

# Neurochemicals

## Newsletter

# Newsletter 9/2008

### New Products for Neurosciences Research

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- BG0469 **Temozolomide** - Antitumour and antiangiogenic agent
- BG0470 **Thiostrepton** - Aminoglycoside antibiotic agent
- BG0471 **Levetiracetam** - Anticonvulsant, binds vesicle protein 2A (SV2A)
- BG0472 **Metoprolol tartrate** - Selective  $\beta_1$ -adrenoreceptor antagonist

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- BG0473 **Fluvastatin sodium** - Competitive HMG-CoA reductase inhibitor
- BG0474 **Lacidipine** -  $\text{Ca}^{2+}$  channel (L-type) blocker
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- BN0718 **GLP-1 agonist** - Glucagon GLP-1 receptor agonist

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- BN0719 **Honokiol** - Antitumour and anxiolytic agent
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- BN0722 **Chaetocin** - Specific methyltransferase SU(VAR)3-9 b inhibitor
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- BP0370 **Cytochrome P450 CYP4A (431-445) (rat)** - Residues 431-445 of rat cytochrome P450 CYP4A
- BP0371 **Bcl 9-2** - Essential nuclear co-activator of  $\beta$ -catenin signaling
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- BP0374 **Alarin (human)** - Galanin-like peptide (GALP) splice variant
- BP0375 **Lys-[Des-Arg<sup>9</sup>]-Bradykinin** - Bradykinin B<sub>1</sub> receptor agonist
- BS0240 **3-Hydroxyanthranilic acid** - NF- $\kappa$ B inhibitor
- BS0241 **Caffeic acid phenethyl ester** - NF- $\kappa$ B inhibitor

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- BS0242 **Harpagoside** - Anti-inflammatory and anti-diabetic agent
- BS0244 **Daidzein** - Phytoestrogen, ER agonist
- BS0245 **Luteolin** - Anti-inflammatory flavonoid

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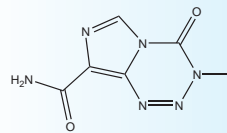
## Temozolomide

Cat.No.	Size	Price €
BG0469	10 mg	45,00

Antitumour and antiangiogenic agent. It is a DNA methylating and drug resistance-modifying agent, that induces G2/M arrest and apoptosis.

### Reference

1. Hirose et al. (2001) *Cancer Res* 61:1957;
2. Kurzen et al. (2002) *Anti-Cancer Drugs* 14:515;
3. Tentori et al. (2002) *Blood* 99:2241



3-Methyl-4-oxo-8-imidazo[5,1-d][1,2,3,5]tetrazinecarboxamide; Temodal

M.W. 194.15  $C_6H_6N_6O_2$

[85622-93-1] Store at +4° C

Soluble to 2 mg/ml in water or to 25 mg/ml in DMSO

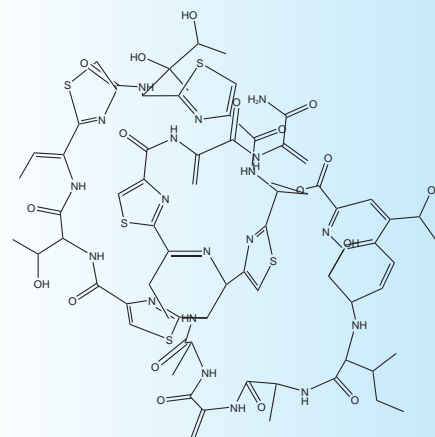
## Thiostrepton

Cat.No.	Size	Price €
BG0470	500 mg	60,00

Peptide antibiotic that inhibits protein synthesis by preventing binding of GTP to 50S ribosomal subunit and binding/dissociation of elongation factor G (EF-G) from the ribosome. An inducer of tipA, a gene that controls the bacterial transcription regulators, TipAL and TipAS, members of the MerR proteins that are central regulators in multidrug resistance.

