWN? HOW TO PROCEED?



Mariella Debille (UGent, Ethical Committee faculty of Veterinary Medicine, BE)

All graphics Mariella Debille VZW Van Staartjes : Scientists, artists and musicians hand in hand www.vanstaartjes.be

Bas Rodenburg



**Professor of Animal Welfare
at Utrecht University**

Thank you



2024





2024 Poultry Science 103:103875
<https://doi.org/10.1016/j.psj.2024.103875>

Animal Well-Being and Behavior

 Poultry Science®

How to see stress in chickens: On the way to a Stressed Chicken Scale

Larissa Schlegel ,^{*,§,1} Anne S. Kleine,[†] Marcus G. Doherr ,[‡] and Carola Fischer-Tenhagen [§]

**Farm Animal Clinic – Division for Poultry, School of Veterinary Medicine, Free University of Berlin, Berlin, Germany; †Clinica Alpina, Scuol, Switzerland; ‡Institute for Veterinary Epidemiology and Biostatistics, School of Veterinary Medicine, Free University of Berlin, Berlin, Germany; and §German Federal Institute for Risk Assessment, German Centre for the Protection of Laboratory Animals (Bf3R), Berlin, Germany*

<https://www.sciencedirect.com/science/article/pii/S0032579124004541>

Mariella Debille (UGent, Ethical Committee faculty of Veterinary Medicine, BE)

All graphics Mariella Debille VZW Van Staartjes : Scientists, artists and musicians hand in hand

PAIN SCORING IN NON-RODENTS

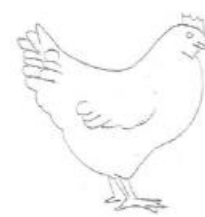



WHAT IS KNOWN? HOW TO PROCEED?



levels on a “Stressed Chicken Scale” (SCS). “Stress” was defined as any physical discomfort such as pain or illness (Bernatzky, 1997), as well as emotional distress caused by “all feelings of displeasure not covered by the exact concept of pain” (Bernatzky, 1997).

SCHLEGEL ET AL.

Stressed Chicken Scale

Unstressed		
Stressed		











Mariella Debille (UGent, Ethical Committee faculty of Veterinary Medicine, BE)

All graphics Mariella Debille VZW Van Staartjes : Scientists, artists and musicians hand in hand www.vanstaartjes.be



PAIN SCORING IN NON-RODENTS

WHAT IS KNOWN? HOW TO PROCEED?

Body signal in unstressed expression	Body signal in stressed expression		
Tail position			
 			
Head position			
 			

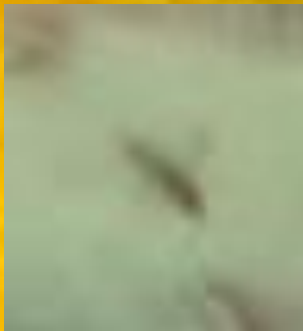
Mariella Debille (UGent, Ethical Committee faculty of Veterinary Medicine, BE)

All grafics Mariella Debille VZW Van Staartjes : Scientists, artists and musicians hand in hand www.vanstaartjes.be



PAIN SCORING IN NON-RODENTS WHAT IS KNOWN? HOW TO PROCEED?

