March 30, 2016

STATEMENT ON A NONPROPRIETARY NAME ADOPTED BY THE USAN COUNCIL

USAN (DE-31)	EFLAPEGRASTIM
PRONUNCIATION	ef" la peg' ra stim
THERAPEUTIC CLAIM	Reducing neutropenia and the incidence of infection in patients with cancer

CHEMICAL NAMES

1. Poly(oxy-1,2-ethanediyl), α-hydro-ω-hydroxy-, 1-ether with immunoglobulin G4 [1-[1-(3-hydroxypropyl)proline]] (human Fc fragment), (3→3')-disulfide with immunoglobulin G4 (human Fc fragment), 1''-ether with granulocyte colony-stimulating factor [*N*-(3-hydroxypropyl),17-serine,65-serine] (human)

2. Human granulocyte colony-stimulating factor and human IgG4 Fc dimer, produced in *Escherichia coli*, linked together with polyethylene glycol derivative: $N^{\alpha.1}$,$N^{1.9'}$-[ω-(oxypropane-1,3-diyl)-α-(propane-1,3-diyl)poly(oxyethylene)] des-(1-L-alanine,37-39)-[18-L-serine(C>S),69-L-serine(P>S)]human granulocyte colony-stimulating factor (G-CSF, pluripoietin) (1-174)-peptide and des-(1-8)-human immunoglobulin G4 Fc fragment (IGHG4*01 H-CH2-CH3) (9'-229')-peptide dimer (11'-11")-disulfide

STRUCTURAL FORMULA

Human GCSF derivative sequence

TPLGPASSLP	QSFLLKSLEQ	VRKIQGDGAA	LQEKLCATYK	LCHPEELVLL	50
GHSLGIPWAP	LSSCSSQALQ	LAGCLSQLHS	GLFLYQGLLQ	ALEGISPELG	100
PTLDTLQLDV	ADFATTIWQQ	MEELGMAPAL	QPTQGAMPAF	ASAFQRRAGG	150
VLVASHLQSF	LEVSYRVLRH	LAQP			174

hIGHG4 Fc monomer

PS	CPAPEFLGGP	SVFLFPPKPK	DTLMISRTPE	VTCVVVDVSQ	50'
EDPEVQFNWY	VDGVEVHNAK	TKPREEQFNS	TYRVVSVLTV	LHQDWLNGKE	100'
YKCKVSNKGL	PSSIEKTISK	AKGQPREPQV	YTLPPSQEEM	TKNQVSLTCL	150'
VKGFYPSDIA	VEWESNGQPE	NNYKTTPPVL	DSDGSFFLYS	RLTVDKSRWQ	200'
EGNVFSCSVM	HEALHNHYTQ	KSLSLSLGK			229'

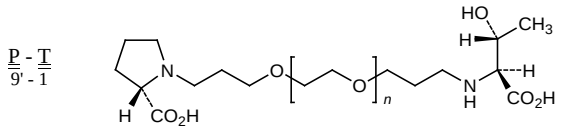
hIGHG4 Fc monomer

PS	CPAPEFLGGP	SVFLFPPKPK	DTLMISRTPE	VTCVVVDVSQ	50"
EDPEVQFNWY	VDGVEVHNAK	TKPREEQFNS	TYRVVSVLTV	LHQDWLNGKE	100"
YKCKVSNKGL	PSSIEKTISK	AKGQPREPQV	YTLPPSQEEM	TKNQVSLTCL	150"
VKGFYPSDIA	VEWESNGQPE	NNYKTTPPVL	DSDGSFFLYS	RLTVDKSRWQ	200"
EGNVFSCSVM	HEALHNHYTQ	KSLSLSLGK			229"

Disulfide bridges

11'-11"	36-42	43'-103'	43"-103"	64-74	149'-207'	149"-207"

Modified residues



MOLECULAR FORMULA	$C_{3070}H_{4764}N_{806}O_{927}S_{23}$. $[C_2H_4O]_n$
MOLECULAR WEIGHT	72 kDa (n = 80)
TRADEMARK	None as yet
SPONSOR	Spectrum Pharmaceuticals, Inc.
CODE DESIGNATIONS	SPI-2012, HM10460A, HNK460
CAS REGISTRY NUMBER	1384099-30-2
UNII	UT99UG9QJX
WHO NUMBER	9918

gbk