### Reference

1. Garcia-Marcos et al. (2007) *Nucleic Acids Res* 35:7109;
2. Jonker et al. (2007) *Nucleic Acids Res* 35:441;
3. Gonzalez et al. (2007) *RNA* 13:2091



Thiostrepton from *Streptomyces laurentii*

M.W. 1664.89  $C_{72}H_{85}N_{19}O_{18}S_5$

[1393-48-2] Store at -20° C

Soluble to 10 mg/ml in DMSO

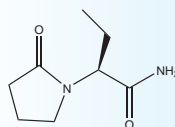
## Levetiracetam

Cat.No.	Size	Price €
BG0471	50 mg	85,00

Anticonvulsant agent. Binds synaptic vesicle protein 2A (SV2A) and inhibits Na<sup>+</sup> dependent Cl<sup>-</sup>/HCO<sub>3</sub><sup>-</sup> exchange.

### Reference

1. Lynch et al. (2004) *Proct Natl Acad Sci USA* 101:9861;
2. De Smedt et al. (2007) *CNS Drug Rev* 13:43;
3. De Smedt et al. (2007) *CNS Drug Rev* 13:57;
4. Ueda et al. (2007) *Brain Res* 1151:55



(2S)-(2-Oxopyrrolidin-1-yl)butyramide; UCB L-059; Keppra

M.W. 170.21  $C_8H_{14}N_2O_2$

[102767-28-2] Store at RT

Soluble to 100 mM in DMSO or to 100 mM in water

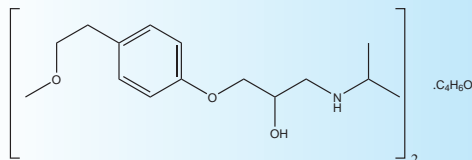
## Metoprolol tartrate

Cat.No.	Size	Price €
BG0472	500 mg	35,00

A selective  $\beta_1$ -adrenoreceptor antagonist ( $K_i$  value are 47 nM at  $\beta_1$ -adrenoreceptors and 1900 nM at  $\beta_2$ -adrenoreceptors).

### Reference

1. Engel et al. (1981) *Naunyn-Schmiedeberg's Arch Pharmacol* 317:277;
2. Olbrich et al. (1999) *J Cardiovasc Pharmacol* 33:193;
3. Brynne et al. (1998) *J Pharmacol Exp Ther* 286:1152



(±) 1-(Isopropylamino)-3-[p-(β-methoxyethyl)phenoxy]-2-propanol tartrate (2:1) salt; Lopressor; Beloc

M.W. 684.81  $(C_{15}H_{25}NO)_2 \cdot C_4H_6O_6$

[56392-17-7] Store at RT

Soluble to 100 mM in water or to 100 mM in ethanol

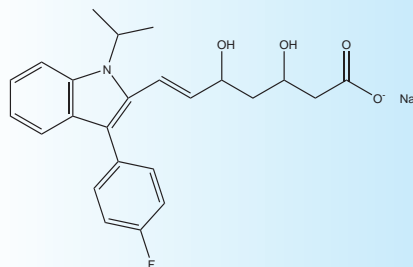
## Fluvastatin sodium

Cat.No.	Size	Price €
BG0473	50 mg	70,00

Competitive HMG-CoA reductase inhibitor ( $K_i = 0.3$  nM). A member of the drug class of statins, used to treat hypercholesterolemia and to prevent cardiovascular disease.

### Reference

1. Corsini et al. (1995) *Pharmacol Res* 31:9;
2. Istvan and Deisenhofer (2001) *Science* 292:1160;
3. Serruyset et al. (2002) *JAMA* 287:3215;
4. Tobert (2003) *Nature Reviews Drug Discovery* 2:517



7-[3-(4-Fluorophenyl)-1-(1-methylethyl)-1H-indol-2-yl]-3,5-dihydroxy-6-heptenoic acid, sodium; Lescol; Cranoc

M.W. 433.45  $C_{24}H_{25}FNO_4Na$   
[93957-55-2] Store at RT  
Soluble to 0.5 mg/ml in ethanol or to 10 mg/ml in DMSO

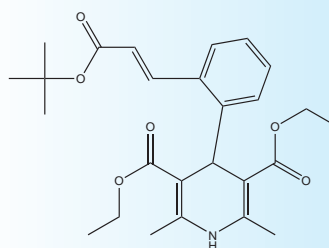
## Lacidipine

Cat.No.	Size	Price €
BG0474	10 mg	120,00

A slow-onset, long-acting  $Ca^{2+}$  channel (L-type) blocker.

