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This updated directory reflects assignment changes based on 2005–2010 Expert Committees. The general USP telephone number, (301) 881-0666, may still be used for general inquiries or when a particular Expert Committee is not identified. The fax number is (301) 816-8373.

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CALL FOR CANDIDATES FOR 2010–2015 COUNCIL OF EXPERTS, ITS EXPERT COMMITTEES, AND ITS EXPERT PANELS. APPLICATION DEADLINE FOR COMMITTEE CHAIRS: DECEMBER 18, 2009.

In accordance with the Bylaws of the USP Convention, USP is issuing a Call for Candidates for the 2010–2015 Council of Experts (COE). The 2010–2015 COE includes Expert Committees in the areas of Nomenclature, Small Molecules, Biologics and Biotechnology, Excipients, General Chapters, Reference Standards, Compounding, Food Ingredients, and Dietary Supplements. In the 2010–2015 cycle, USP is expanding the number of Expert Panels that report to Expert Committees.

The deadline for applications for the COE (Expert Committee Chairs) is **December 18, 2009**. The deadline for applications for Expert Committee members is **May 15, 2010**. Recruitment for Expert Panel members will begin in July 2010 and will be continuous.

These Expert Committees and Panels are aligned with the new USP Strategic Plan, which focuses on expanding and enhancing USP's core compendial and standards-setting activities. The ability to add Expert Panels according to USP's needs introduces flexibility and scalability into USP's activities. USP plans to continue to attract a global base of experts and therefore encourages any qualified individual to apply. Importantly, this approach also enables USP to closely align its documentary and Reference Standards activities for a more efficient standards-setting process.

Specific Expert Committees and Expert Panels for which USP is seeking candidates are listed at USP's nominations website (www.usp.org/goto/nominate).

For further information, please contact Nelufar Mohajeri, Director, Volunteer Affairs and Compendial Initiatives (nym@usp.org or nominate@usp.org).

USP POSTS COMMENTARY TO INTERIM REVISION ANNOUNCEMENTS ON THE USP WEBSITE.

In order to maintain transparency for revisions made to proposed Interim Revision Announcements that become official in the *Pharmacopeial Forum*, USP posts commentary for the proposed *Interim Revision Announcements* on the *Revisions and Commentary* web page on the date that the official standard is released in *Pharmacopeial Forum*. Note that commentary to *In-Process Revisions* is posted on the *Revisions and Commentary* web page under the final book or supplement where the official standard appears. *Commentary* is not part of the official text of the monograph and is not intended to be enforceable by regulatory authorities. Rather, it explains the basis of the Expert Committee's response to public comments. If there is a difference between the contents of the *Commentary* section and the official monograph, the text of the official monograph prevails. In case of a dispute or question of interpretation, the language of the official text, alone and independent of the *Commentary* section, shall prevail.

CUMULATIVE EDITIONS. *USP–NF* is available in print, CD, and online formats. For the CD and online formats, each new edition or *Supplement* integrates content from all previous editions to date.

PHARMACOPEIAL FORUM PUBLIC REVIEW and COMMENT PERIOD DEADLINES.

The USP welcomes and encourages interested parties to submit comments and data regarding potential, proposed, or adopted (official) standards. In accordance with the Rules and Procedures of the 2005–2010 Council of Experts, USP has implemented a 90-day comment period by providing a deadline for each issue of *PF* unless otherwise stated in the individual briefing. The listing of comment period deadlines and the targeted official publications appears below.

Pharmacopeial Forum	Comment Deadline	Targeted Official Publication	Release Date	Official Date
PF 35(2)	June 15, 2009	USP 33–NF 28 1st Supplement	February 2010	August 1, 2010
PF 35(3)	August 15, 2009			
PF 35(4)	October 15, 2009	USP 33–NF 28 2nd Supplement	June 2010	December 1, 2010
PF 35(5)	December 15, 2009			
PF 35(6)	February 15, 2010	USP 34–NF 29	November 2010	May 1, 2011
PF 36(1)	March 31, 2010			

All official revisions are published in the annual edition or *Supplements* to *USP–NF* (twice yearly). Between these publications, official revisions are published in *PF* in the *Interim Revision Announcement* section and incorporated in the upcoming *USP–NF* or *Supplement*. They may also be published as *Revision Bulletins* on www.usp.org in the “New Official Text” section. The official publication in which an *Interim Revision Announcement (IRA)* is incorpo-

rated will depend upon publication deadlines. The electronic version of *USP–NF* is updated as each *Supplement* becomes available and therefore contains all official text up to and including the contents of the latest *Supplement*. The table below outlines the publications and their release and official dates, and the *USP–NF* or *Supplement* that supersedes them.

