LUMEA PLANTELOR MEDICINALE - DE LA MIT LA REALITATE

Institutul National de Cercetare – Dezvoltare pentru Stiinte Biologice Bucuresti / Centrul de Cercetari Biologice "Stejarul" Piatra Neamt

Plantele medicinale contin numeroase principii active .

***Principiu activ* = substanta care constituie esenta unui produs vegetal sau animal**

OBIECTIVE

- **Studiul unor specii medicinale provenite din culturi experimentale si/sau multimplicate *in vitro* in vederea evaluarii potentialului bioproductiv;**

- **Obtinerea fitocomplecsilor activi si analiza fitochimica a uleiurilor volatile pentru obtinerea unor fitopreparete cu utilizari terapeutice diverse;**

- **Selectia unor chemovarietati / chemotipuri bogate in principii active prin tehnici de cultura experimentala si culturi de tesuturi.**

MATERIAL SI METODE

Analiza fitochimica se realizeaza pe material vegetal conform cu fiecare specie luata in studiu la nivel de *Herba* sau *Folium* prin metode ca:

- **Cromatografie pe strat subtire (CSS) pentru compusii polifenolici, flavonoidici, iridoidici, triterpenici si sterolici;**

- **Cromatografie de lichide de inalta performanta (HPLC) pentru compusii polifenolici;**