### Reference

1. Lindholm et al. (1996) *Blood Press* 5:241;
2. McCormack and Wagstaff (2003) *Drugs* 63:2327



Diethyl 2,6-dimethyl-4-[2-[(E)-3-[(2-methylpropan-2-yl)oxy]-3-oxoprop-1-enyl]phenyl]-1,4-dihydropyridine-3,5-dicarboxylate; Motens

M.W. 455.54  $C_{26}H_{33}NO_6$   
[103890-78-4] Store at RT  
Soluble in ethanol or DMSO

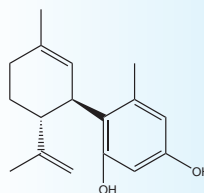
## O-1602

Cat.No.	Size	Price €
BN0716	10 mg	160,00

Atypical cannabinoid and potent cannabinoid (GPR55) receptor agonist ( $EC_{50}$  values are 13 nM, > 30  $\mu$ M and > 30  $\mu$ M for GPR55,  $CB_1$  and  $CB_2$  receptors respectively).

### Reference

1. Ryberg et al. (2007) *Br J Pharmacol* 152:1092;
2. Johns et al. (2007) *Br J Pharmacol* 152:825;
3. McHugh et al. (2008) *Mol Pharmacol* 73:441



5-Methyl-4-[(1R,6R)-3-methyl-6-(1-methylethenyl)-2-cyclohexen-1-yl]-1,3-benzenediol

M.W. 258.36  $C_{17}H_{22}O_2$   
[317321-41-8] Store at -20° C (protect from light)  
Soluble in methyl acetate

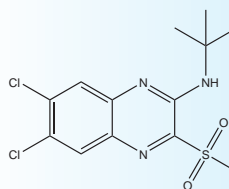
## GLP-1 agonist

Cat.No.	Size	Price €
BN0718	5 mg	150,00

Non-peptide GLP-1 receptor agonist and an allosteric modulator of GLP-1 binding. It induces GLP-1-mediated cAMP production in BHK plasma membrane preparations ( $EC_{50} = 101$  nM) and potentiate glucose-dependent insulin release in pancreatic islets derived from wild-type, but not GLP-1 receptor knock-out mice. Unlike GLP-1, its biological activity is not inhibited by orthosteric antagonists such as Exendin.

### Reference

1. Knudsen et al. (2007) *Proc Natl Acad Sci USA* 104:937



6,7-Dichloro-2-methylsulfonyl-3-N-tert-butylaminoquinoline

M.W. 348.25  $C_{13}H_{15}Cl_2N_3O_2S$   
Store at +4° C (protect from light)  
Soluble in DMSO or ethanol

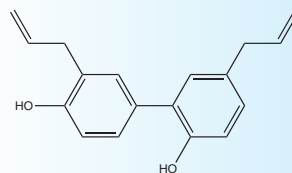
## Honokiol

Cat.No.	Size	Price €
BN0719	10 mg	78,00

Biphenolic molecule isolated from *Magnolia grandifloris* with anti-tumour, anxiolytic, antithrombotic, antidepressant, antiemetic and antibacterial activity. Liposomal Honokiol seems to be a promising agent for treatment of cisplatin-resistant human ovarian cancer. Also inhibits growth of PC-3 xenografts *in vivo* in association with apoptosis induction.

### Reference

1. Hahm et al. (2008) *Clin Cancer Res* 14:1248;
2. Luo et al. (2008) *J Cancer Res Clin Oncol* 2008 Mar 19; [Epub ahead of print]



5,3'-Diallyl-2,4'-dihydroxybiphenyl

M.W. 266.33  $C_{18}H_{18}O_2$   
[35354-74-6] Store at +4 ° C  
Soluble to 100 mM in DMSO

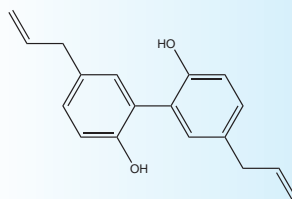
## Magnolol

Cat.No.	Size	Price €
BN0720	10 mg	78,00

Biphenolic molecule isolated from *Magnolia grandifloris* with antifungal, antibacterial and antioxidant effects. Displays also anti-inflammatory activity by interfering with NF-κB signaling. See also the isomer Honokiol (Cat. No. BN0719).