Publication Schedules

Publication	Release Date	Official Date	Superseded by
<i>IRA [PF 35(2)]</i>	March 1, 2009	April 1, 2009	<i>2nd Supplement to USP 32–NF 27</i>
<i>IRA [PF 35(3)]</i>	May 1, 2009	June 1, 2009	<i>USP 33–NF 28</i>
<i>2nd Supplement to USP 32–NF 27</i>	June 1, 2009	December 1, 2009	<i>USP 33–NF 28</i>
<i>IRA [PF 35(4)]</i>	July 1, 2009	August 1, 2009	<i>1st Supplement to USP 33–NF 28</i>
<i>IRA [PF 35(5)]</i>	September 1, 2009	October 1, 2009	<i>1st Supplement to USP 33–NF 28</i>
<i>IRA [PF 35(6)]</i>	November 1, 2009	December 1, 2009	<i>2nd Supplement to USP 33–NF 28</i>
<i>USP 33–NF 28</i>	November 1, 2009	May 1, 2010	<i>1st Supplement to USP 33–NF 28</i>
<i>IRA [PF 36(1)]</i>	January 1, 2010	February 1, 2010	<i>2nd Supplement to USP 33–NF 28</i>
<i>1st Supplement to USP 33–NF 28</i>	February 1, 2010	August 1, 2010	<i>2nd Supplement to USP 33–NF 28</i>

PRIORITY NEW MONOGRAPH ITEMS. The following list contains monographs USP is seeking for drug substances and drug products that are, or will be, off patent within 5 years. Monographs are marked “Received” upon receipt of a monograph proposal. This list has been updated as of June 24, 2009.

Monograph sponsors should consult USP’s Guideline for Submitting Requests for Revision to the *USP–NF* at <http://www.usp.org/USPNF/submitMonograph/subGuide.html>.

For additional information, contact Randy Kiser, MS, MBA, rwk@usp.org.

Small Molecules (Drug Substances)—As of June 24, 2009

1. Acamprosate Calcium	2. Acrivastine	3. Adapalene
4. Aldesleukin	5. Alemtuzumab	6. Allopurinol Sodium
7. Alosetron Hydrochloride	8. Aminopromazine Fumarate	9. Aminopterin Sodium
10. Amlexanox	11. Amlodipine Maleate	12. Amrinone Lactate
13. Anagrelide Hydrochloride (Received)	14. Artemether	15. Auranofin
16. Azacitidine	17. Azelaic Acid (Received)	18. Azelastine Hydrochloride
19. Bemotrizinol	20. Bentoquatam	21. Benzphetamine Hydrochloride
22. Bepridil Hydrochloride	23. Besifloxacin	24. Bismuth Tribromophenate
25. Bivalirudin (Received)	26. Bromfenac Sodium	27. Butenafine Hydrochloride
28. Caffeine Citrate	29. Calcium Trisodium Pentetate	30. Calfactant
31. Camphorated Metacresol	32. Candesartan Cilexetil (Received)	33. Carbaspirin Calcium
34. Ceftibuten	35. Cerivastatin Sodium	36. Cevimeline Hydrochloride (Received)
37. Chlophedianol Hydrochloride	38. Chlorpheniramine Tannate	39. Cidofovir
40. Cisatracurium Besylate	41. Climbazole	42. Codeine Polistirex
43. Colfosceril	44. Copper Undecylenate	45. Cysteamine Bitartrate
46. Dalfopristin	47. Decitabine	48. Deserpidine
49. Desogestrel	50. Desonide (Received)	51. Diethanolamine Methoxycinnamate
52. Difenoxin Hydrochloride	53. Doconazol	54. Domiphen Bromide
55. Doripenem	56. Entacapone (Received)	57. Epoprostenol Sodium (Received)
58. Esmolol Hydrochloride (Received)	59. Estazolam	60. Estramustine Phosphate Sodium

INSTRUCTIONS TO AUTHORS

Contributions in the form of original research reports, evaluations of new and existing compendial methods, and other commentaries and articles relevant to drug standards or to *USP–NF* revision will be considered for publication in *Pharmacopeial Forum* under the section *Stimuli to the Revision Process*. Manuscripts are received with the explicit understanding that they have not been published previously in any language or medium and that they are not simultaneously under consideration by any other publication.