- **Gaz cromatografie cuplata cu spectrometrie de masa (GC-MS).**

Ajuga reptans L. - vinerita

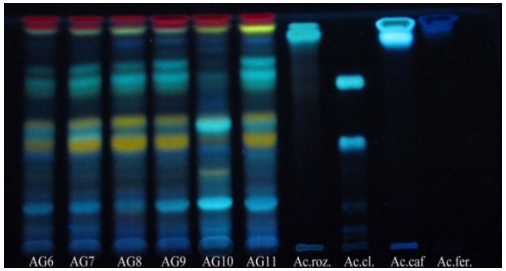
Ajuga genevensis L. - suliman

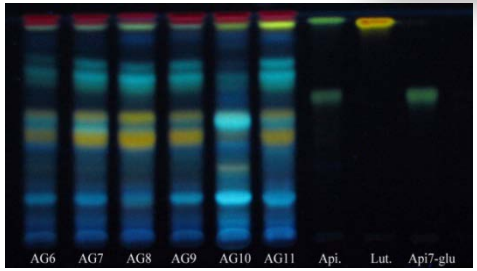


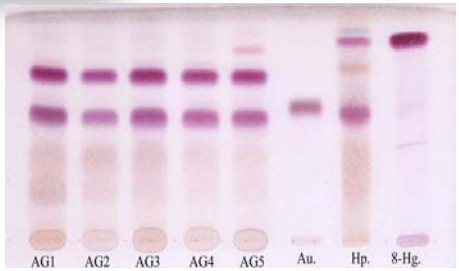


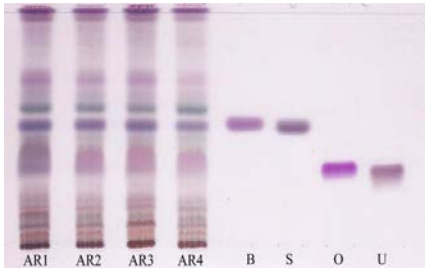


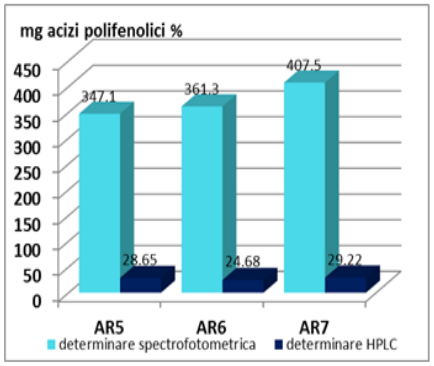


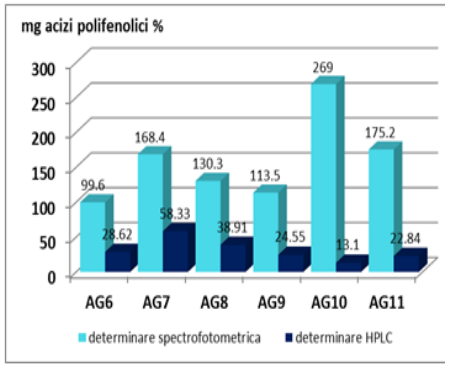


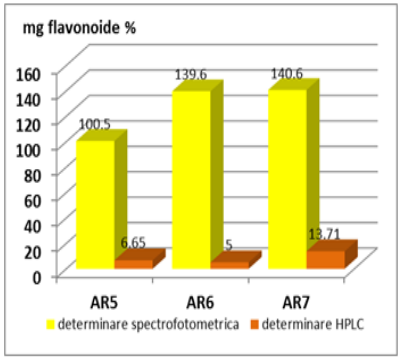


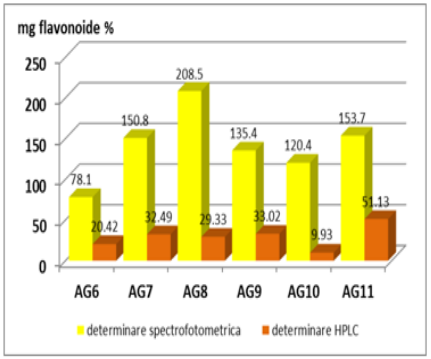






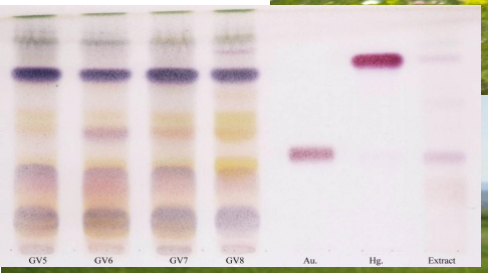


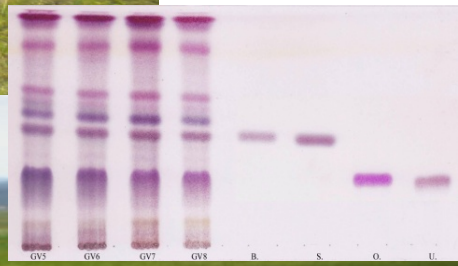


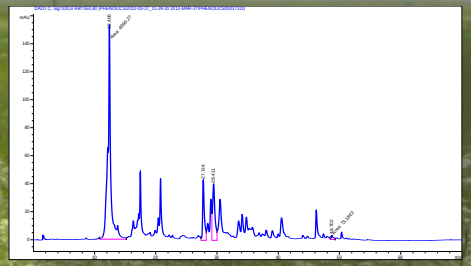


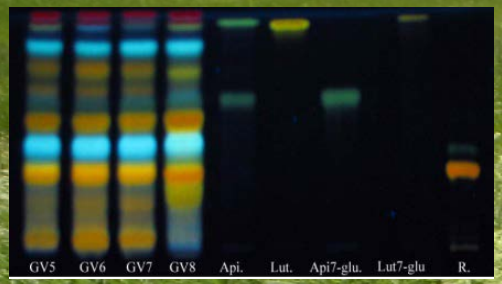
Galium verum L. – sanziene galbene

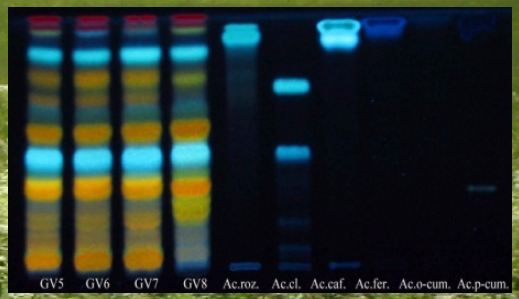
Galium album Mill. – sanziene albe

