INLAND REVENUE AUTHORITY OF SINGAPORE

IRAS e-Tax Guide

Pharmaceutical Manufacturing Industry: Tax Treatment of Research & Development and Intellectual Property-Related Expenditure (Fourth edition)

Pharmaceutical Manufacturing Industry: Tax Treatment of Research & Development and Intellectual Property- Related Expenditure

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1 Aim

1.1 This e-Tax guide provides guidance on the tax treatment for the following items common to companies in Singapore which develop, manufacture and market drugs for use as pharmaceuticals (herein referred to as "pharmaceutical manufacturing companies"):

(a) Deduction of research and development ("R&D") expenditure under Sections 14C and 14D of the Income Tax Act 1947 ("ITA");
(b) Writing down allowances under Section 19B of the ITA;
(c) Income from provision of R&D services; and
(d) Deduction of royalty payments and withholding tax implications.

2 At a glance

2.1 A pharmaceutical manufacturing company may claim deductions on expenditure incurred on qualifying R&D activities relating to its existing trade or business in the year of assessment ("YA") in which the expenditure was incurred. The manner of set-off against income depends on whether the expenditure can be directly identified to specific products. As a matter of principle, the matching of expense and revenue should be observed where feasible.

2.2 Under the liberalised R&D tax treatment, a company may also claim deductions on R&D expenditure not relating to its existing trade or business (i.e. a new trade or business), provided the expenditure is for qualifying R&D activities conducted in Singapore during the basis periods from YA 2009 to YA 2028. To give maximum benefits to the company, such deductions shall be set off against normal income first with the remaining balance available for set off against concessionary income in accordance with Section 37A of the ITA.

2.3 With effect from YA 2018, a pharmaceutical manufacturing company may also claim a deduction for payments made under a R&D cost sharing agreement ("CSA payment") for R&D activities that are not related to the company's existing trade or business, regardless of whether such activities are conducted in or outside Singapore, under Section 14C for the ITA, so long as the activities are undertaken wholly or partly for the company or on its behalf[1]. CSA payments that are not related to the existing trade or business may be treated

[1] For YA 2012 to YA 2017, companies may only claim deduction on CSA payment for R&D activities not related to their trade or business, if such activities were conducted in Singapore.

as common expenses and be allocated across the different income streams derived by the company, using acceptable bases of allocation.

2.4 When a pharmaceutical manufacturing company undertakes R&D activities on behalf of its affiliates or head office, it should charge an arm's length service fee. The R&D service fees would be taxed at the normal corporate tax rate unless such services are explicitly covered under the Letter of Offer of Incentives issued by the Economic Development Board (EDB).

2.5 Finally, for royalty payments for the use of intellectual property rights ("IPRs"), the deduction rules and the corresponding withholding tax implications will depend on when the liability to pay the royalty crystallises.

3 Overview of the Pharmaceutical Manufacturing Industry in Singapore

3.1 The pharmaceutical manufacturing industry develops, produces and markets drugs licensed for use as medications. These drugs are usually covered by patents and are sold with a profit margin sufficient for the patent owner to recover the expenditure on research and development that goes into developing the drug. *Annex A* shows the typical value chain of a pharmaceutical manufacturing company.

3.2 Singapore is a choice location for pharmaceutical manufacturing companies to locate their manufacturing hubs. Manufacturing facilities established in Singapore are mainly primary manufacturing plant[2] for Active Pharmaceutical Ingredients ("API"s), and some also perform secondary manufacturing. Besides manufacturing, many pharmaceutical manufacturing companies in Singapore also undertake other value-adding functions such as R&D and headquarter activities. Such headquarter activities may include marketing support, clinical trial coordination, IP management, procurement, logistics, manufacturing management and R&D services. Some pharmaceutical companies in Singapore are also entrepreneurs that own the IPRs to produce and market the drugs. The ownership of the IPRs arises from the funding of the R&D costs of developing the drugs or acquiring the IPRs from IPR owners which are usually affiliated companies. As such, the risks undertaken by these

[2] Pharmaceutical manufacturing is divided into two major stages:
- The first stage, which is known as primary manufacturing, is the production of the active pharmaceutical ingredients ("API"s). API is a simple organic compound that is synthesised chemically before it is formulated into a final drug.
- The second stage, called secondary manufacturing, is the formulation of the API into the final drug.

pharmaceutical manufacturing companies are higher compared to contract or toll manufacturers, resulting in larger share of profits or losses correspondingly.

