



Listeria monocytogenes Outbreak Associated with Queso Fresco

2004 PulseNet Update Meeting

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Cluster Detection

- WebBoard Posting
 - May 2003: Texas posts three listeriosis cases
 - Originating in Southern Texas
 - Isolation ranging from March to April of 2003
- PulseNet Central Responds
 - Names *Ascl* and *Apal* patterns
 - *Ascl*: GX6A16.0017
 - *Apal*: GX6A12.0671 and GX6A12.0672
 - 120-day cluster search
 - One GA case found indistinguishable by two enzymes
 - Named outbreak 0305TX-1

Epidemiologists Connect

- 0305TX-1 reported to CDC epi
 - Three of four cases exposed to Queso Fresco
- Texas epidemiologists purchased Queso Fresco at area market
 - Legally imported from Mexico yet illegally sold
 - Samples sent to CDC and University of Georgia (UGA) for laboratory analysis

Listeria Laboratories Connect

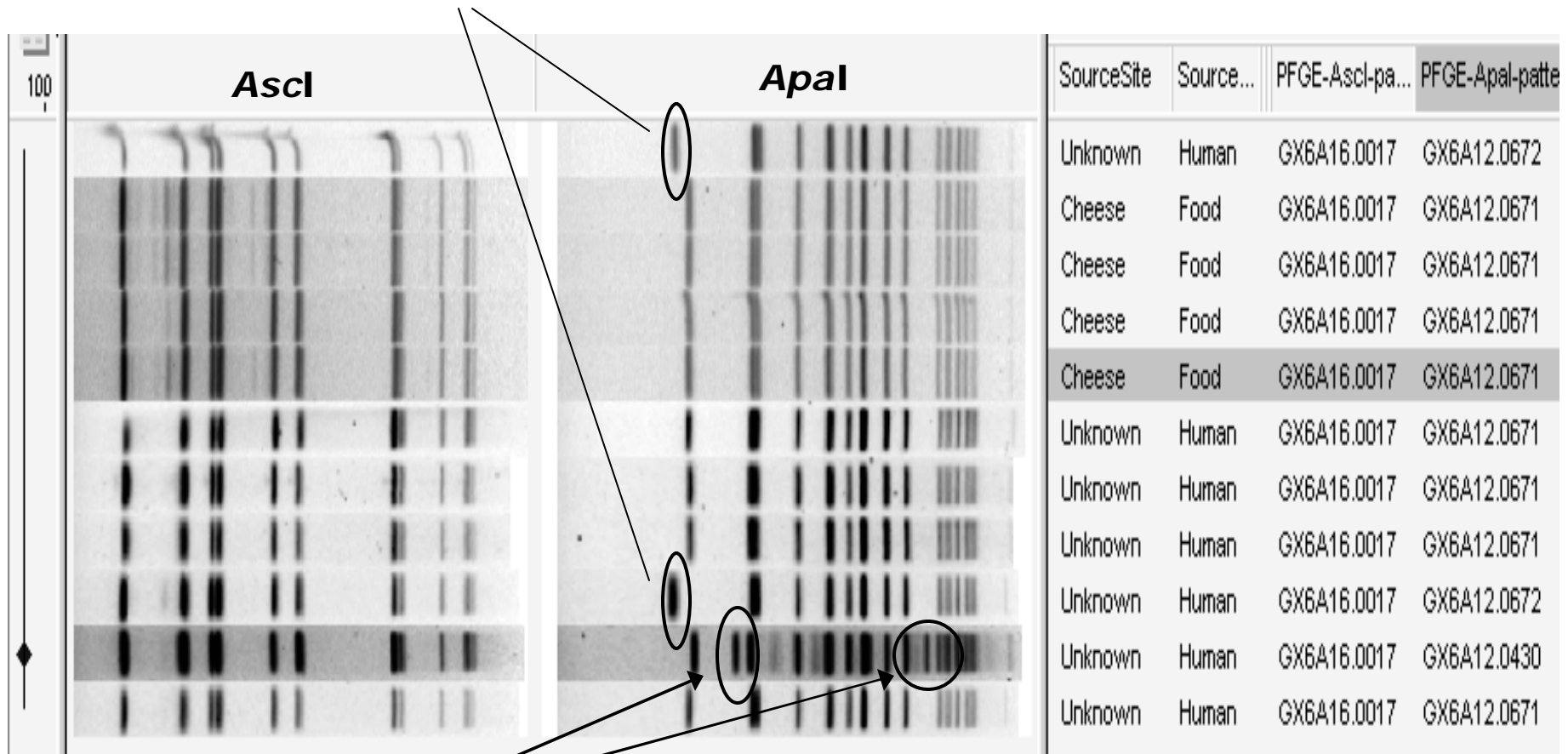
- Serotyping, Ribotyping, and Quantification experiments performed
 - Quantification studies:
 - Outbreak cheese samples contained 20 CFU/g
 - Other cheese samples contained 3.6 CFU/g

	Ascl GX6A16.0017	Apal GX6A12.0671	Serotype 4b	Ribotyping DUP-1038	Quantification 20 CFU/g
Cheese	4/4	4/4	0/4*	4/4	4/4
Human	7/7	4/7	7/7	6/7	N/A

*untypeable

0305TX-1 Patterns

Apal GX6A12.0672 differing from GX6A12.0671 by one band shift



Apal GX6A12.0430 differing from GX6A12.0671 by two additional bands

Queso Fresco – A Continuing Problem¹

- Multi-State: December 2000
 - Twelve cases: 11 Hispanic non-english speaking females and one post surgery patient
 - Questionnaires revealed food vehicle as “Mexican-style fresh soft cheese”
 - Purchased at “local markets or from door to door vendors”
 - All isolates were serotype 4b
 - “Officials recommended reinforcing... community awareness of the hazards of eating unpasteurized fresh cheese while pregnant.”
 - “Public health messages to the Hispanic community... can be challenging because of language... barriers.”

Queso Fresco – A Continuing Problem²

- Los Angeles County: Listeriosis epidemic of 1985
 - 142 cases: 93 pregnant (87% Hispanic), 49 nonpregnant
 - Case-control study showed elevated odds ratio of 5.5 for consumption of Mexican-style cheeses
 - 82% of isolates were serotype 4b
 - “Recognition of the extent of this outbreak...was facilitated by the ability to discriminate between strains of the same serotype by phage typing.”

Conclusions

- A number of Queso Fresco *Listeria* outbreaks share commonalities
 - Serotype is frequently 4b
 - Hispanic Community majority
- Queso Fresco often purchased at local markets or produced within the community
- An effort should be made to educate populations of dangers of consuming products that may be contaminated with *Listeria monocytogenes* and its correlation with Queso Fresco

Future Initiatives

- CDC laboratory
 - All isolates should be sent to CDC without delay for ribotyping and serotyping
- CDC and Texas epidemiologists
 - Working together to implement printing labels in Spanish and English for consumers in the Texas/Mexico area
 - Health education programs for pregnant women
- CDC epidemiologists
 - Developing a thorough questionnaire for use in listeriosis cases

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