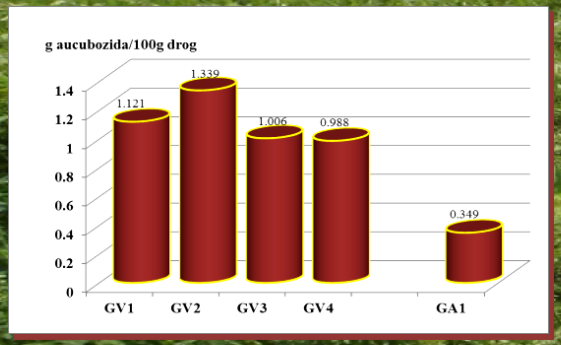


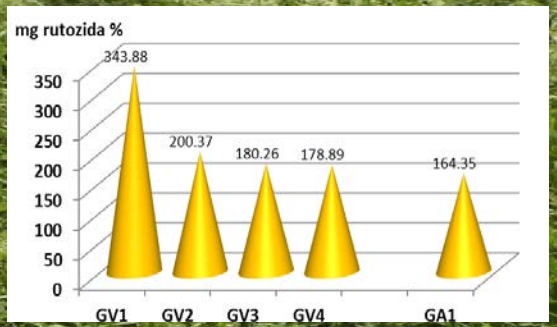


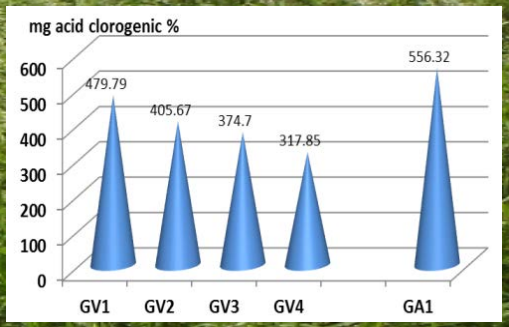




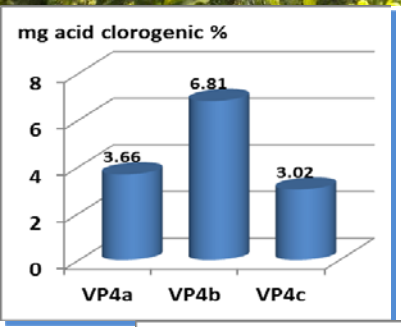




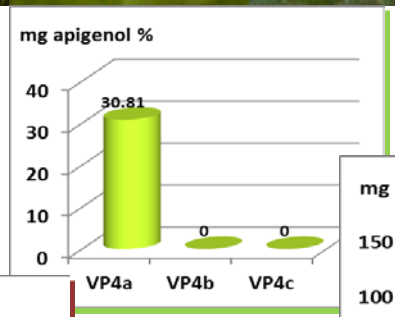


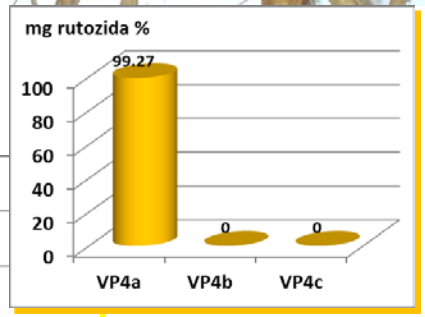


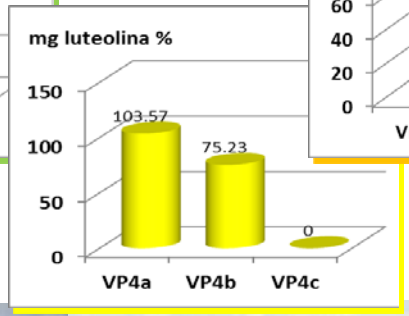
Betonica officinalis L. - vindecea

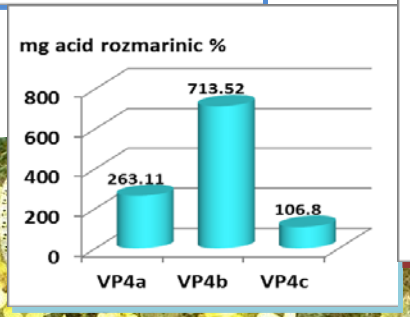


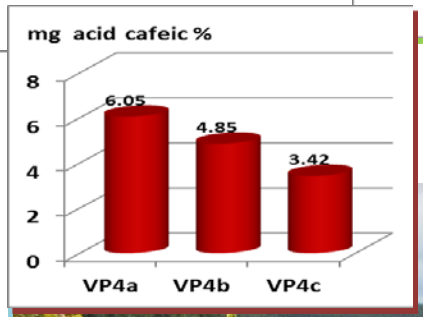
Verbascum phlomoides - lumanarica

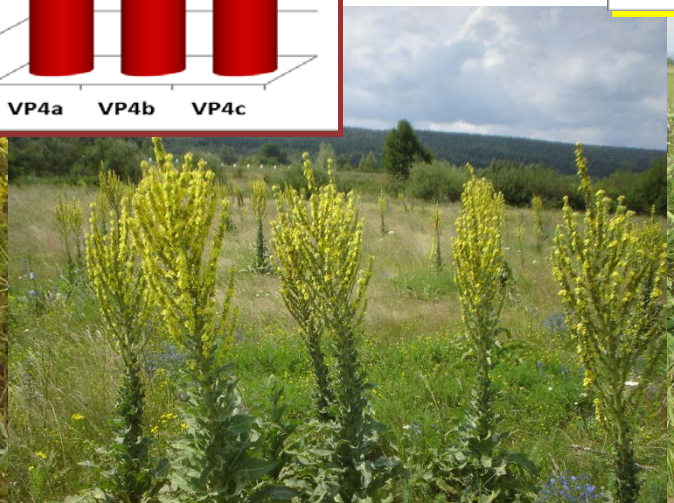








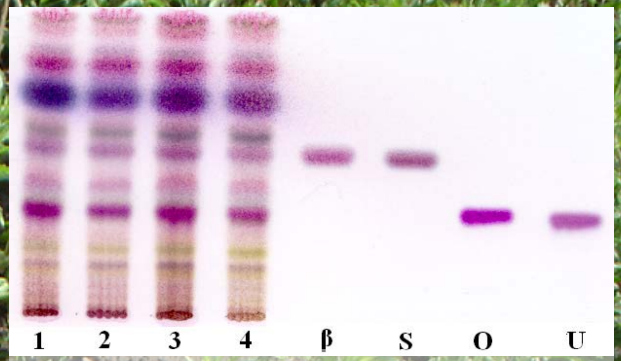




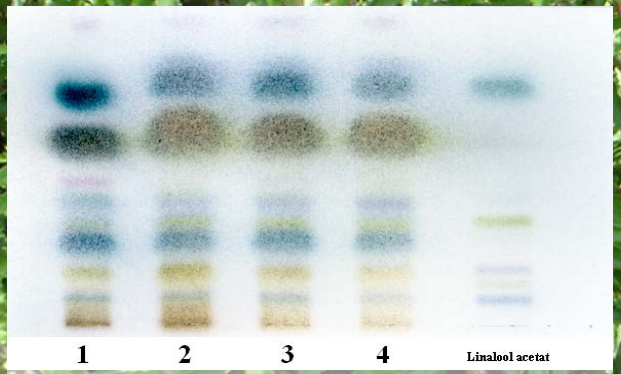
Dracocephalum moldavica L. – mataciune

Experimente

Nr. crt.	Cod proba	Specia	Populatia	Descriere
1	SEPT_2009_1	*D.m.*	Lot 1 – fl. albe	proaspat
2	SEPT_2009_2	*D.m.*	Lot 1 – fl.albe	uscat
3	SEPT_2009_3	*D.m.*	Lot 2 – fl. albastre	proaspat
4	SEPT_2009_4	*D.m.*	Lot 2 – fl. albastre	uscat



CSS pentru triterpene la *Dracocephalum moldavica*



CSS pentru ulei volatil la *Dracocephalum moldavica*

TR (min.)	Component	Aria (%)			
		D.m. 1	D.m. 2	D.m. 3	D.m. 4
10.362	**cis-β-citral**	**21.19**	**24.68**	**22.86**	**24.15**
10.527	**trans-geraniol**	**11.71**	**6.47**	**9.69**	**6.85**
10.769	**trans-α-citral**	**25.70**	**30.46**	**29.50**	**29.93**
12.267	**acetat de nerol**	**25.47**	**25.72**	**28.16**	**26.68**

S-a constatat ca probele noastre contin cantitatile cele mai mari de: **trans-α-citral** (pana la 31%), **acetat de nerol** (pana la 28%), **cis-β-citral** (pana la 25%), **trans-geraniol** (pana la 12%).