3.3 The paragraphs below elaborate on IRAS's views on the appropriate treatment applicable to transactions common to the pharmaceutical manufacturing industry.

4 Deduction of R&D Expenditure under Sections 14C and 14D

4.1 The R&D activities undertaken by pharmaceutical manufacturing companies may be (1) undertaken in-house by the company, (2) outsourced to an R&D organisation or (3) undertaken under an R&D cost sharing agreement ("CSA"). Such R&D activities may be related to the company's existing trade or business, or otherwise.

4.2 Depending on where the R&D activities are undertaken and whether the activities are related to the pharmaceutical manufacturing companies' trade, tax deductions on qualifying R&D expenditure may be allowed under Sections 14C (100% deduction), 14D(1) (additional 150% deduction for YAs 2019 to 2028) and 14D(1A) (further 150% enhanced deduction on the first $400,000 for YAs 2024 to 2028)[3] of the ITA. The tax deduction granted will be net of any government grant / subsidy enjoyed by the company on the R&D project.

4.3 The amount of R&D expenditure claimable under Section 14C of the ITA under the various scenarios mentioned are as follows:

(A) <u>For existing trade or business</u>

(1) *Expenditure incurred on R&D activities undertaken in-house by the company.*

R&D expenditure qualifying for tax deduction under Section 14C excludes:

(i) expenditure that is allowable as a deduction under Section 14 of the ITA;

(ii) expenditure that is specifically prohibited for deduction under Section 15 of the ITA (such as share option costs, depreciation

[3] For YA 2024 to 2028, a further 150% enhanced deduction is granted on the first $400,000 of qualifying R&D expenditure incurred on qualifying R&D activities undertaken in Singapore under the Enterprise Innovation Scheme ("EIS"). For more information on the EIS, please refer to the IRAS e-Tax Guide "Enterprise Innovation Scheme".

etc.); and

(iii) capital expenditure on plant, machinery, land or buildings or acquisition of rights for the purpose of the R&D project.

(2) *Payment made for R&D activities outsourced to an R&D organisation*.

(3) *Payment made in respect of expenditure that is allocated to and borne by the company under the R&D CSA.*

R&D expenditure qualifying for tax deduction under Section 14C excludes any payment for the right to be a party to the CSA (i.e. buy-in-payment). Prior to YA 2018, the deductibility of CSA is subject to the same exclusions in (1). However, with effect from YA 2018, expenditure specifically prohibited from deduction under Section 15 of the ITA need not be excluded.

(B) <u>For new trade or business (Up to and including YA 2028)</u>

(1) *Expenditure incurred on R&D activities undertaken in-house by the company, where such R&D activities are carried out in Singapore.*

R&D expenditure qualifying for tax deduction under Section 14C excludes:

(i) expenditure that is allowable as a deduction under Section 14 of the ITA;

(ii) expenditure that is specifically prohibited from deduction under Section 15 of the ITA (such as share option costs, depreciation etc.); and

(iii) capital expenditure on plant, machinery, land or buildings or acquisition of rights for the purpose of the R&D project.

(2) *Payment made to an R&D organisation for R&D activities undertaken in Singapore.*

(3) *Payment made in respect of expenditure that is allocated to and borne by the company under the R&D CSA.*

Previously, CSA R&D expenditure that was unrelated to the company's existing business could only qualify for deduction if it was undertaken in Singapore. From YA 2018 onwards, such expenditure can qualify for deduction under Section 14C even if the R&D activities were carried out overseas. In addition, from YA 2018,

expenditure specifically prohibited for deduction under Section 15 of the ITA need not be excluded. CSA R&D expenditure continues to exclude payments for the right to be a party to the CSA (e.g. buy-in payment).

4.4 Eligibility to claim R&D tax deduction

4.4.1 Pharmaceutical manufacturing companies that incur the qualifying R&D expenditure and are the beneficiaries of the R&D activities may claim R&D tax deduction.