Eye closure



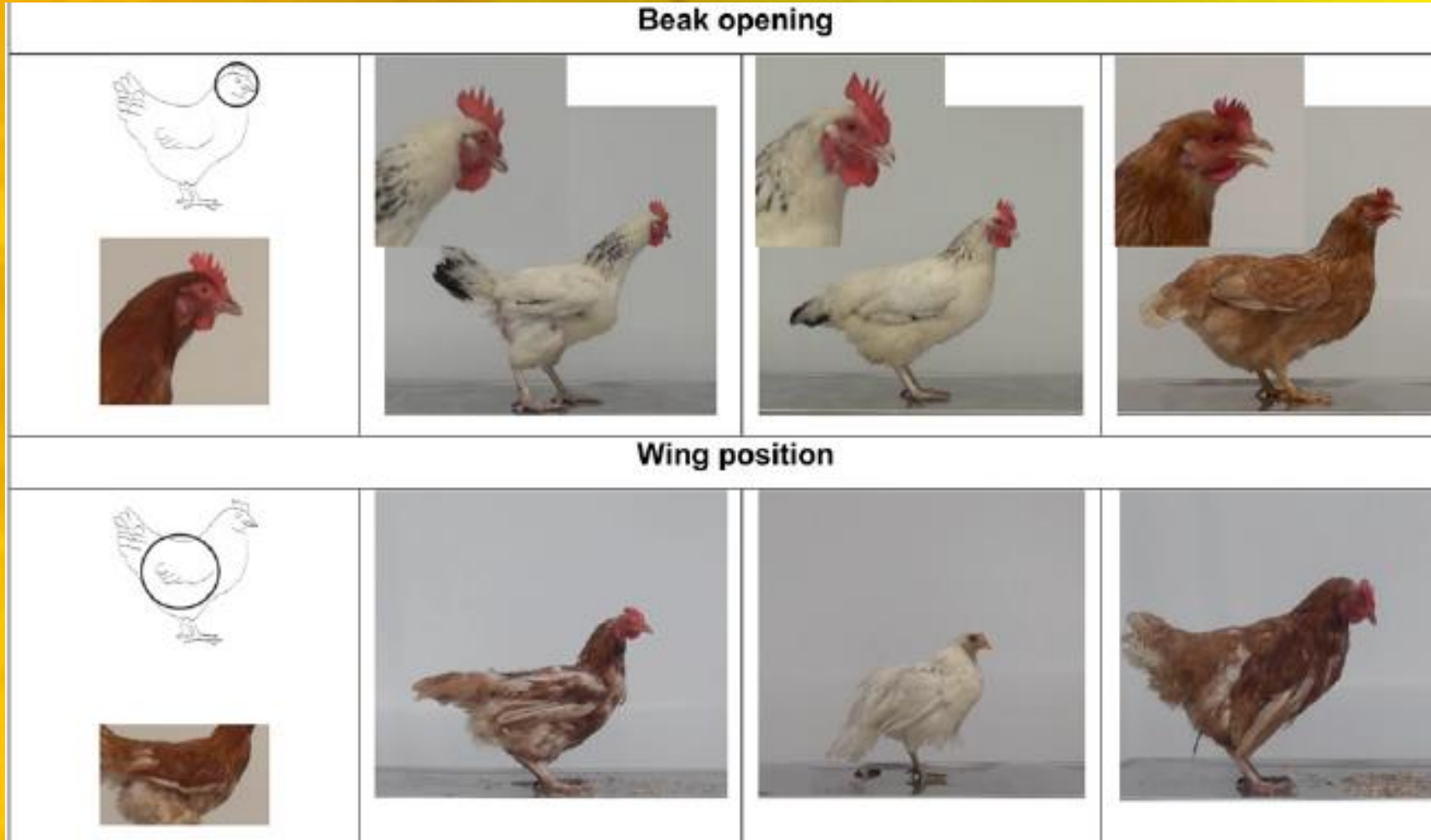
Mariella Debille (UGent, Ethical Committee faculty of Veterinary Medicine, BE)

All grafics Mariella Debille VZW Van Staartjes : Scientists, artists and musicians hand in hand www.vanstaartjes.be



PAIN SCORING IN NON-RODENTS

WHAT IS KNOWN? HOW TO PROCEED?











Mariella Debille (UGent, Ethical Committee faculty of Veterinary Medicine, BE)

All graphics Mariella Debille VZW Van Staartjes : Scientists, artists and musicians hand in hand www.vanstaartjes.be



PAIN SCORING IN NON-RODENTS WHAT IS KNOWN? HOW TO PROCEED?

