

# Pros and cons of the use of *Lucilia sericata* eggs in maggot debridement therapy

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8<sup>th</sup> Central European Dipterological Conference  
28.-30. september 2015 Kežmarské Žľaby, Slovakia

**Európska únia**  
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# Maggot debridement therapy in modern medicine

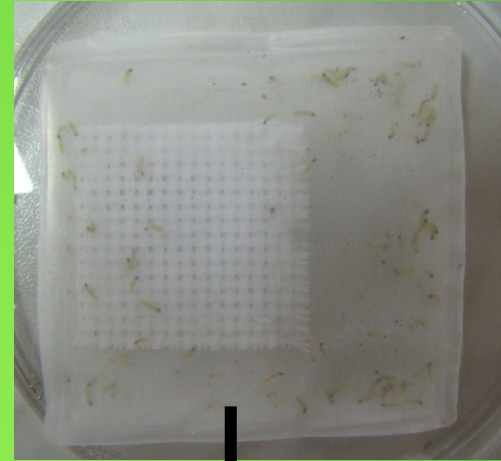
- an established treatment option for non-healing wounds
- medically induced myiasis
- *L. sericata* larvae secrete a wide range of biologically active substances



# Application of maggots



loose (free-range)



bagged

# Traditional preparation of larvae

Upon call from a doctor:



disinfection

sterility  
test

(overnight)

hatching  
on sterile  
medium



...

(overnight)



# Traditional preparation of larvae

Upon call from a doctor:



disinfection

sterility  
test

(overnight)

hatching  
on sterile  
medium



...

(overnight)

It may take more than 48 hours to prepare and deliver the larvae to healthcare facility

**Is there a way to speed up this process?**

# When using *L. sericata* eggs:

Upon call from a doctor:



disinfection

sterility  
test

hatching  
on sterile  
medium



...

# When using *L. sericata* eggs:

Upon call from a doctor:



It would take 24 hours to prepare and deliver the larvae to healthcare facility

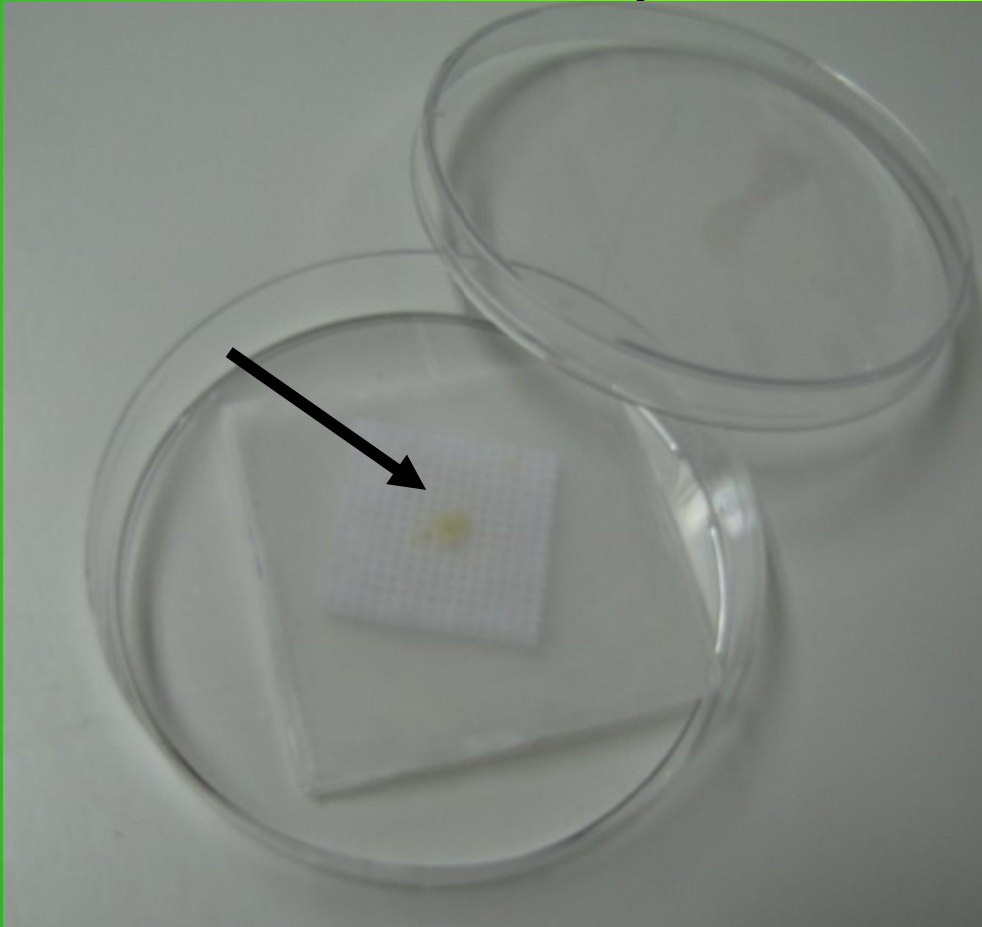


# Aims

- to show that the growth of larvae would be comparable when using eggs compared to standard preparation of maggots
- to verify possibilities of storage