4.4.2 Generally, the pharmaceutical manufacturing company can claim tax deductions on the qualifying R&D expenditure in the YA relating to the basis period in which the expenditure was incurred. The R&D undertaken may or may not be identifiable to a specific product line, for which income may be taxed at prevailing rates or concessionary rates. The manner and order of deduction in such situations are discussed below.

4.4.3 For more details relating to R&D tax measures including the types of activities that qualify as R&D, and the specific types of expenditure that are claimable, please refer to the IRAS e-Tax Guide “Research and Development Tax Measures”.

4.5 Manner of set-off for expenditure incurred on R&D activities relating to existing trade or business

4.5.1 As a matter of principle, the matching of expense and revenue should be observed where feasible. Hence, pharmaceutical manufacturing companies need to establish the purpose, products or activities for which R&D has been undertaken.

4.5.2 <u>Qualifying expenditure directly identifiable to specific existing products</u>

The R&D expenditure should first be matched against income generated from specific products under the respective tax rate categories. To illustrate, if a pharmaceutical manufacturing company enjoying pioneer incentive undertook qualifying R&D activities on its pioneer product, the R&D expenditure incurred should be matched and deducted against the income derived from the pioneer product under the tax-exempt category.

4.5.3 Qualifying expenditure not directly identifiable to specific existing products

R&D expenditure may be incurred on continuous improvements on the manufacturing process of existing products. Where the R&D activities could not be identifiable to specific product lines or activities, the R&D expenditure may be deducted against the company's trade income in the year they are incurred. Where a pharmaceutical manufacturing company has trade income subject to tax under different tax rate categories (tax exempt, concessionary rate or normal rate), the R&D expenditure should be allocated across the various tax rate categories using a reasonable basis[4].

4.5.4 Qualifying expenditure relating to new products or processes

(a) A pharmaceutical manufacturing company may incur R&D expenditure on discovering and developing new drugs or processes. As these R&D activities are to develop new products or processes to support the entire existing manufacturing trade of the company, the R&D expenditure may be treated as common expenses and deducted against the company's trade income in the year they are incurred. Where a pharmaceutical manufacturing company has trade income subject to tax under different tax rate categories (tax exempt, concessionary rate or normal rate), the R&D expenditure should be allocated across the various tax rate categories using a reasonable basis.

(b) Strict application of the matching principle would require IRAS to adjust the R&D expenditure to match it against the income subject to tax when the outcome of the R&D is known. The outcome of the R&D activities could be the commercialisation of a new drug and the income from the application of the new discovery may be accorded with incentives subsequently. To provide greater tax certainty to companies, IRAS will not make any retrospective adjustments on the deduction of R&D expenditure allowed in prior years regardless of the outcome from the R&D activities.

4.5.5 *Annex B* shows an example of the manner of set-off of R&D expenditure as described above.

[4] The acceptable bases of allocation include turnover ratio or any other ratio used for allocating common operating expenses bearing a close nexus to the level of R&D activities undertaken. The basis, once adopted, must be applied consistently, unless there is a change in circumstances.

4.6 Manner of set-off for expenditure incurred on R&D activities in respect of new trade or business – applicable to basis periods up to and including YA 2028

4.6.1 For R&D activities that are not related to the pharmaceutical manufacturing companies' existing trade or business, the below tax treatments apply.

4.6.2 Where a pharmaceutical manufacturing company that derives both income subject to tax at the prevailing corporate tax rate ("normal income") and income subject to tax at concessionary rate(s) ("concessionary income") undertakes R&D activities in Singapore that are not related to its existing trade or business, the qualifying R&D expenditure (except for CSA payment with effect from YA 2018 – see paragraph 4.6.3 for details) should first be deducted against its normal income. Any remaining balance of R&D expenditure will be treated as part of normal unabsorbed loss and is available for set off against concessionary income in accordance with Section 37A of the ITA. This will give maximum benefits to companies embarking on R&D in a completely new trade or business in Singapore.

4.6.3. With effect from YA 2018, a pharmaceutical manufacturing company may claim Section 14C deduction on CSA payment for qualifying R&D activities not related to its existing trade or business, regardless of whether such activities are conducted in or outside Singapore. Such CSA payments should be treated as common expenses and be allocated across the different income streams derived by the company, using acceptable bases of allocation as set out in footnote 4.