All manuscripts are subject to review by USP headquarters staff, Committee members, or qualified outside referees, and if accepted for publication they will be subject to editing by USP staff. Accepted manuscripts become the property of the USP Convention (USPC) and may not be subsequently published elsewhere without written permission from the USPC. Authors are also responsible for obtaining permission for reprinting any illustrations that have been published elsewhere.

Abstract—Include an abstract of not more than 250 words stating the purpose and the results or conclusions of the article.

Style and Usage—*Stimuli* articles generally follow the current *Chicago Manual of Style* except in scientific usage (numbers, abbreviations, etc.). For the latter, authors should use the current *AMA Manual of Style* or the current *ACS Style Guide*. Authors may usefully consult a current copy of *Pharmacopeial Forum*.

References—Consult the current *AMA Manual of Style*, which is generally consistent with the National Library of Medicine's *Recommended Formats for Bibliographic Citation*. A current copy of *Pharmacopeial Forum* will offer examples of reference formats.

Copyright—Copyright transfer documents will be sent to authors after manuscripts have been accepted for publication.

Contact Person—USP will designate a Scientific Liaison in the Documentary Standards Division as the corresponding author. This ensures that USP receives all comments generated by the *Stimuli* article. Authors should contact the Scientific Liaison if they would like to receive copies of comments generated by their *Stimuli* articles.

Submission Instructions—Manuscripts must be submitted both as an electronic file and as a printed copy of the electronic file. Submit the text in Microsoft® Word or another current word-processing application. The preferred format for graphics submitted electronically is tagged image file format (TIFF). Photocopies are not acceptable. Manuscripts submitted for publication should be addressed to:

Pharmacopeial Forum
Executive Secretariat, USP
12601 Twinbrook Pkwy.
Rockville, MD 20852

Pharmacopeial Standards for the Subdivision Characteristics of Scored Tablets

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ABSTRACT The practice of tablet splitting as a way to reduce prescription medication costs has become increasingly prevalent. The United States Pharmacopeial Convention (USPC) has no standards for the subdivision characteristics of scored tablets. Literature results show that many tablets on the US market exhibit unacceptable subdivision characteristics. The *European Pharmacopoeia (EP)* provides requirements for subdivision accuracy of scored tablets, if subdivision is indicated in order to comply with the product label. This *Stimuli* article provides a rationale for why standards should be included in *USP* to address the accuracy of subdivision, as well as to account for loss of mass upon subdivision. We propose that for accuracy of subdivision current *EP* standards be adopted, applicable only to any tablet that bears a score mark. For loss of mass, we propose an average of $\leq 3\%$ of the intact tablet mass. From data reported in the literature we estimate that as many as half of the scored tablets on the US market would be in compliance with these standards. Generally, we do not advocate such standards be tested on a batch-to-batch basis but rather that the testing should be conducted as part of the development process before marketing approval. We also discuss a third, related, quality attribute: ease of subdivision. Although future research and discussion in this area are warranted, we believe that not only should scored tablets break into accurate partial doses with minimal loss of mass, but also that the tablets should be breakable by a representative sample of the population, including the elderly.

INTRODUCTION

Tablets intended for oral administration are the most common pharmaceutical dosage form in the US, and many tablets bear score mark(s) (1). The presence of a score mark implies that the tablet can be subdivided into smaller doses. Patients split tablets for a variety of reasons, including to adjust the dose, to ease swallowing, and to save money. As healthcare costs rise, tablet splitting to save money has become more prevalent in the US. Because some manufacturers have established the same or similar prices for different strengths of tablets of the same medication, consumers can purchase double the strength needed and divide the tablets in half for twice the number of doses (2). This has led many healthcare plans to establish mandatory tablet splitting policies as a means to reduce costs, a practice that has drawn opposition from several organizations, including the American Society of Consultant Pharmacists, the American Medical Association, and the American Pharmacists Association. The opposition stems from concerns about the potential for unpredictable dosing, particularly for the elderly (3–5).

The most important advantage of score lines, however, is dose flexibility—the ability to adjust a dose up or down in response to medication effects or to comply with the labeled dosage and administration instructions (posology). Dose flexibility can be especially important for medications that typically are titrated to achieve a therapeutic goal or for those that have a narrow therapeutic index, such as warfarin or levothyroxine.