### Reference

1. Lee et al. (2005) *Planta Med* 71:338;
2. Lin et al. (2007) *Life Sci* 81:1071;
3. Li et al. (2007) *Arch Pharm Res* 30:850;
4. Amblard et al. (2007) *Bioorg Med Chem Lett* 17:4428



5,5'-Diallyl-2,2'-dihydroxybiphenyl

M.W. 266.33  $C_{18}H_{18}O_2$   
[528-43-8] Store at +4 ° C  
Soluble to 100 mM in DMSO

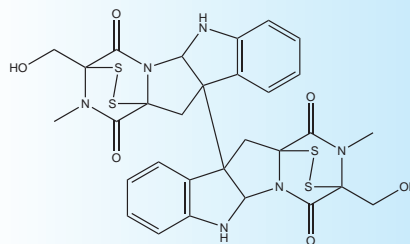
## Chaetocin

Cat.No.	Size	Price €
BN0722	1 mg	230,00

A fungal metabolite from *Chaetomium minutum* with antimicrobial and cytostatic activity. It has been shown recently as the first inhibitor of the lysine-specific histone methyltransferase. It is specific for the methyltransferase SU(VAR)3-9 both *in vitro* (IC<sub>50</sub> = 0.6 - 0.8 μM) and *in vivo* and may therefore be used to study heterochromatin-mediated gene repression.

### Reference

1. Weber et al. (1972) *Acta Cryst* B28:2945;
2. Greiner et al. (2005) *Nat Chem Biol* 1:143



Chaetocin

M.W. 696.84  $C_{30}H_{28}N_6O_5S_4$   
[28097-03-2] Store at +4 ° C  
Soluble to 1 mg/ml in DMSO

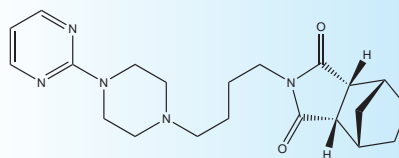
## Tandospirone

Cat.No.	Size	Price €
BN0727	10 mg	120,00

Anxiolytic agent. Partial agonist at 5-HT<sub>1A</sub> receptors, displaying a K<sub>i</sub> value of 7.06 nM.

### Reference

1. Seymour et al. (1990) *Prog Clin Biol Res* 361:453;
2. Fujiwara et al. (1993) *Life Sci* 52:949;
3. Utsu et al. (2007) *J Pharmacol Sci* 105:112



3a,4,7,7a-Hexahydro-2-(4-(4-(2-pyrimidinyl)-1-piperazinyl)butyl)-4,7-methano-1H-isoindole-1,3(2H)-dione; SM-3997

M.W. 383.49  $C_{21}H_{29}N_5O_2$   
[87760-53-0] Store at RT  
Soluble to 50 mM in DMSO or ethanol

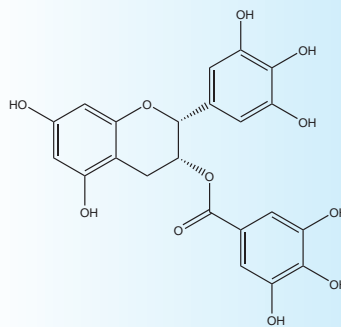
## (-)-Epigallocatechin gallate

Cat.No.	Size	Price €
BN0728	10 mg	55,00

Recently it has been shown, that it inhibits the fibrillogenesis of both - synuclein and amyloid - by directly binding to the natively unfolded polypeptides and preventing their conversion into toxic, on-pathway aggregation intermediates. Also an antioxidant that helps protect the skin from UV radiation-induced damage and tumour formation. Shows inhibitory effects on the life cycle of HIV-1. The most abundant catechin in tea.