# Materials & Methods

- loose and bagged *L. sericata* eggs subject to simulated transport and incubation on pork at 35° C



bagged



loose

# Materials & Methods



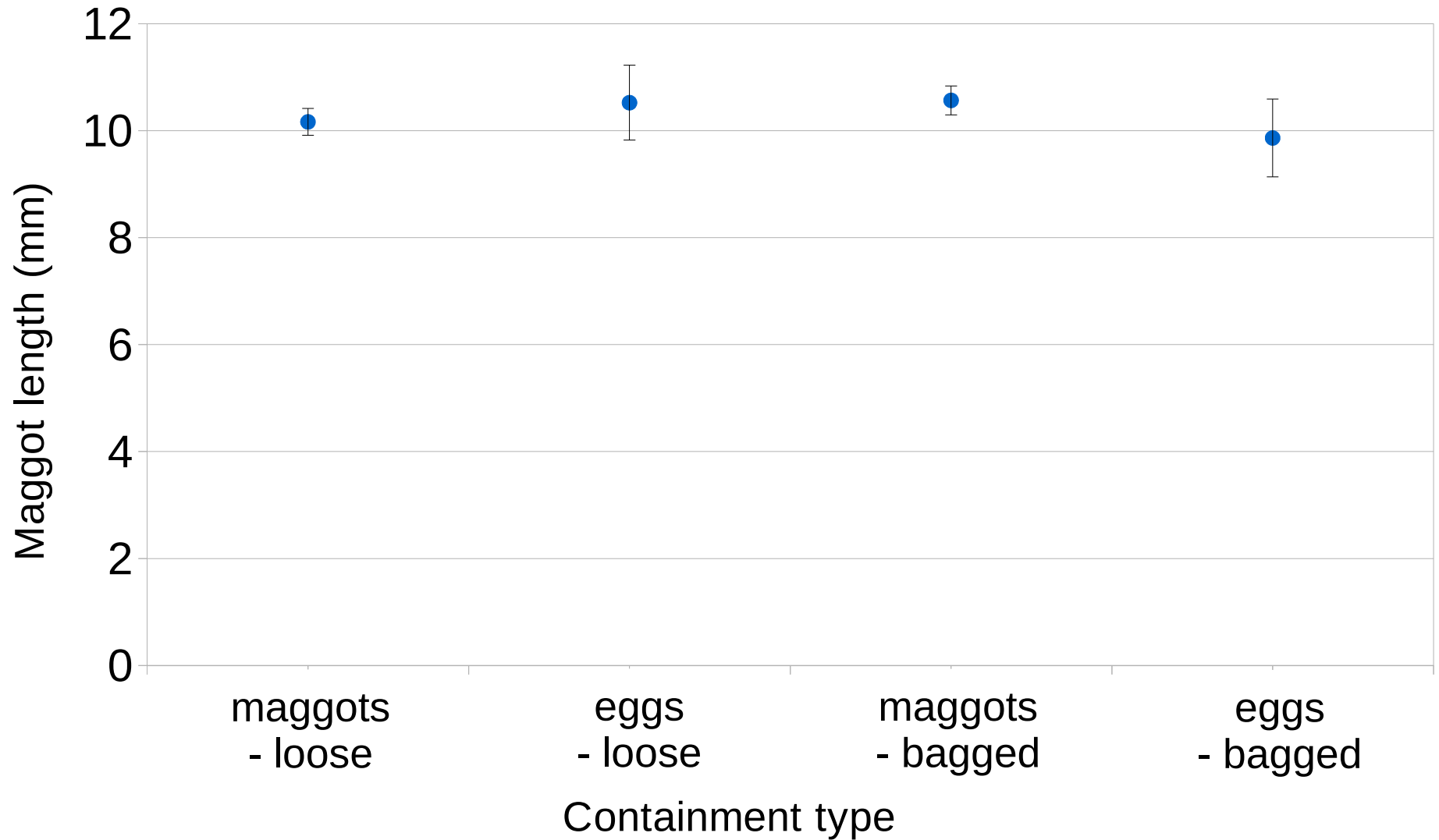
incubation on pork at 35 °C



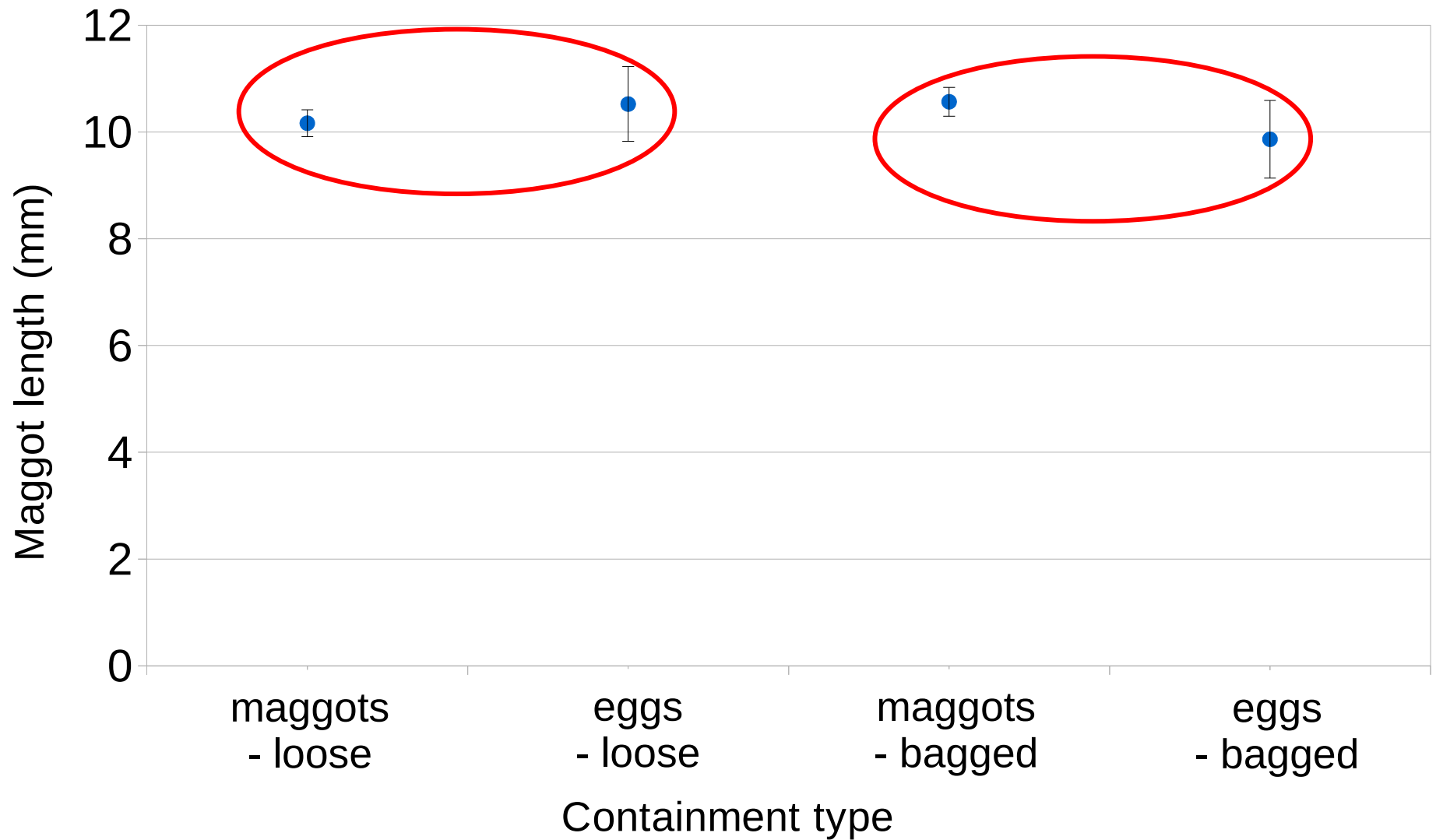
incubation on pork at 35 °C



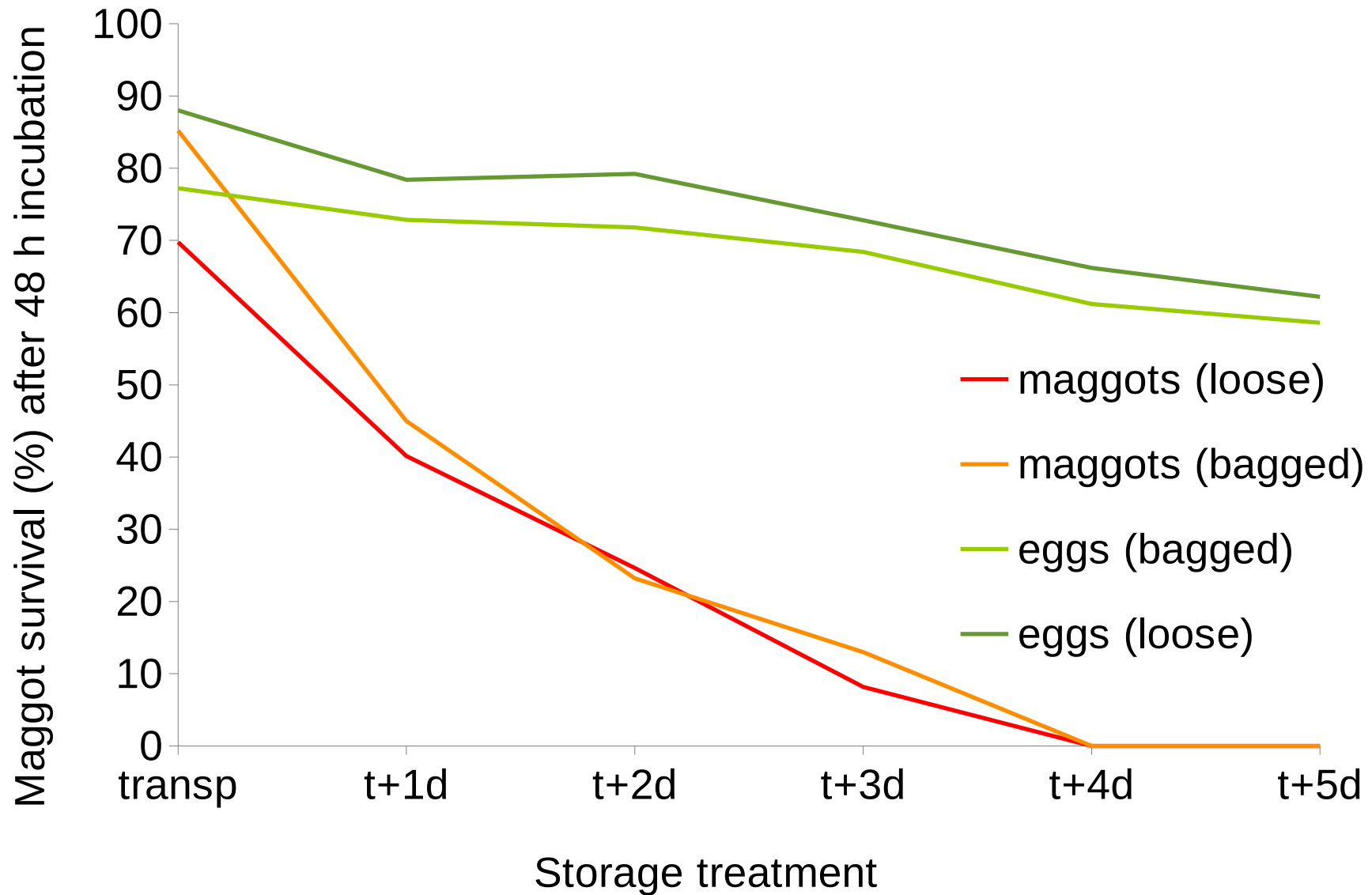
# Results – larval growth after 48 h



# Results – larval growth after 48 h



# Results – survival after storage at 7-8 °C



# Eggs vs. larvae of *L. sericata* in wound treatment

## Pros:

- ✓ Faster preparation (24 h)
- ✓ Easier handling
- ✓ Longer shelf life

## Cons

- Need for rapid sterility tests
- Sensitive to transport temperature
- Sensitive to wound conditions (moisture...)
- Egg chorions in wounds?



# Conclusions

- *L. sericata* eggs are much more easier to prepare and use compared to maggots
- a number of problems need to be solved before introduction into clinical practise

# Thank you!

This research was funded by the Operational Program of Research and Development and cofinanced with the European Fund for Regional Development (EFRD), Grant No. ITMS 26240220030: **Research and development of new biotherapeutic methods and their application in the treatment of some illnesses.**



*„Podporujeme výskumné aktivity na Slovensku/Projekt je spolufinancovaný zo zdrojov EÚ“.*