Therefore, scored tablets play an important role in providing dose flexibility, among other benefits. Many studies have shown that scored tablets can be difficult—or even impossible—to break and often display large variations in the mass of the subdivided parts (6–8). A research group of the Dutch National Institute for Public Health and the Environment (RIVM) conducted a comprehensive literature review of articles that investigated the subdivision performance of scored tablets and identified several studies that reported unacceptable subdivision characteristics (9). Problems included large variations in the mass of the subdivided parts when split by hand, tablet splitter, or other means (9). A later study published by the same research group investigated patients' experiences and perceptions with breaking scored tablets. This study reported that 39% of patients were in some way dissatisfied with the subdivision characteristics of their scored tablets and that poorly functioning score lines were perceived as a quality defect. The authors concluded that the subdivision performance of scored tablets cannot be interpreted as a purely technical quality attribute and that badly performing score lines may lead to reduced patient compliance with medication.

Based on available literature, this *Stimuli* article examines: a) the ease or lack thereof in splitting scored tablets, b) the accuracy of the splitting process, and c) the loss of mass of split scored tablets sold in the US. The *Stimuli* article then proposes *USP* standards for the subdivision of scored tablets.

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A Recombinant Factor C Procedure for the Detection of Gram-negative Bacterial Endotoxin

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ABSTRACT This *Stimuli* article addresses a modified photometric procedure for the detection of gram-negative bacterial endotoxin (lipopolysaccharide). This procedure is based on the activation of recombinant Factor C (rFC), the endotoxin-sensitive protease that initiates the traditional *Limulus* Amebocyte Lysate (LAL) cascade. The rFC procedure described in this *Stimuli* article is a single-step, quantitative endpoint procedure that measures the enzyme-mediated cleavage of a fluorogenic substrate. This study shows that the rFC procedure is equivalent to LAL in its ability to measure endotoxin and has a quantitation range comparable to that of quantitative photometric LAL procedures. However, unlike LAL, which uses an extract from the blood cells of the horseshoe crab *Limulus polyphemus* that contains Factor C, the rFC procedure uses an rFC cloned from the horseshoe crab, *Carcinoscorpius rotundicauda*, thereby reducing the number of false-positive results involving glucans.

RATIONALE

The majority of parenteral drugs and implantable medical devices are tested for gram-negative bacterial endotoxin using reagents prepared from circulating amebocytes found in the blood of the American horseshoe crab, *Limulus polyphemus*. Variations of this procedure are described in *US Pharmacopeia (USP) General Chapter Bacterial Endotoxins Test (85) (1)*. This chapter describes the gel-clot *Limulus* Amebocyte Lysate (LAL) procedure and the various kinetic and endpoint photometric LAL procedures. A comparison of a kinetic turbidimetric LAL, kinetic chromogenic LAL, and the proposed recombinant quantitative photometric procedure that is not subject to false-positive reactions involving glucans, is the subject of this *Stimuli* article. This alternative procedure has been successfully validated according to the requirements described in *USP General Information Chapter Validation of Compendial Procedures (1225) (2)*.

Mechanism of Reaction

The protease cascade and rationale of traditional LAL procedures have been extensively investigated (3–7). Factor C (FC), the first component in the LAL cascade, is a protease zymogen that is activated by endotoxin binding (5, 6, 8). Following a series of cascading events, a dose-dependent response is seen in the presence of endotoxin (*Figure 1a*, LAL–Endotoxin). In the kinetic turbidimetric variation of the LAL procedure, in the presence of endotoxin the protein coagulogen is converted to coagulin, resulting in a dose-dependent increase in turbidity. In the kinetic chromogenic version of the LAL procedure, a synthetic chromogenic substrate is cleaved to produce a yellow color. An alternative LAL-based pathway triggered by glucans can also invoke a similar response, thus causing a false-positive result (*Figure 1*, LAL–Glucan).

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Transfer of HPLC Procedures to Suitable Columns of Reduced Dimensions and Particle Sizes

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ABSTRACT This *Stimuli* article contains proposals to help the analyst adjust HPLC column length and particle size to achieve separation power at least equivalent to that used in the original procedure, markedly increasing the range of options currently allowed in *Chromatography* (621). The article presents the scientific rationale for application of these proposals to isocratic procedures and follows with gradient procedures.