4.6.4. *Annex C* provides a diagrammatic representation of the set-off rules for R&D expenditure.

5. Writing Down Allowances under Sections 19B

5.1. A company may be given writing down allowances ("WDA") under Section 19B of the ITA for IPRs it has acquired. It may also qualify for enhanced allowance on costs incurred to acquire IPRs for use in its trade or business under the EIS[5].

[5] For more details, please refer to IRAS e-Tax guide on "Enterprise Innovation Scheme".

5.2. The manner of set-off shall follow the principles set out in Section 4.5 above. Where feasible, companies should observe the matching of expense and revenue.

(a) If the expenditure can be directly identified to specific existing products, the WDA should first be matched against income generated from these specific products under the respective tax rate categories. Otherwise, the WDA may be allocated across the various tax rate categories using a reasonable basis.

(b) If the expenditure relates to new products or processes, the WDA may be allocated across the various tax rate categories using a reasonable basis. IRAS will not make any retrospective adjustments on the WDA allowed in prior years regardless of the outcome of the R&D activities.

6. Provision of R&D Services

6.1. Some pharmaceutical manufacturing companies may undertake R&D activities on behalf of their affiliates or head office within the company's manufacturing facility. Any IPRs arising from the R&D activities are usually owned by the affiliate or head office and not by the Singapore company carrying out the R&D activities. In this regard, the Singapore company should charge an arm's length fee for the provision of R&D services.

6.2. The R&D service fees would be taxed at the normal corporate tax rate unless such services are explicitly covered by incentives. IRAS will rely strictly on the Letter of Offer of Incentives issued by the EDB to determine the appropriate tax treatment. Where such service income is not explicitly covered in the scope of the incentive, IRAS will assess the income to tax under the normal tax rate category.

6.3 If the pharmaceutical manufacturing companies are undertaking R&D activities on behalf of their affiliates or head office, the expenditure incurred for undertaking such R&D activities would be allowable under Section 14 of the ITA instead of Section 14C or Section 14D.

7. Deduction of Royalty Payments and Withholding Tax Implications

7.1. Pharmaceutical manufacturers often pay royalties to their head office for the use of rights to manufacture drugs. There are two common bases typically used by pharmaceutical manufacturing companies when computing royalty payments. They are:

	Basis	Description
(a)	Ex-factory	Royalties are payable when the company sells its manufactured intermediate product to an intermediary (usually an affiliate) who then engages a toll manufacturer to formulate the intermediate product into the final drugs
(b)	In-market	Royalties are payable only when the intermediary sells the finished drugs to end-customers

7.2 The deduction rules and the corresponding withholding tax implications will depend on when the liability to pay the royalty crystallises.

7.3 In the case of (a) above, royalty accruals and income from sale of intermediate product are recognised in the accounts when the sales take place. Under Section 14(1) of the ITA, a deduction is allowed if the expenditure has been "incurred" i.e. the liability to pay is crystallised. In this instance, since royalty payments are due and payable upon the sale of the intermediate product, the royalty payments will be deductible at this point. Similarly, royalty payments to non-residents will be subject to withholding tax when the intermediate product is sold.

7.4 In the case of (b) above, a company may make a provision for royalties under FRS 37[6] at the point of sale of intermediate product to the intermediary. This is to better match royalty expense and income derived, and at the same time, recognise that inventories are still held by the intermediary, pending sales to end-customers.

[6] FRS 37: Provisions, Contingent Liabilities and Contingent Assets

7.5 Although the company has created an accounting obligation in its accounts at the point of sale of intermediate product, its legal obligation only crystallises upon the sale of the product to end-customers. As such, the expenditure is not considered to be “incurred” for tax purposes. Hence, the royalty payment is deductible only upon the sale of the final product to end-customers. As a corollary, the recipient will only be taxed on his royalty income when his legal entitlement to the royalty income has crystallised, i.e. upon the sale of the final product to end customers. If the recipient is a non-resident, tax should be withheld on the payment at this point.

7.6 *Annex D* shows an example of the above tax treatments for royalty payments.

8 Contact Information

8.1 If you have any enquiries or need clarification on this Guide, please call the Corporate Tax helpline at 1800-3568622.