### Reference

1. Yamaguchi et al. (2002) *Antiviral Res* 2002 53:19;
2. Katiyar et al. (2007) *J Nutr Biochem* 18:287;
3. Ehrnhoefer et al. (2008) *Nat Struct Mol Biol* 15:558



(-)-cis-2-(3,4,5-Trihydroxyphenyl)-3,4-dihydro-1(2H)-benzopyran-3,5,7-triol 3-gallate; EGCG

M.W. 458.37  $C_{22}H_{18}O_{11}$   
[989-51-5] Store at -20° C

Soluble to 20 mg/ml in DMSO or to 20 mg/ml in ethanol

## Substance P (1-6) amide

Cat.No.	Size	Price €
BP0367	1 mg	75,00

1 to 6 amino acid fragment of substance P (SP), one of the products of SP hydrolysis by kidney endopeptidase. SP is a neuropeptide that functions as a neurotransmitter, neuromodulator and inflammatory mediator. It has been associated in the regulation of mood disorders, anxiety, stress, reinforcement, neurogenesis, respiratory rhythm, neurotoxicity, nausea, emesis and pain. It also has effects as a potent vasodilator caused by the release of nitric oxide from the endothelium.

H-Arg-Pro-Lys-Pro-Gln-Gln-NH<sub>2</sub>

M.W. 751.88  $C_{32}H_{57}N_{13}O_8$   
Desiccate at -20° C  
Soluble in water

### Reference

1. Matsas et al. (1983) *Proc Natl Acad Sci USA* 80:3111;
2. Higa et al. (1988) *Anal Biochem* 173:463;
3. Keire and Kobayashi (1998) *Prot Sci* 7:2438

## Substance P (1-7) amide

Cat.No.	Size	Price €
BP0368	1 mg	75,00

Bioactive N-terminal fragment 1 to 7 amino acid of substance P (SP), that is generated by SP endopeptidase. SP is a neuropeptide that functions as a neurotransmitter, neuromodulator and inflammatory mediator. It has been associated in the regulation of mood disorders, anxiety, stress, reinforcement, neurogenesis, respiratory rhythm, neurotoxicity, nausea, emesis and pain. It also has effects as a potent vasodilator caused by the release of nitric oxide from the endothelium.

H-Arg-Pro-Lys-Pro-Gln-Gln-Phe-NH<sub>2</sub>

M.W. 899.05  $C_{41}H_{66}N_{14}O_9$   
Desiccate at -20° C  
Soluble in water

### Reference

1. Matsas et al. (1983) *Proc Natl Acad Sci USA* 80:3111;
2. Higa et al. (1988) *Anal Biochem* 173:463;
3. Keire and Kobayashi (1998) *Prot Sci* 7:2438

## Cytochrome P450 CYP3A4 (253-273) (human)

Cat.No.	Size	Price €
BP0369	1 mg	180,00

This 21-amino acid peptide corresponds to residues 253-273 of human cytochrome P450 CYP3A4. It is used as a biomarker of outcome in osteosarcoma.

### Reference

1. Danielson et al. (1997) *Proc Natl Acad Sci USA* 94:10797;
2. Wang and Lu (1997) *Drug Metab Dispos* 25:762;
3. Dhaini et al. (2003) *J Clin Oncol* 21:2481

H-Val-Lys-Arg-Met-Lys-Glu-Ser-Arg-Leu-Glu-Asp-Thr-Gln-Lys-His-Arg-Val-Asp-Phe-Leu-Gln-OH

M.W. 2644.02  $C_{113}H_{191}N_{37}O_{34}S$   
Desiccate at -20° C  
Soluble in water

## Cytochrome P450 CYP4A (431-445) (rat)

Cat.No.	Size	Price €
BP0370	1 mg	90,00

This 15-amino acid peptide corresponds to residues 431-445 of rat cytochrome P450 CYP4A.

### Reference

1. McCarty et al. (2005) *Kidney Int* 67:152;
2. Williams et al. (2007) *Am J Physiol Renal Physiol* 293:F501

H-Asp-Pro-Ser-Arg-Phe-Ala-Pro-Asp-Ser-  
Pro-Arg-His-Ser-His-Ser-OH

M.W. 1692.75  $C_{71}H_{105}N_{25}O_{24}$   
Desiccate at -20° C  
Soluble in water

## Bcl 9-2

Cat.No.	Size	Price €
BP0371	500 µg	240,00

Essential nuclear co-activator of  $\beta$ -catenin signaling and a homologue of the human proto-oncogene product Bcl 9. It appears to contribute to oncogenicity by two mechanisms: interfering with cadherins, which act as tumour suppressor genes, and by an increased signaling of family members of the Wnt pathway.