Leg posture			
			
Fullness of plumage			
			

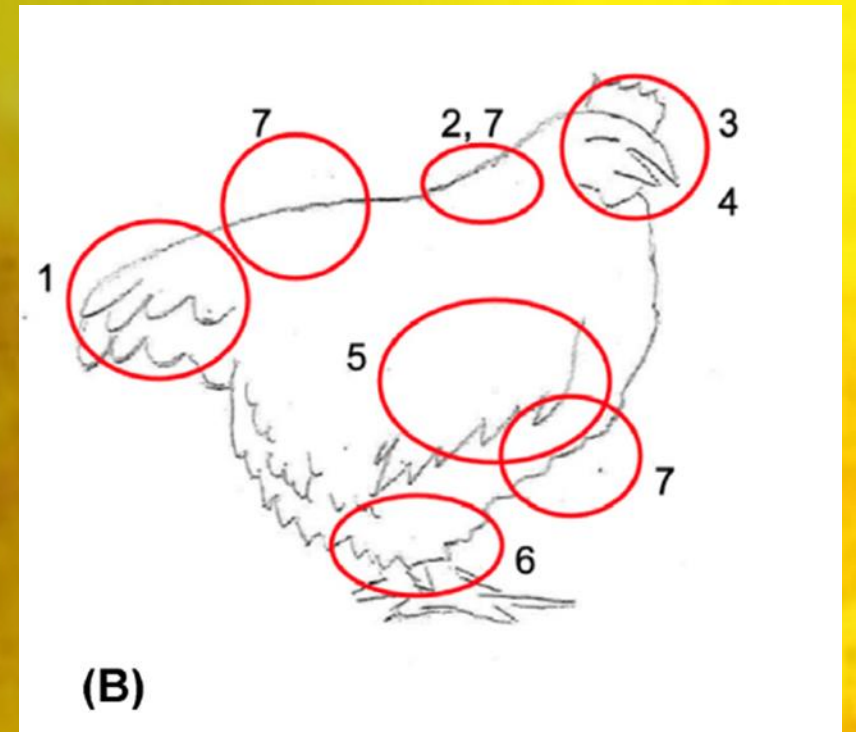
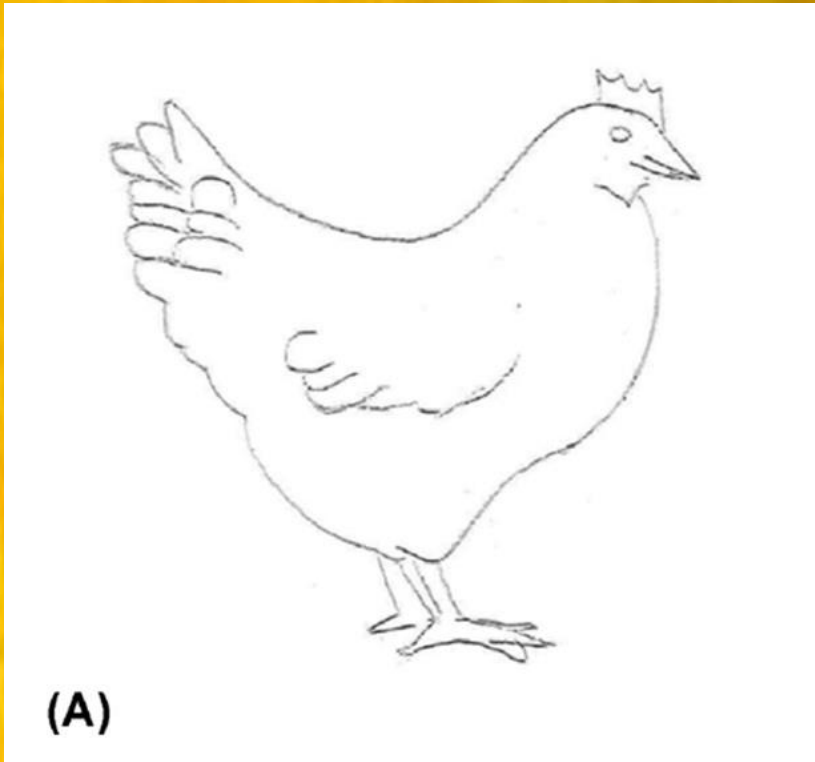
Mariella Debille (UGent, Ethical Committee faculty of Veterinary Medicine, BE)

All grafics Mariella Debille VZW Van Staartjes : Scientists, artists and musicians hand in hand www.vanstaartjes.be



PAIN SCORING IN NON-RODENTS

WHAT IS KNOWN? HOW TO PROCEED?



Mariella Debille (UGent, Ethical Committee faculty of Veterinary Medicine, BE)

All graphics Mariella Debille VZW Van Staartjes : Scientists, artists and musicians hand in hand www.vanstaartjes.be

PAIN SCORING IN NON-RODENTS WHAT IS KNOWN? HOW TO PROCEED?



Connection



**Prof. Frank Tuyttens
ILVO/UGENT**

Mariella Debille (UGent, Ethical Committee faculty of Veterinary Medicine, BE)

All grafics Mariella Debille VZW Van Staartjes : Scientists, artists and musicians hand in hand www.vanstaartjes.be



PAIN SCORING IN NON-RODENTS WHAT IS KNOWN? HOW TO PROCEED?