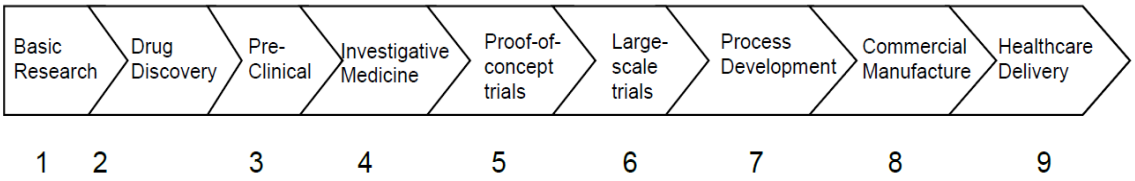
9 Updates and Amendments

	Date of amendment	Amendments made
1	16 May 2014	The amendments reflect changes to R&D since the first edition of this guide was published on 22 Aug 2011. The major changes are: • The extension of the R&D scheme from YA 2015 to YA 2025 • The expansion of Sections 14D and 14DA to include payments made under R&D cost sharing agreements with effect from YA 2012 • The removal of writing down allowances claim under S19C for approved R&D cost sharing agreements
2	20 Mar 2018	The main amendments to the e-Tax Guide since the second edition (published on 16 May 2014) are as follows: Insertion of paragraphs 2.3 and 4.6.3 to incorporate the enhancements relating to the tax treatment for payment made under R&D CSA with effect from YA 2018 • Update paragraphs 4.1, 4.2, 4.3, 4.6.1 and 4.6.2 to: - Include the type of qualifying expenditure for S14D(1) deduction - Incorporate enhancements relating to the tax treatment for payment made under R&D CSA with effect from YA 2018 - Update the change in the percentage of tax deduction under Section 14DA(1) for qualifying R&D expenditure on qualifying R&D undertaken in Singapore with effect from YA 2019 - Update on phasing out of PIC with effect from YA 2019

3	20 Mar 2024	The main amendments to the e-Tax Guide since the third edition (published on 20 Mar 2018) are as follows: • Editorial changes to update the previous Section 14D / Section 14DA / Section 37B to Section 14C / Section 14D / Section 37A respectively arising from the renumbering and citation of the Income Tax Act 1947 (2020 Revised Edition) • Extension of the R&D tax measures under Section 14C / Section 14D to YA 2028 • Insertion of paragraph 4.2 on the different types of R&D tax deductions that are available under Sections 14C and 14D from YAs 2019 to 2028 and deletion of paragraph 4.3 • Revision to paragraphs 4.2 and 5.1 on the introduction of the Enterprise Innovation Scheme • Revision to Annex A for clarity on which stage of a typical value chain of a pharmaceutical manufacturing company will be treated as R&D

Annex A – Typical Value Chain of a Pharmaceutical Manufacturing Company

Typically, the value chain of a pharmaceutical manufacturing company comprises the following stages:



- Generally, stages 1 (Basic Research) to 7 (Process Development) of a new drug development will be within the R&D phase.
  - Stages 1 to 3 are the initial experimental stages of research and development (R&D).
  - Stages 4 to 6, also known as clinical development, are the stages to establish the properties, effects and safety of the new compound or drug before its commercial production.
  - Stage 7 is carried out before commercial production can start. It is carried out to optimise and improve manufacturing processes.

- R&D will typically be considered as ended after stage 7 (i.e. activities carried out in stage 8 (Commercial Manufacture) onwards will not be R&D). For clinical trials, trials that take place before the company receives permission to manufacture the drug can be treated as R&D except those relating to non-R&D activity (e.g., marketing development). Clinical trials that continue to test the new drug after approval and manufacture (e.g., to test that new drug does not have long term effects as required by regulatory authority) should only be treated as R&D if they bring about a further scientific or technological advancement.

Annex B – Manner of Set-off for Expenditure Incurred on R&D Activities Relating to Existing Trade or Business

Co A undertakes in-house R&D activities that are related to its drug manufacturing business. One of the manufactured drugs, X, was awarded the Pioneer (Manufacturing) Incentive.