### Reference

1. Brembeck et al. (2004) *Genes Dev* 18:2225;
2. Willert and Jones (2006) *Genes Dev* 20:1394

H-Gly-Ser-Glu-Gly-Leu-Ser-Lys-Glu-Gln-Leu-Glu-  
His-Arg-Glu-Ser-Leu-Gln-Thr-Leu-Arg-Asp-Ile-  
Glu-Arg-Leu-Leu-Leu-Arg-Ser-Gly-Glu-Thr-Glu-Pro-  
Phe-Leu-Lys-Gly-Pro-Pro-Gly-Gly-Ala-Gly-NH<sub>2</sub>

M.W. 4944.48  $C_{212}H_{353}N_{67}O_{69}$   
Desiccate at -20° C  
Soluble in water

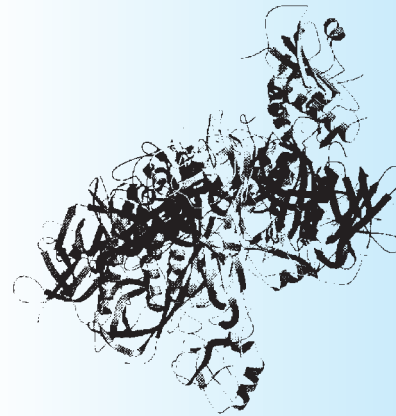
## Pertussis toxin

Cat.No.	Size	Price €
BP0372	50 µg	290,00

G<sub>i/o</sub> protein inactivator. It catalyzes the ADP-ribosylation of the alpha subunits of the heterotrimeric guanine nucleotide regulatory proteins G<sub>i</sub>, G<sub>o</sub>, and G<sub>t</sub>. This prevents the G protein heterotrimers from interacting with receptors, thus blocking their coupling and activation. The product is not activated. If activation is required, see Kaslow et al. (1987) for suggested conditions.

### Reference

1. Kaslow et al. (1987) *Biochemistry* 26:123;
2. Harada et al. (1992) *Eur J Pharmacol* 227:301;
3. Hausman and Burns (1992) *J Biol Chem* 267:13735;
4. Kaslow and Burns (1992) *FASEB J* 6:2684;
5. Zhu et al. (1992) *J Pharmacol Exp Therap* 263:1479;
6. Stein et al. (1994) *Structure* 2:45



(crystal structure; Stein et al. (1994) *Structure* 2:45)

Protein-based AB<sub>5</sub>-type exotoxin with five dissimilar subunits: S-1 (M.W. 28 kDa), S-2 (M.W. 23 kDa), S-3 (M.W. 22 kDa), S-4 (M.W. 11.7 kDa) and S-5 (M.W. 9.3 kDa), in a molar ratio of 1:1:1:2:1; Histamine-sensitizing factor; IAP; Islet Activating Protein; Pertussigen

[70323-44-3] Desiccate at -20° C  
Soluble in water

## Spexin (human, mouse, rat)

Cat.No.	Size	Price €
BP0373	500 µg	150,00

A newly discovered gastro-intestinal peptide hormone. It is expressed in the submucosal layer of the mouse esophagus and stomach, and a predicted peptide from the spexin precursor induced muscle contraction in a rat stomach explant assay.

### Reference

1. Mirabeau et al. (2007) *Genome Res* 17:320

H-Asn-Trp-Thr-Pro-Gln-Ala-Met-Leu-Tyr-  
Leu-Lys-Gly-Ala-Gln-NH<sub>2</sub>

M.W. 1619.88  $C_{76}H_{114}N_{20}O_{19}S$   
Desiccate at -20° C  
Soluble in water

## Alarin (human)

Cat.No.	Size	Price €
BP0374	500 µg	160,00

Galanin-like peptide (GALP) splice variant (the signal sequence of the GALP precursor peptide and the first 5 aa of the mature GALP are followed by 20 aa without homology to any other protein). It exhibited potent and dose-dependent vasoconstrictor and anti-edema activity in the cutaneous microvasculature. However, its physiological effects does not appear to be mediated via the known galanin receptors.