M.J. Gentle 2001



Attentional Shifts Alter Pain Perception in the Chicken

January 2001 - *Animal Welfare* 10(S1):187-194

DOI: [10.1017/S0962728600023617](https://doi.org/10.1017/S0962728600023617)

M.J. Gentle

Prof. Frank Tuytens
ILVO/UGENT

Mariella Debille (UGent, Ethical Committee faculty of Veterinary Medicine, BE)

All graphics Mariella Debille VZW Van Staartjes : Scientists, artists and musicians hand in hand www.vanstaartjes.be



PAIN SCORING IN NON-RODENTS WHAT IS KNOWN? HOW TO PROCEED?




A. Nasser 2023



Methods of Pain Assessment in Chicks as a Model

Document Type : Review Artical


Authors

Ahmed Naser   1; Yasser albadrany  2; Khalid Ahmed Shaaban  3

¹ Pharmacology and Toxicology Dept., Faculty of Veterinary medicine, University of Mosol

² physiology, biochemistry and pharmacology /college of veterinary medicine/university of Mosul

³ Mosul - Iraq

 10.21608/EJVS.2021.64605.1219

Prof. Frank Tuyttens
ILVO/UGENT

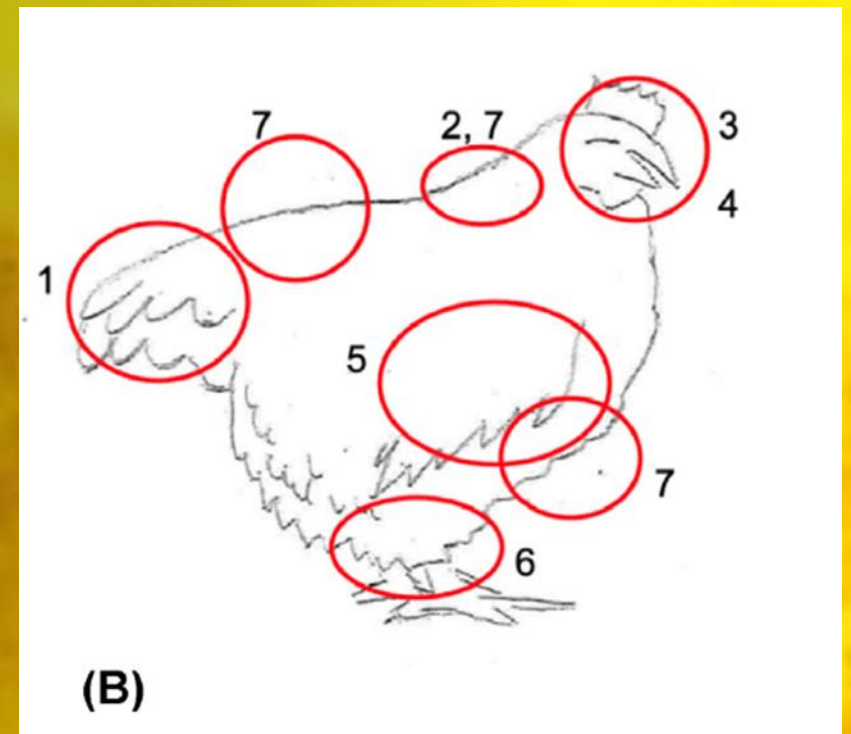
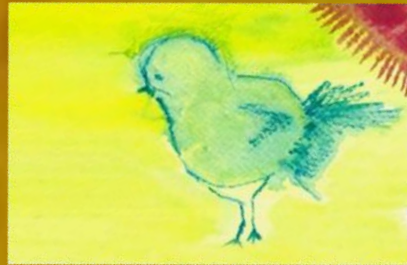
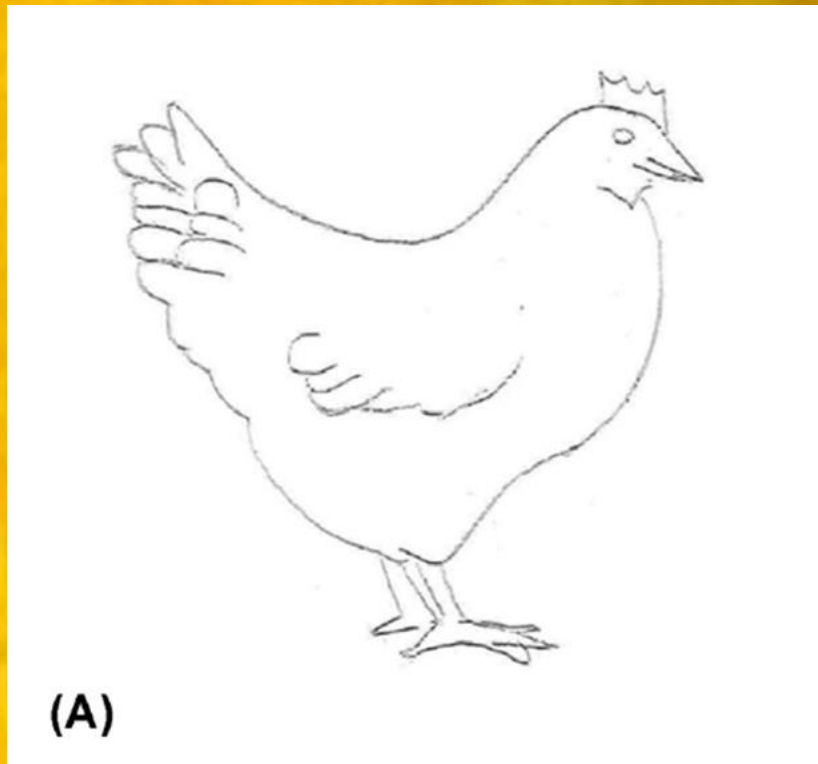
Mariella Debille (UGent, Ethical Committee faculty of Veterinary Medicine, BE)