In the financial year ended 31 December 20x1, Co A derived both pioneer exempt and normal income. Co A incurred the following R&D expenditure:

Deduction / allowance under ITA	Purpose	Amount ($)
Section 14C deduction	- Non-routine improvements on existing pioneer product X	20,000
	- Continuous improvements on manufacturing process of existing products	30,000
	- Developing new drug Y	60,000
Section 19B writing down allowance	- Acquiring IPR for new drugs	60,000

The new drug, Y, was successfully commercialised in March 20x2 and was awarded the Pioneer (Manufacturing) Incentive subsequently.

Co A's R&D expenditure should be reflected in its income tax computation for YA 20x2 as follows:

Tax Computation

		YA 20x2		
		$'000	$'000	$'000
		Pioneer Exempt	**Normal Tax**	**Total**
Sales Income		800	400	1,200
Less:	Trade-related R&D deductions			
	- Pioneer product X (Note 1)	20	-	20
	- Continuous improvements on manufacturing process (Note 2)	20	10	30
	- Developing new drug (Note 2)	40	20	60
	Other deductible expenses	220	120	340
Adjusted profit		500	250	750
Less:	Capital allowances			

- Trade-related Plant & Machinery	250	100	350
- S19B writing down allowance (Note 3)	8	4	12
Exempt income / Chargeable income before exempt amount	242	146	388

Note 1: Directly identifiable R&D expenses are matched against income generated from pioneer product X.

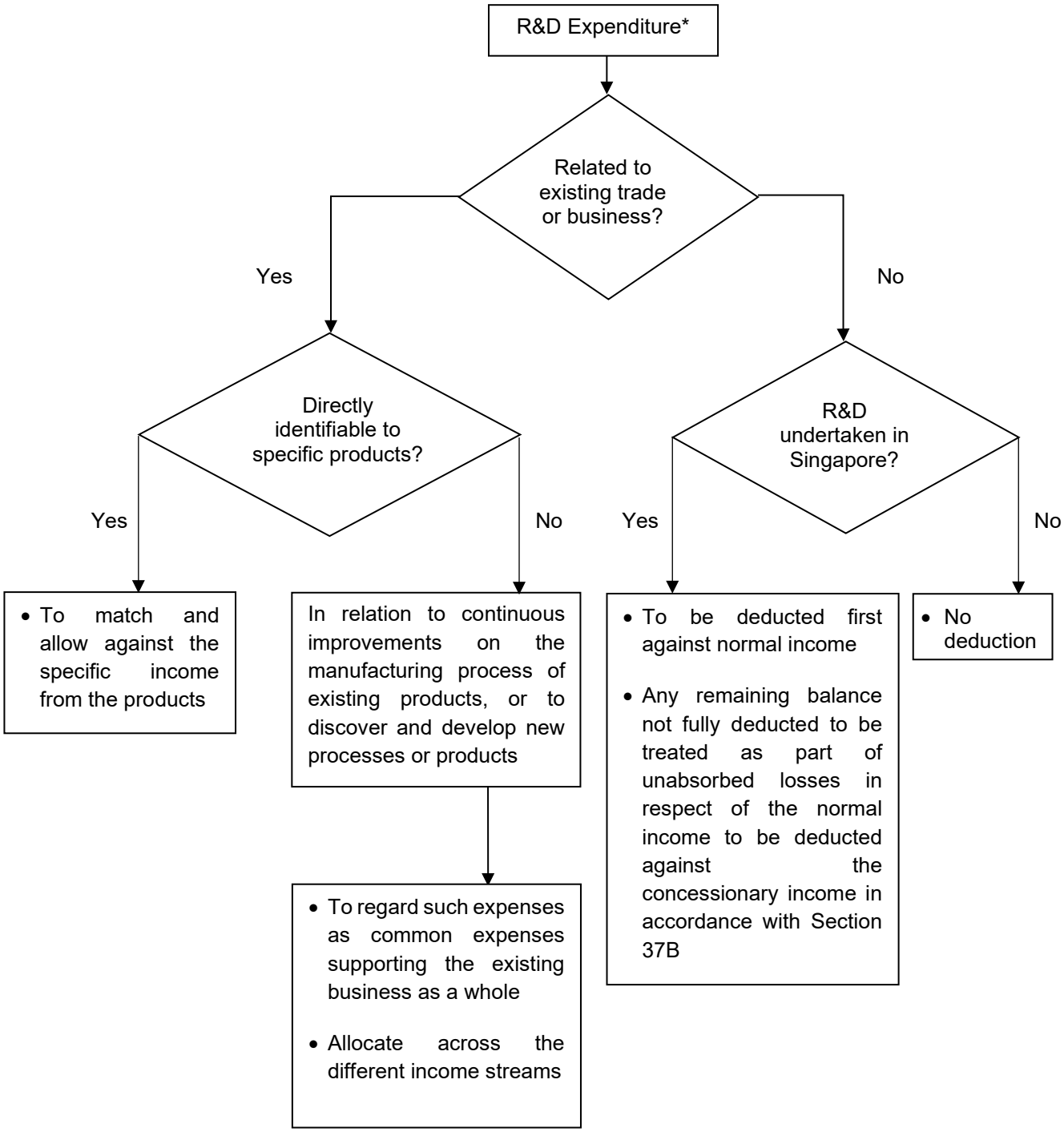
Note 2: These R&D expenses are treated as common expenses. They are allocated across the various tax rate categories using a reasonable basis such as turnover. For example, the computation for expenses on continuous improvements on manufacturing process is as follows:

