



20/02/2009

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## Urinary Peptides

HPLC UV det

ref.ranges

<b>Peptiduria</b>	<b>150</b>	<90	increased peptiduria
<i>gluten derived peptides</i>			
Gluten derivatives	<b>3,4</b>	<10	mean value
Major gluten derivatives	<b>2,8</b>	<6	mean value
<i>gluten derived opioid peptides</i>			
Gluten morphine A4	<b>2,8</b>	<2,5	slightly increased value
Gluten morphine A5	<b>3,7</b>	<1,7	moderately increased value
Gluten morphine C	<b>1,2</b>	<1,7	mean value
Gluten morphine B5	<b>4,6</b>	<1,3	moderately increased value
<i>Casein derived opioid peptides</i>			
Casomorphine 1-3	<b>0,8</b>	<1	mean value
Casomorphine 1-4	<b>2,9</b>	<4	slightly increased value
Casomorphine 1-4 NH2	<b>2,3</b>	<1	moderately increased value
Casomorphine 1-7	<b>0,5</b>	<2,5	traces
Casomorphine 1-8	<b>2,3</b>	<8	mean value
<i>Other opioid peptides (bioclinical markers)</i>			
Peptide P1	<b>1,1</b>	<1	moderately increased value
Peptide P2	<b>2,2</b>	<2	moderately increased value
Peptide HK1	<b>2,2</b>	<2	slightly increased value
Peptide HK2	<b>9,0</b>	<6	slightly increased value
<i>Tripeptides increasing serotonergic activity</i>			
p-glu-trp-gly	<b>4,2</b>	<1,4	moderately increased value
p-glu-trp-gly NH2	<b>0,4</b>	<1,4	mean value
<i>Other opioid peptides (issued from fungus ?)</i>			
Deltorphine	<b>1,4</b>	<1	moderately increased value
Dermorphine	<b>0,6</b>	<1	traces
<i>Non peptidic psycholeptic molecules</i>			
indolyl-acrylyl-glycine	<b>23,3</b>	<18	slightly increased value

urinary creatinine

720 mg/l

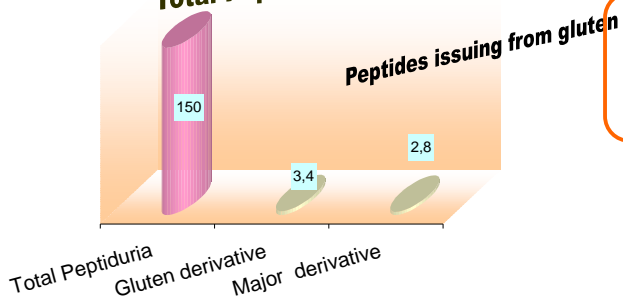


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# Urinary Peptides

[results  $\mu\text{g} / \mu\text{mol Cr}$ ]

## Total Peptiduria

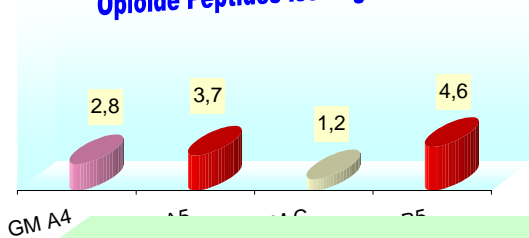


## Interpretation

Sharply increase in total Peptiduria

Average rate of gluten derivatives

## Opioid Peptides issuing from Gluten



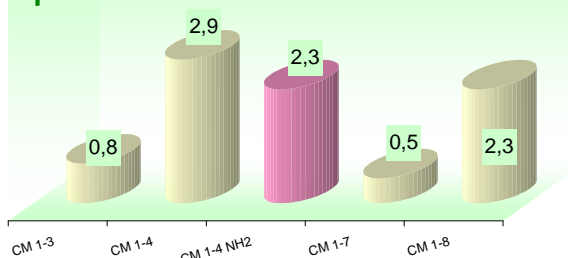
Increase in A4 Gluten Morphine reflects the augmentation of gluten with opioid activity.

Increase in A5 Gluten morphine reflects the augmentation of gluten with opioid activity.

Absence in B5 Gluten morphine

Sharply increase in C gluten morphine reflects the remarkable augmentation of gluten with opioid activity.

## Opioid Peptides issuing from casein and gluten?



Small amounts of Casomorphin 1-3

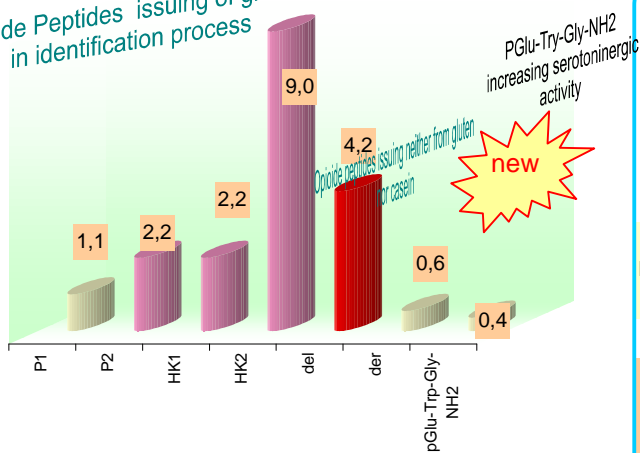
Small amounts of Casomorphin 1-4

Increase in Casomorphin 1-4 amide reflects the augmentation of casein with opioid activity.

Small amounts of Casomorphin 1-7

absence in Casomorphine 1-8

## Opioid Peptides issuing of gluten in identification process



Small amounts of peptide P1

Augmentation of P2, opioid peptide issuing from gluten.

Augmentation of HK1, opioid peptide issuing from gluten.

Augmentation of HK2, opioid peptide issuing from gluten.

Peptides HK1 & HK2 (HK like hyperkinetic) are associated with hyperactivity syndrome and attention deficit in children and hyper-agitation, or impatience in older subjects.

Sharply augmentation of Deltorphine

Deltorphine, isolated from skin of mollusk, is found in the majority of normal children and in high quantities in autistic children. It is very specific for the opioid receptor delta 2. Its significance is not yet confirmed, found from digestive system or

Small amounts of Dermorphine

## Psycholeptic molecule (non peptide molecule)



Frequently found at high quantity in the autistic children, it represents an increase in the intestinal permeability and a biochemical marker of this disease.

# Urinary Peptides

20 years after Dohan showed the relative incidence of the schizophrenia and the cereal consumption, Reichelt and his coworkers have brought back the circumstance of quietly high peptiduria among the autistic and schizophrenic children.

These **peptides** resulting in majority of incomplete digestion from wheat proteins - gliadine- and dairy -casein -, disturb physiology and cerebral morphogenesis in young children. A deficit in peptidases of the digestive mucous membrane and other tissues(?) would be a key pathogenic element of autism and schizophrenia and many others disturb, psychiatric in particular immune, inflammatory, etc.....

The treatment rests primarily on the exclusion of the sources of accused peptides, cereal or dairy or both, and take some medicine such as

- **Serenaid** (multi-enzyme nutritional aid containing Dipeptyl Peptidase IV (DPP IV). (<http://www.klaire.com>),
- **Creon** (Pancreatic deficiencies: especially cystic fibrosis and chronic pancreatitis (lipases amylases and proteases)(<http://www.solvay.com>)

## GLUTEN & MORBIDITY