All grafics Mariella Debille VZW Van Staartjes : Scientists, artists and musicians hand in hand www.vanstaartjes.be



PAIN SCORING IN NON-RODENTS

WHAT IS KNOWN? HOW TO PROCEED?

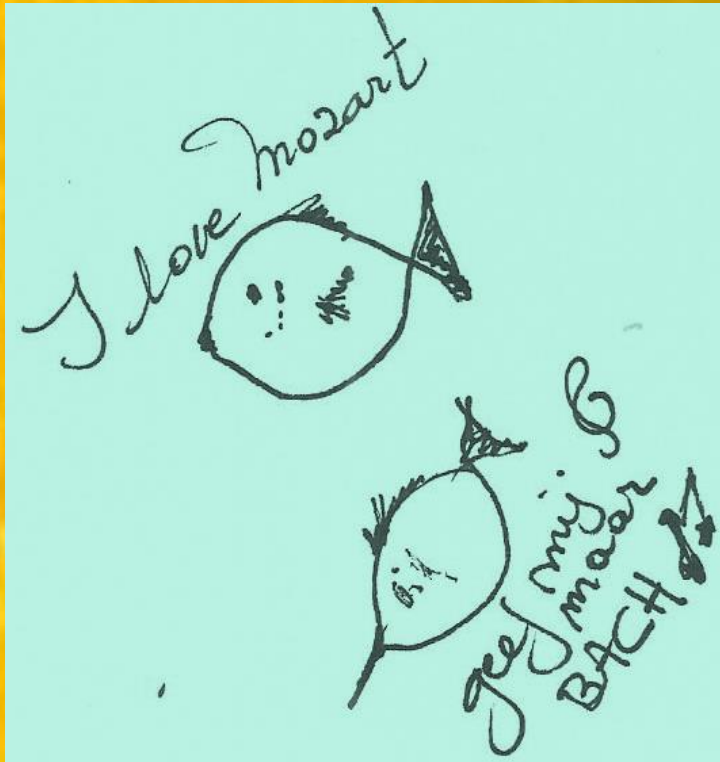


Mariella Debille (UGent, Ethical Committee faculty of Veterinary Medicine, BE)

All graphics Mariella Debille VZW Van Staartjes : Scientists, artists and musicians hand in hand www.vanstaartjes.be



PAIN SCORING IN NON-RODENTS WHAT IS KNOWN? HOW TO PROCEED?



Did you know that ...



