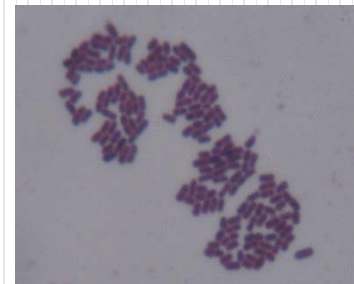


# Manufacture of traditional B&H cheeses with selected indigenous bacterial cultures and technological parameters as basis for industrial production

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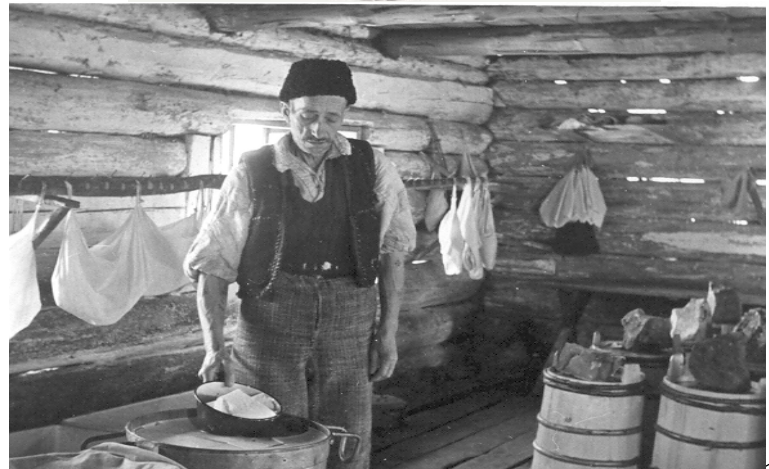


Two most important B&H traditional cheeses are **Livno** and **Travnik** cheese

These cheeses are made from raw milk with no selected starter culture and they are characterized by a complex microflora, which is responsible for creation of cheese aroma

Small farm-house products causes significant variations in low hygienic level and quality.

Accumulated problems have led to significant reduction in the number of producers, and almost disappearance of this type of production.



# The main objectives:

- Improving the scientific and technical capacities of Laboratory of Dairy Science (FAFS), Sarajevo through cooperation of Bosnian and Norwegian Scientific/Educational Institutions
- Formation of culture collections B&H traditional dairy products and the preservation of these microorganisms (strains)
- Application of best fermentative characteristics LAB isolates in modern industrial conditions (pasteurization and adding of LAB)



# The main results:

- 2 PhD students
- 11 Master students

## PhD students learned:

- molecular methods (PCR16S, DGGE, ARISA, etc);
- how to design an experiment in pilot plant.

During HERD project we organized  
for the first time in history of FAFS  
microbiological Laboratory at Dairy chair!



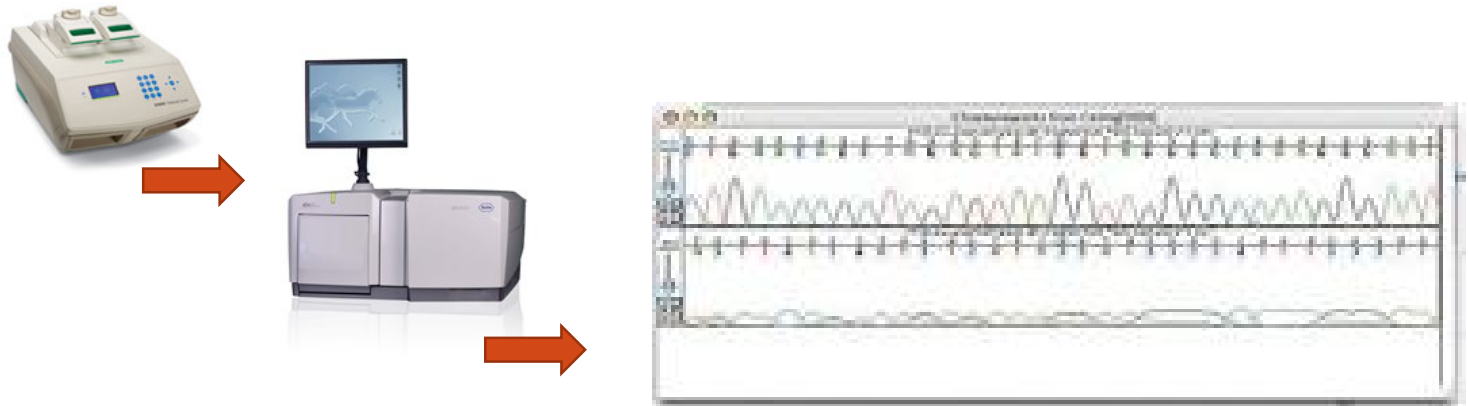
For improvement of capacities and competences of young  
researches, students, cheese producers and dairy industry.

# The main results:

- 2100 LAB isolates from Livno and Travnik



Biochemical & fermentation tests



Genetically determined microbial isolates :

- 200 from Livno cheese
- 160 from Travnik cheese

**FIRST culture collections  
of traditional B&H dairy products!**



# Production of Livno cheese with 3 indigenous LAB







4V4/48

4V3/48

4V2/48

4V1/48

4V4/24

4V3/24

4V2/24

4V1/24

4V4/12

4V3/12

4V2/12

4V1/12







# HOW TO CONTINUE???

- Genom sequencing of the „best” Livno & Travnik cheese isolates,
- Analysis of isolates on probiotic and protective properties,
- Testing of different combinations of isolates in industriy and in traditional production of cheeses...





TUSEN TAKK!!!!