INTRODUCTION

Users of compendial chromatographic procedures increasingly need to develop analytically equivalent procedures that decrease analysis time and solvent consumption. In this process they face limitations because USP does not provide the necessary flexibility to change the chromatographic column without revalidation of the method. The *United States Pharmacopeia (USP) General Chapter Chromatography* (621) describes in detail the range of adjustments allowed in the system when the suitability test failed. These adjustments in the operating conditions, when needed, are the maximum variations that can be made without the need for validation rather than verification of method performance under the new conditions. Included, among others, are changes in column length ($\pm 70\%$), changes in column diameter ($\pm 25\%$), particle size (can be reduced by as much as 50%), and flow rate ($\pm 50\%$). Additional changes are being implemented (1): The column diameter can be changed freely provided that the linear velocity is kept constant, following the formula: where F , l , and d are the flow rates, the column lengths, and the column diameters, respectively, before the change (subscript 1) and after the change (subscript 2). An adjustment of the flow rate by $\pm 50\%$ is also allowed.

$$F_2 = F_1 \cdot \frac{l_2 \cdot d_2^2}{l_1 \cdot d_1^2} \quad (1)$$

Except for this flexibility, (621) is silent on changes allowed to the column specified in the monograph. In some cases *USP* chromatographic procedures prescribe the use of a column that is no longer available and needs to be replaced with another of the same stationary phase but different dimensions. In others cases, switching to a column with different particle size and dimensions may provide a more rapid separation with equivalent

chromatographic performance. Both these situations currently require revalidation. This article proposes allowing the flexibility to change column dimensions or particle size as long as equivalent or better column performance is maintained, and it provides guidance to ensure that this is achieved in a scientifically rigorous manner.

PROPOSED CHANGES TO THE SYSTEM SUITABILITY SECTION OF (621) WITH RESPECT TO PARTICLE SIZE AND COLUMN LENGTH

This *Stimuli* article proposes a new approach that will both preserve the quality of the separation as well as expand the changes in particle size beyond the current twofold decrease. The intent of this proposal is to allow the chromatographer a reduction in analysis time without sacrificing column performance or impairing the separation capability for a procedure.

Chromatography defines the relationships by which particle size, column length, and flow rate can be changed without affecting the quality of the separation (2–8). The column plate count N is determined as follows:

$$N = (l/H) = l/(d_p \cdot h) \quad (2)$$

where l is the column length, H is the theoretical plate height, d_p is the particle diameter, and h is the reduced plate height. The quality of the separation is determined primarily by the plate count, which is why most *USP* chromatographic procedures require a minimum plate count. The plate count remains constant if the ratio of column length to particle diameter remains constant, provided that the reduced plate height remains the same (see equation 2).

The reduced plate height h depends exclusively on the reduced velocity v , which in turn is a function of the particle diameter and the flow rate.

$$h = H/d_p \quad (3)$$

$$v = ud_p/D_M \quad (4)$$

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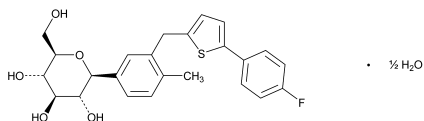
USP Dictionary of USAN and International Drug Names 2009 USP DICTIONARY SUPPLEMENT 4

IMPORTANT—Save this Supplement. This and all supplements appearing in *PF* are needed to keep the 2009 edition of the USP Dictionary (USPD) up-to-date. The cumulative contents of the supplements to the current (2009) edition will be included in the next complete edition of the Dictionary.

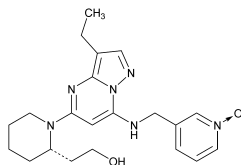
Newly Approved United States Adopted Names (USAN), Released for Publication

The following are newly established United States Adopted Names (USAN). These names will not be listed cumulatively; see preceding and succeeding numbers of *PF* for other new USAN to supplement the Dictionary main volume.

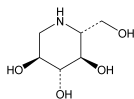
Canagliflozin [2009] (kan' a gli floe' zin). $C_{24}H_{25}FO_5S \cdot H_2O$. 453.53. (1) D-Glucitol, 1,5-anhydro-1-C-[3-[[5-(4-fluorophenyl)-2-thienyl]methyl]-4-methylphenyl]-, hydrate (2:1), (1S)-; (2) (1S)-1,5-Anhydro-1-C-(3-[[5-(4-fluorophenyl)thiophen-2-yl]methyl]-4-methylphenyl)-D-glucitol hemihydrate; (3) (1S)-1,5-Anhydro-1-[3-[[5-(4-fluorophenyl)-2-thienyl]methyl]-4-methylphenyl]-D-glucitol hemihydrate. CAS-928672-86-0. Antidiabetic. \diamond JNJ-28431754; JNJ-28431754-AAA; JNJ-24831754-ZAE; TA-7284