Available online at www.sciencedirect.com



aquacultural
engineering

Aquacultural Engineering 36 (2007) 61–72

www.elsevier.com/locate/aqua-online

Effect of Mozart's music (Romanze-Andante of "Eine Kleine Nacht Musik", sol major, K525) stimulus on common carp (*Cyprinus carpio* L.) physiology under different light conditions

S.E. Papoutsoglou^{a,*}, N. Karakatsouli^a, E. Louizos^b, S. Chadio^c,
D. Kalogiannis^c, C. Dalla^d, A. Polissidis^d, Z. Papadopoulou-Daifoti^d

Mariella Debille (UGent, Ethical Committee faculty of Veterinary Medicine, BE)

All graphics Mariella Debille VZW Van Staartjes : Scientists, artists and musicians hand in hand www.vanstaartjes.be

Lynne Sneddon

Professor at Gothenburg University



- Zebrafish are a significant model organism in research 1 mice 2 fish!
- Their use is increasing
- Used to be considered that fish did not experience pain,
- Recent evidence supports the consensus that zebrafish, have the potential to experience pain or nociception and stress !
- Fish welfare in experimentation stems from both scientific and ethical requirements.
- The principles of Replacement, Reduction and Refinement (3Rs) were developed over 50 years ago as a framework for humane animal research and are embedded in national and international legislation regulating the use of animals in scientific procedures (www.nc3rs.org.uk/the-3Rs).

Mariella Debille (UGent, Ethical Committee faculty of Veterinary Medicine, BE)

**PAIN SCORING IN NON-RODENTS
WHAT IS KNOWN? HOW TO PROCEED?**

**All the following material has been
Provided by
Prof. Lynne Sneddon
Just click on the footage**



Thank you 


Mariella Debille (UGent, Ethical Committee faculty of Veterinary Medicine, BE)

All graphics Mariella Debille VZW Van Staartjes : Scientists, artists and musicians hand in hand www.vanstaartjes.be

**PAIN SCORING IN NON-RODENTS
WHAT IS KNOWN? HOW TO PROCEED?**

**Pain management in Zebrafisch:
Report from a FELASA Working Group
Dr. Lynne Sneddon**



Mariella Debille (UGent, Ethical Committee faculty of Veterinary Medicine, BE)

All grafics Mariella Debille VZW Van Staartjes : Scientists, artists and musicians hand in hand www.vanstaartjes.be




PAIN SCORING IN NON-RODENTS WHAT IS KNOWN? HOW TO PROCEED?

[nature](#) > [scientific reports](#) > [articles](#) > [article](#)

Article | [Open access](#) | Published: 21 June 2019

Automated monitoring of behaviour in zebrafish after invasive procedures

[Anthony G. Deakin](#), [Jonathan Buckley](#), [Hamzah S. AlZu'bi](#), [Andrew R. Cossins](#), [Joseph W. Spencer](#), [Waleed Al'Nuaimy](#), [Iain S. Young](#), [Jack S. Thomson](#) & [Lynne U. Sneddon](#) 

Scientific Reports **9**, Article number: 9042 (2019) | [Cite this article](#)

9143 Accesses | **47** Citations | **71** Altmetric | [Metrics](#)



Mariella Debille (UGent, Ethical Committee faculty of Veterinary Medicine, BE)

All grafics Mariella Debille VZW Van Staartjes : Scientists, artists and musicians hand in hand www.vanstaartjes.be



PAIN SCORING IN NON-RODENTS WHAT IS KNOWN? HOW TO PROCEED?



Mariella Debille (UGent, Ethical Committee faculty of Veterinary Medicine, BE)

All grafics Mariella Debille VZW Van Staartjes : Scientists, artists and musicians hand in hand www.vanstaartjes.be

PAIN SCORING IN NON-RODENTS WHAT IS KNOWN? HOW TO PROCEED?



*Empathy,
Yes we can!
Yes we can!
Yes we can!*



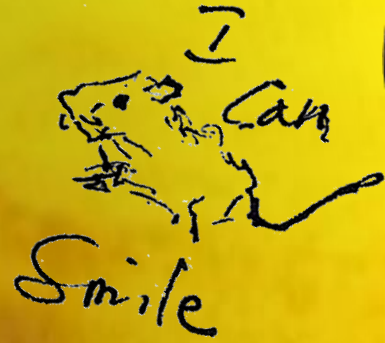
Mariella Debille (UGent, Ethical Committee faculty of Veterinary Medicine, BE)

All graphics Mariella Debille VZW Van Staartjes : Scientists, artists and musicians hand in hand www.vanstaartjes.be

PAIN SCORING IN NON-RODENTS WHAT IS KNOWN? HOW TO PROCEED?



van Staartjes!



*Empathy,
Yes we can!
Je suis une souris*



*A Need
for
Kindness*

Mariella Debille (UGent, Ethical Committee faculty of Veterinary Medicine, BE)

All graphics Mariella Debille VZW Van Staartjes : Scientists, artists and musicians hand in hand www.vanstaartjes.be