Hyssopus officinalis L. – isop

Culturi *in-vitro*

Culturi conventionale

Analiza fitochimica (extracte vegetale)

- ❖Spectrofotometrie
- ❖ CSS
- ❖ HPLC
- ❖ GC-MS

Melissa officinalis L. – roinita

Multiplicare *in vitro*

Loturi experimentale

CCB *"Stejarul"* Piatra Neamt

SCDA Secuieni

SCDL Bacau

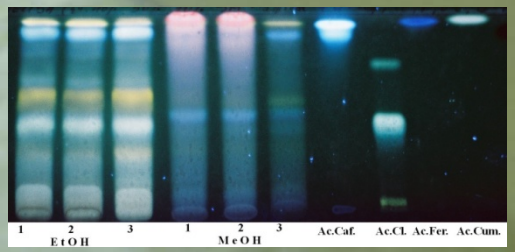
Analiza fitochimica (extracte vegetale)

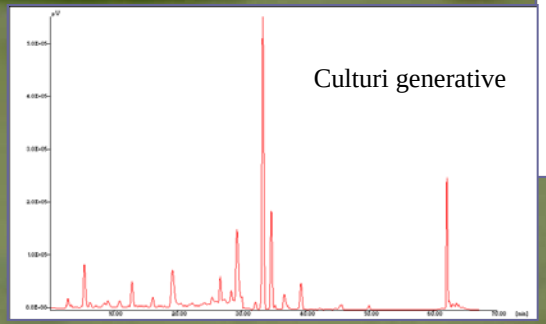
Izolare fitocomplex / flavonoide, polifenoli

Obtinere ulei volatil / hidrodistilare

Caracterizare ulei volatil / gaz cromatografie

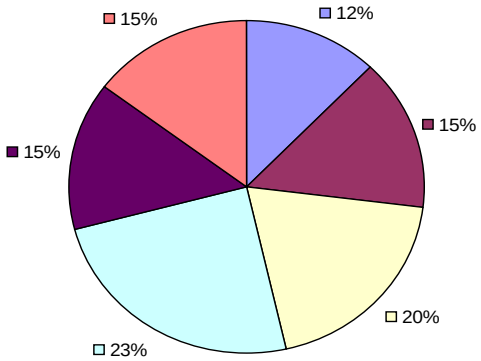
CSS pentru flavonoide si polifenoli la extracte de *Melissa officinalis*