H-Ala-Pro-Ala-His-Arg-Ser-Ser-Thr-Phe-Pro-Lys-Trp-Val-Thr-Lys-Thr-Glu-Arg-Gly-Arg-Gln-Pro-Leu-Arg-Ser-OH

M.W. 2894.25  $C_{127}H_{205}N_{43}O_{35}$   
[909409-86-5] Desiccate at -20° C  
Soluble in water

### Reference

1. Santic et al. (2006) *J Mol Neurosci* 29:145;
2. Santic et al. (2007) *Proc Natl Acad Sci USA* 104:10217;
3. Lang et al. (2007) *Pharmacol Ther* 115:177

## Lys-[Des-Arg<sup>9</sup>]-Bradykinin

Cat.No.	Size	Price €
BP0375	5 mg	40,00

Bradykinin B<sub>1</sub> receptor agonist. In cells expressing rat, mouse and human B<sub>1</sub> receptor it elicited Ca<sup>2+</sup>-signals at an EC<sub>50</sub> in the order of 1 nM.

H-Lys-Arg-Pro-Pro-Gly-Phe-Ser-Pro-Phe-OH

[Des-Arg<sup>10</sup>]-Kallidin

M.W. 1032.20  $C_{50}H_{73}N_{13}O_{11}$   
[71800-36-7] Desiccate at -20° C  
Soluble to 1 mg/ml in water

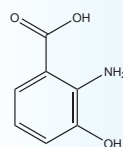
### Reference

1. Galizzi (1994) *Br J Pharmacol* 113:389;
2. Santiago et al. (1995) *Am J Physiol* 269:2057;
3. Schanstra et al. (1998) *J Clin Invest* 101:2080;
4. Zhang and Codd (1998) *Life Sci* 62:2303;
5. Zubakova et al. (2008) *Int Immunopharmacol* 8:276

## 3-Hydroxyanthranilic acid

Cat.No.	Size	Price €
BS0240	100 mg	65,00

A compound generated during tryptophan metabolism initiated by indoleamine 2,3-dioxygenase, is known to induce T cell death. It has been reported that it inhibits NF-κB activation upon T cell antigen receptor engagement by specifically targeting PDK1. Inhibition of NF-κB by HAA leads to dysfunction and cell death of activated Th2 cells, which in turn suppresses experimental asthma.



2-Amino-3-hydroxybenzoic acid; HAA

M.W. 153.14  $C_7H_7NO_3$   
[548-93-6] Store at -20° C  
Soluble in water

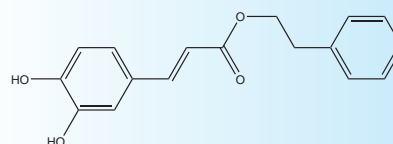
### Reference

1. Hayashi et al. (2007) *Proc Natl Acad Sci USA* 104:18619

## Caffeic acid phenethyl ester

Cat.No.	Size	Price €
BS0241	25 mg	55,00

A specific inhibitor of the nuclear transcription factor NF-κB. It is the active component of propolis, a honeybee hive product. Also displays antioxidant, antimutagenic, anticarcinogenic, anti-inflammatory and antiviral activity.



3-(3,4-Dihydroxyphenyl)-2-propenoic acid 2-phenylethyl ester; CAPE; Phenylethyl caffeate

M.W. 284.31  $C_{17}H_{16}O_4$   
[104594-70-9] Store at -20° C (protect from light)  
Soluble in DMSO or ethanol

### Reference

1. Sud'ina et al. (1993) *FEBS Lett* 329:21;
2. Fesen et al. (1994) *Biochem Pharmacol* 48:595;
3. Natarajan et al. (1996) *Proc Natl Acad Sci USA* 93:9090;
4. Fitzpatrick et al. (2001) *J Pharmacol Exp Ther* 299:915