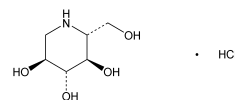
Dinaciclib [2009] (din' a sye' klub). $C_{21}H_{28}N_6O_2$. 396.50. (1) 2-Piperidineethanol, 1-[3-ethyl-7-[[1-(1-oxido-3-pyridinyl)methyl]amino]pyrazolo[1,5-a]pyrimidin-5-yl]-, (2S)-; (2) 3-[[[3-Ethyl-5-[(2S)-2-(2-hydroxyethyl)piperidin-1-yl]pyrazolo[1,5-a]pyrimidin-7-yl]amino]methyl]pyridine 1-oxide. CAS-779353-01-4. Treatment of cancer. \diamond SCH 727965



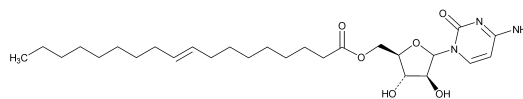
Duvoglustat [2009] (doo' voe gloo' stat). $C_6H_{13}NO_4$. 163.20. (1) 3,4,5-Piperidinetriol, 2-(hydroxymethyl)-, (2R,3R,4R,5S)-; (2) (2R,3R,4R,5S)-2-(Hydroxymethyl)piperidine-3,4,5-triol. CAS-19130-96-2. Treatment of Pompe disease.



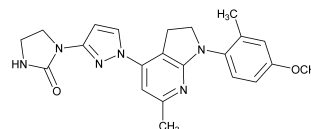
Duvoglustat Hydrochloride[2009] (doo' voe gloo' stat hye' droe klor' ide). $C_6H_{13}NO_4 \cdot HCl$. 199.60. (1) 3,4,5-Piperidinetriol, 2-(hydroxymethyl)-, hydrochloride (1:1), (2R,3R,4R,5S)-; (2) (2R,3R,4R,5S)-2-(Hydroxymethyl)piperidine-3,4,5-triol hydrochloride. CAS-73285-50-4. Treatment of Pompe disease. \diamond AT2220



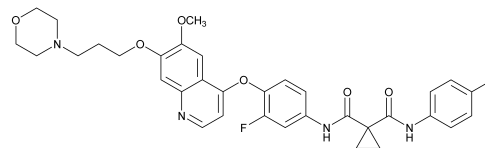
Elacytarabine [2009] (el' a sye tar' a been). $C_{27}H_{45}N_3O_6$. 507.66. (1) 2(1H)-Pyrimidinone, 4-amino-1-[5-O-[(9E)-1-oxo-9-octadecenyl]-beta-D-arabinofuranosyl]-; (2) 4-Amino-1-[5-O-[(9E)-octadec-9-enoyl]-beta-D-arabinofuranosyl]pyrimidin-2(1H)-one. CAS-188181-42-2. INN. Treatment of cancer. \diamond CP-4055



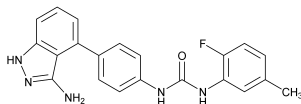
Emicerfont [2009] (em' i ser' font). $C_{22}H_{24}N_6O_2$. 404.50. (1) 2-Imidazolidinone, 1-[1-[2,3-dihydro-1-(4-methoxy-2-methylphenyl)-6-methyl-1H-pyrrolo[2,3-b]pyridin-4-yl]-1H-pyrazol-3-yl]-; (2) 1-[1-[1-(4-Methoxy-2-methylphenyl)-6-methyl-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-4-yl]-1H-pyrazol-3-yl]imidazolidin-2-one. CAS-786701-13-1. Treatment of anxiety disorders, depression, and IBS. \diamond GW876008X



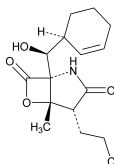
Foretinib [2009] (for e' ti nib). $C_{34}H_{34}F_2N_4O_6$. 632.70. (1) 1,1-Cyclopropanedicarboxamide, N-[3-fluoro-4-[[6-methoxy-7-[3-(4-morpholinyl)propoxy]-4-quinolinyl]oxy]phenyl]-N'-(4-fluorophenyl)-; (2) N-[3-Fluoro-4-((6-methoxy-7-[3-(morpholin-4-yl)propoxy]quinolin-4-yl)oxy)phenyl]-N'-(4-fluorophenyl)cyclopropane-1,1-dicarboxamide. CAS-849217-64-7. Antineoplastic. \diamond GSK1363089G



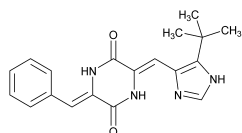
Linifanib [2009] (lin if' a nib). $C_{21}H_{18}FN_5O$. 375.40. (1) Urea, *N*-[4-(3-amino-1*H*-indazol-4-yl)phenyl]-*N'*-(2-fluoro-5-methylphenyl)-; (2) 1-[4-(3-Amino-1*H*-indazol-4-yl)phenyl]-3-(2-fluoro-5-methylphenyl)urea. CAS-796967-16-3. *Antineoplastic*. \diamond ABT-869