Exempt income = $30,000 x $800,000 / $1,200,000
= $20,000
Normal income = $30,000 x $400,000 / $1,200,000
= $10,000

Note 3: The WDAs in respect of expenditure incurred in acquiring IPR for new drugs are allocated across the various tax rate categories using a reasonable basis such as turnover. The computation of WDAs is as follows:

Exempt income = ($60,000 / 5) x $800,000 / $1,200,000
= $8,000
Normal income = ($60,000 / 5) x $400,000 / $1,200,000
= $4,000

Annex C – Flow Chart on Set-off Rules for R&D Expenditure

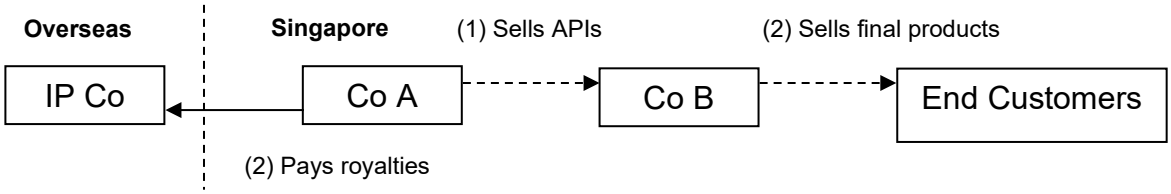


* With effect from YA 2018, the tax treatment under Section 14C for CSA payments has been enhanced. Refer to paragraph 4.6.3 for the applicable set-off rule.

Annex D – Deduction of Royalty Payments and Withholding Tax

Co A, Co B and IP Co are members of the same Group. Co A is a pharmaceutical company in Singapore which manufactures active pharmaceutical ingredients ("API"s). Its financial year end is 31 December. Co B is a secondary manufacturer which helps Co A formulate the APIs into final products for sale to end customers.

IP Co is an overseas entity which owns and manages the intellectual property rights for the Group. Co A has an agreement with IP Co whereby royalties are computed based on in-market sales of final products to end customers.



	Date	Event
(1)	30 Nov 2020	Co A sells APIs to Co B and recognises the sales in its accounts when the APIs are shipped to Co B. At the same time, Co A recognises a specific provision for royalties payable to IP Co based on some reasonable estimates of the final sales by Co B to end customers.
(2)	31 Jan 2021	Co B sells the final products to end customers and recognises the sales in its books. At the same time, Co A's liability to pay royalties to IP Co crystallises. Co A pays royalties to IP Co and reverses the specific provision recognised in its books on 30 Nov 2020.

The relevant tax treatments for Co A are as follows:

(a) The specific provision for royalties payable to IP Co is **not** a deductible expense for YA 2021 because Co A has not incurred the expenditure. It has merely recognised an accounting obligation. Correspondingly, withholding tax is not applicable.

(b) The actual royalty payment to IP Co is deductible in YA 2022 as the amount has been incurred. Withholding tax must be made to IRAS by the 15th of the second month from the date of payment to IP Co. The reversal of specific provision is not taxable.