Nepeta cataria L. – catusnica

Multiplicare *in vitro*



Nepeta cataria (V1) Proaspat

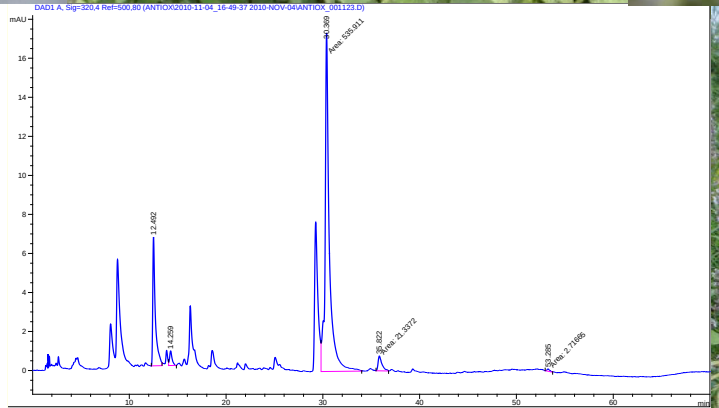
Nepeta cataria (V1) Uscat

Nepeta cataria (V2) Proaspat

Nepeta cataria (V2) Uscat

Nepeta cataria (V3) Proaspat

Nepeta cataria (V3) Uscat



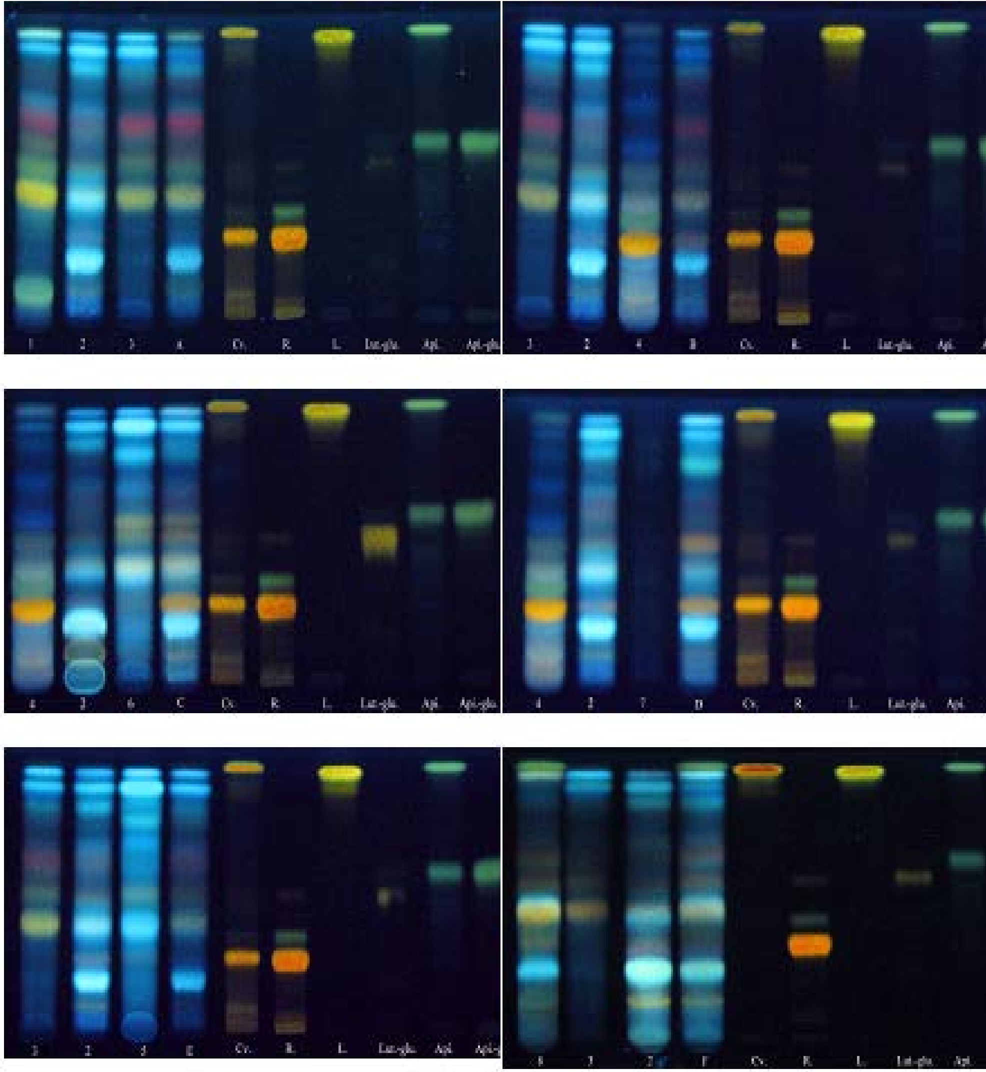


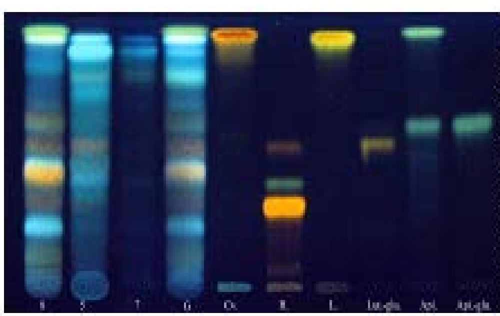












Legenda:

Probe: **1**– *Majorana hortensis*; **2**– *Nepeta cataria*; **3**– *Dracocephalum moldavica*; **4**– *Polygala vulgaris*; **5**– *Melissa officinalis*; **6**– *Satureja hortensis*; **7**– *Ocimum basilicum*; **8**– *Monarda fistulosa*

A– *Majorana hortensis* + *Nepeta cataria* + *Dracocephalum moldavica*

B– *Dracocephalum moldavica* + *Nepeta cataria* + *Polygala vulgaris*;

C– *Polygala vulgaris* + *Nepeta cataria* + *Satureja hortensis*;

D– *Polygala vulgaris* + *Nepeta cataria* + *Ocimum basilicum*;

E– *Dracocephalum moldavica* + *Nepeta cataria* + *Melissa officinalis*;

F– *Monarda fistulosa* + *Dracocephalum moldavica* + *Nepeta cataria*;

G– *Monarda fistulosa* + *Melissa officinalis* + *Ocimum basilicum*.

Etaloane: **Cv**– cynarozid; **R**– rutozida; **L**– luteolina; **Lut-glu**– luteolin 7-O glucozida; **A**– apigenol; **Api-glu**– apigenol-7-O-glucozida


Salutari de la Piatra Neamt!