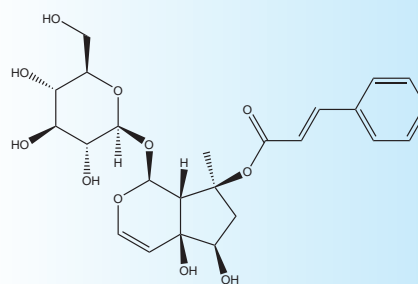
## Harpagoside

Cat.No.	Size	Price €
BS0242	5 mg	98,00

Suppresses LPS-induced iNOS and COX-2 expression through inhibition of NF- $\kappa$ B activation. Isolated from *Scrophularia ningpoensis* Hemsl. Anti-inflammatory and anti-diabetic compound.

### Reference

1. Chrubasik et al. (2000) *Phytomedicine* 6:469;
2. Ahmed et al. (2003) *Biol Pharm Bull* 26:462;
3. Gunther et al. (2006) *Phytochem Anal* 17:1;
4. Huang et al. (2006) *J Ethnopharmacol* 104:149;
5. Li et al. (2007) *Anal Bioanal Chem* 389:2259



[(1S,4aS,5R,7S,7aS)-4a,5-Dihydroxy-7-methyl-1-[(2S,3R,4S,5S,6R)-3,4,5-trihydroxy-6-(hydroxymethyl)oxan-2-yl]oxy-1,5,6,7a-tetrahydro-cyclopenta[c]pyran-7-yl] (E)-3-phenylprop-2-enoate

M.W. 494.49  $C_{24}H_{30}O_{11}$   
 [19210-12-9] Store at -20° C  
 Soluble in methanol

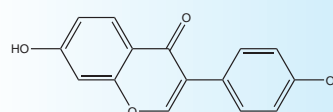
## Daidzein

Cat.No.	Size	Price €
BS0244	10 mg	35,00

Analogue of genistein (Cat. No. BS0082). It is an estrogen receptor (ER) agonist and it blocks G1 phase cell cycle progression. Phytoestrogen and isoflavonoid displaying multiple biological actions.

### Reference

1. Sathyamoorthy et al. (1994) *Cancer Res* 54:957;
2. Higashi and Ogawara (1994) *Biochim Biophys Acta* 1221:29;
3. de Lemos (2001) *Ann Pharmacother* 35:1118



7-Hydroxy-3-(4-hydroxyphenyl)-4H-1-benzopyran-4-one

M.W. 254.24  $C_{15}H_{10}O_4$   
 [486-66-8] Desiccate at -20° C  
 Soluble to 100 mM in DMSO

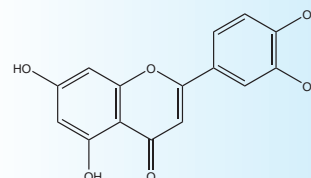
## Luteolin

Cat.No.	Size	Price €
BS0245	10 mg	40,00

A flavonoid found in celery and green pepper, that reduces production of proinflammatory mediators in LPS-stimulated macrophages, fibroblasts, and intestinal epithelial cells. It shows inhibition of 15-lipoxygenases ( $IC_{50}$  = 600 nM), matrix metalloproteinases and also inhibits the release of TNF $\alpha$  from neutrophils. Recently it has been shown, that it reduces IL-6 production in microglia by inhibiting JNK phosphorylation and activation of AP-1.

### Reference

1. Ueda et al. (2002) *Biol Pharm Bull* 25:1197;
2. Sadik et al. (2003) *Biochem Pharmacol* 65:773;
3. Sartor et al. (2002) *Biochem Pharmacol* 64:229;
4. Jang et al. (2008) *Proc Natl Acad Sci USA*, 10.1073/pnas.0802865105



2-(3,4-Dihydroxyphenyl)-5,7-dihydroxy-4H-1-benzopyran-4-one; Luteolol; Digitoflavone; Flacitran; 3',4',5,7-Tetrahydroxyflavone

M.W. 286.24  $C_{15}H_{10}O_6$   
 [491-70-3] Store at -20° C  
 Soluble to 5 mg/ml in ethanol or to 10 mg/ml in DMSO

[www.biotrend.ch](http://www.biotrend.ch)