Marizomib [2009] (mar iz' oh mib). $C_{15}H_{20}ClNO_4$. 313.80. (1) 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 4-(2-chloroethyl)-1-[(*S*)-(1*S*)-2-cyclohexen-1-yl]hydroxymethyl]-5-methyl-, (1*R*,4*R*,5*S*)-; (2) (1*R*,4*R*,5*S*)-4-(2-Chloroethyl)-1-[(*S*)-[(1*S*)-cyclohex-2-en-1-yl]hydroxymethyl]-5-methyl-6-oxa-2-azabicyclo[3.2.0]heptane-3,7-dione. CAS-437742-34-2. *Antineoplastic*. \diamond NPI-0052



Plinabulin [2009] (plin'' a bue' lin). $C_{19}H_{20}N_4O_2$. 336.40. (1) 2,5-Piperazineidione, 3-[[5-(1,1-dimethylethyl)-1*H*-imidazol-4-yl]methylene]-6-(phenylmethylene)-, (3*Z*,6*Z*)-; (2) (3*Z*,6*Z*)-6-Benzylidene-3-[[5-(1,1-dimethylethyl)-1*H*-imidazol-4-yl]methylidene]piperazine-2,5-dione. CAS-714272-27-2. *Antineoplastic*. \diamond NPI-2358



Potassium Sulfate [2009] (poe tas' ee um sul' fate). K_2SO_4 . 174.26. (1) Sulfuric acid potassium salt (1 : 2); (2) Potassium sulfate. CAS-7778-80-5. JAN. *Oral bowel cleansing solution*.

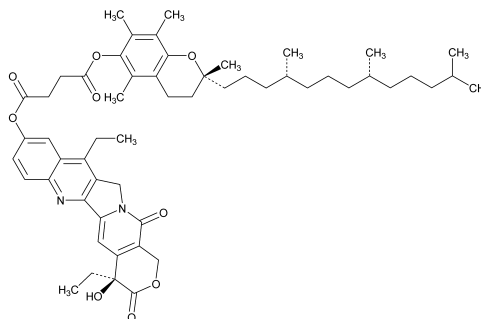
Rintatolimod [2009] (rin'' ta tol' i mod). $[[C_{10}H_{11}N_4O_7P]_{13}]_n$, $[[C_9H_{12}N_3O_7P]_{12}[C_9H_{11}N_2O_8P]]_n$. (1) 5'-Inosinic acid, homopolymer, complex with 5'-cytidylic acid polymer with 5'-uridylic acid (1 : 1); (2) Poly[5'-inosinyl-(3'→)] duplex with poly[dodecakis[3']-cytidyl-(5'→)3'-uridylyl-(5'→)]. The molecular mass ranges from 400,000 to 1,750,000 daltons. CAS-38640-92-5. *Treatment of chronic fatigue syndrome; antiviral*. Ampligen (Hemispherx Biopharma).



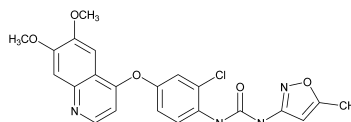
Taspoglutide [2008] (tas'' poe gloo' tide). $C_{152}H_{232}N_{40}O_{45}$. 3339.71. (1) 7-36-Glucagon-like peptide I (human), 8-(2-methylalanine)-35-(2-methylalanine)-36-L-argininamide-; (2) [8-(2-Amino-2-methylpropanoic acid),35-(2-amino-2-methylpropanoic acid)]human glucagon-like peptide 1 (GLP-1)-(7-36)-peptidamide. CAS-275371-94-3. INN. *Treatment of type 2 diabetes*. \diamond RO5073031



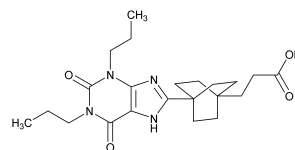
Tenifatecan [2009] (ten if'' a tee' kan). $C_{55}H_{72}N_2O_9$. 905.20. (1) Butanedioic acid, (4*S*)-4,11-diethyl-3,4,12,14-tetrahydro-4-hydroxy-3,14-dioxo-1*H*-pyrano[3',4':6,7]indolizino[1,2-*b*]quinolin-9-yl (2*R*)-3,4-dihydro-2,5,7,8-tetramethyl-2-[(4*R*,8*R*)-4,8,12-trimethyltridecyl]-2*H*-1-benzopyran-6-yl ester; (2) (4*S*)-4,11-Diethyl-4-hydroxy-3,14-dioxo-3,4,12,14-tetrahydro-1*H*-pyrano[3',4':6,7]indolizino[1,2-*b*]quinolin-9-yl (2*R*)-2,5,7,8-tetramethyl-2-[(4*R*,8*R*)-4,8,12-trimethyltridecyl]-3,4-dihydro-2*H*-1-benzopyran-6-yl butanedioate. CAS-850728-18-6. *Antineoplastic*. \diamond SN2310



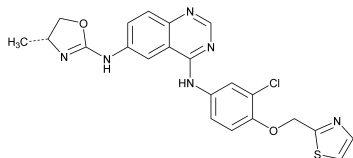
Tivozanib [2009] (tye voe' za nib). $C_{22}H_{19}ClN_4O_5$. 454.90. (1) Urea, *N*-[2-chloro-4-[(6,7-dimethoxy-4-quinolinyl)oxy]phenyl]-*N'*-(5-methyl-3-isoxazolyl)-; (2) *N*-{2-Chloro-4-[(6,7-dimethoxyquinolin-4-yl)oxy]phenyl}-*N'*-(5-methylisoxazol-3-yl)urea. CAS-475108-18-0. *Antineoplastic*. \diamond AV-951



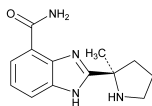
Tonapofylline [2009] (toe'' na pof' i lin). $C_{22}H_{32}N_4O_4$. 416.50. (1) Bicyclo[2.2.2]octane-1-propanoic acid, 4-(2,3,6,7-tetrahydro-2,6-dioxo-1,3-dipropyl-1*H*-purin-8-yl)-; (2) 3-[4-(2,6-Dioxo-1,3-dipropyl-2,3,6,7-tetrahydro-1*H*-purin-8-yl)bicyclo[2.2.2]oct-1-yl]propanoic acid. CAS-340021-17-2. *Treatment of heart failure*. \diamond BG9928



Varlitinib [2009] (var li' ti nib). $C_{22}H_{19}ClN_6O_2S$. 466.90. (1) 4,6-Quinazolinediamine, N^4 -[3-chloro-4-(2-thiazolylmethoxy)phenyl]- N^6 -[(4*R*)-4,5-dihydro-4-methyl-2-oxazolyl]-; (2) N^4 -[3-Chloro-4-(thiazol-2-ylmethoxy)phenyl]- N^6 -[(4*R*)-4-methyl-4,5-dihydrooxazol-2-yl]quinazoline-4,6-diamine. CAS-845272-21-1. Antineoplastic. \diamond ARRY-334543



Veliparib [2009] (ve lip' a rib). $C_{13}H_{16}N_4O$. 244.30. (1) 1*H*-Benzimidazole-7-carboxamide, 2-[(2*R*)-2-methyl-2-pyrrolidinyl]-; (2) 2-[(2*R*)-2-Methylpyrrolidin-2-yl]-1*H*-benzimidazole-4-carboxamide. CAS-912444-00-9. Antineoplastic enhancing agent. \diamond ABT-888



Yttrium Y 90 Clivatuzumab Tetraxetan [2009] (i' tree um klye'' va tooz' oo mab te trax' e tan). $C_{6496}H_{9952}N_{1716}O_{2014}S_{44}$. ($C_{16}H_{23}N_4O_7^{90}Y$)_n. 145.7 kilodaltons (antibody). (1) Immunoglobulin G1, anti-(human mucin MUC1) (human-mouse monoclonal hPAM4 heavy chain), disulfide with human-mouse monoclonal hPAM4 κ -chain, dimer, 1,4,7,10-tetraazacyclododecane-1,4,7,10-tetraacetic acid conjugate, yttrium-⁹⁰Y chelate; (2) Immunoglobulin G1, anti-(mucin-1 (MUC-1, PENT, episialin, tumor-associated mucin, EMA, H23AG, PUM or CD227)); humanized mouse monoclonal hPAM4 γ 1 heavy chain (222-215')-disulfide with humanized mouse monoclonal hPAM4 κ light chain, dimer (228-228':231-231'')-bisdisulfide, substituted (average of 2 to 5 substitutions) on N^6 of lysyl residus by (4,7,10-tris(carboxymethyl)-1,4,7,10-tetraazacyclodec-1-yl)acetyl (substitutive tetraxetan), (90Y)yttrium(III) chelate. CAS-943976-23-6. Treatment of pancreatic cancer. hPAM4-Cide (Immunomedics). \diamond hPAM4-DOTA; IMMU-107; ⁹⁰hY-PAM4