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# Reaxys: Uma solução – 6 Bases de dados

## Dados de Bioatividade

>39 milhões de dados de bioatividade experimentais

## Bibliografia

>63 milhões de registros (de ~16,000 revistas dif. editoras y 105 escritórios de patentes)

## Substâncias

>120 milhões de substâncias (conteúdo total)  
~ 105 milhões de substâncias únicas

## Alvos moleculares

> 30.000 alvos moleculares, incluindo informação das espécies

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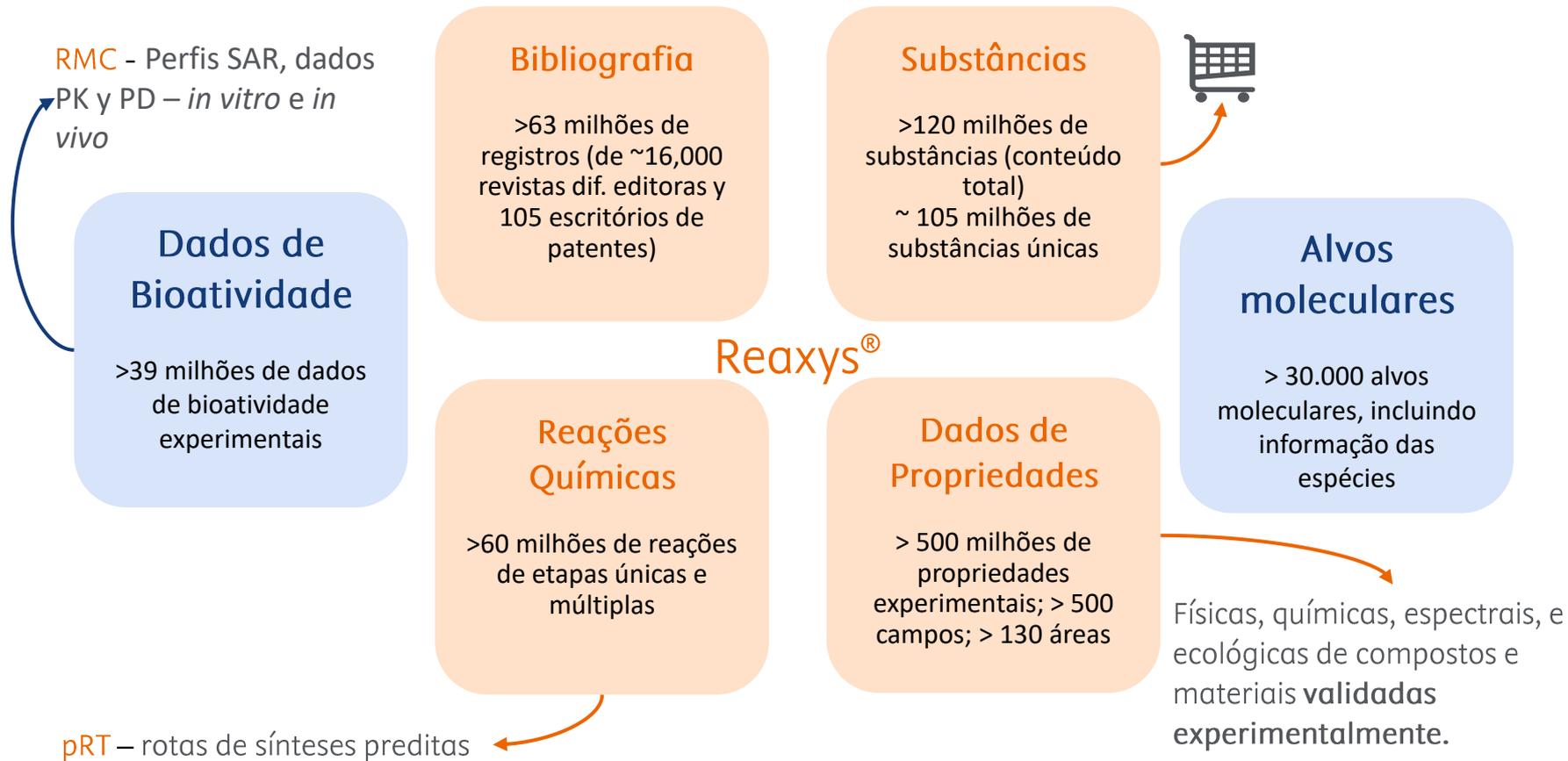
## Reações Químicas

>60 milhões de reações de etapas únicas e múltiplas

## Dados de Propriedades

> 500 milhões de propriedades experimentais; > 500 campos; > 130 áreas

# Reaxys: Uma solução – 6 Bases de dados



# Reaxys

Volume 33, Issues 1-3, 2015

Contents lists available at ScienceDirect

**Tetrahedron**

Journal homepage: [www.elsevier.com/locate/tet](http://www.elsevier.com/locate/tet)

**Functionalization of indole at C-5 or C-7 via palladium-catalyzed double carbonylation. A facile synthesis of indole keto-carboxamides and carboxamide dimers**

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**ARTICLE INFO**

**Keywords:** Indole; Palladium; Carbonylation; Carboxamide; Indole dimer

**ABSTRACT**

Palladium-catalyzed double carbonylation of indole derivatives (the parent compound and 2-substituted indoles) with an isocyanide and carbonyl compounds afforded indole keto-carboxamides and carboxamide dimers in the presence of the corresponding indole-2-thioamide in moderate yields. The indole keto-carboxamides were used as a key intermediate for the synthesis of a new class of 5- and 7-substituted indole keto-carboxamides and carboxamide dimers. The indole keto-carboxamides were used as a key intermediate for the synthesis of a new class of 5- and 7-substituted indole keto-carboxamides and carboxamide dimers. The indole keto-carboxamides were used as a key intermediate for the synthesis of a new class of 5- and 7-substituted indole keto-carboxamides and carboxamide dimers.

**1. Introduction**

Indole is a heterocyclic aromatic ring system consisting of a benzene ring fused to a pyrrole ring. It is a common natural product and a key building block in the synthesis of many biologically active compounds. Indole derivatives are widely used in the synthesis of pharmaceuticals, agrochemicals, and materials. The synthesis of indole derivatives is a challenging task due to the high reactivity of the indole ring system. Indole derivatives are widely used in the synthesis of pharmaceuticals, agrochemicals, and materials. The synthesis of indole derivatives is a challenging task due to the high reactivity of the indole ring system.

**2.2. Amino carbonylation of 5-substituted (5) indoles in the presence of indole-2-thioamide**

Significantly, the amino carbonylation of 5-substituted (5) indoles can be carried out using inexpensive carbon monoxide pressure gas (the corresponding indole-2-thioamide and 5-substituted indole) under mild conditions (100 °C, 10 bar). The amino carbonylation carried out at high (10 bar) carbon monoxide pressure showed moderate to high chemoselectivity toward 5-keto-carboxamides (5) yielding typically in the range of 40–60%.

Scheme 1. Amino carbonylation of 5-substituted (5) indoles (the 5-*R*-indoles) and indole (5).



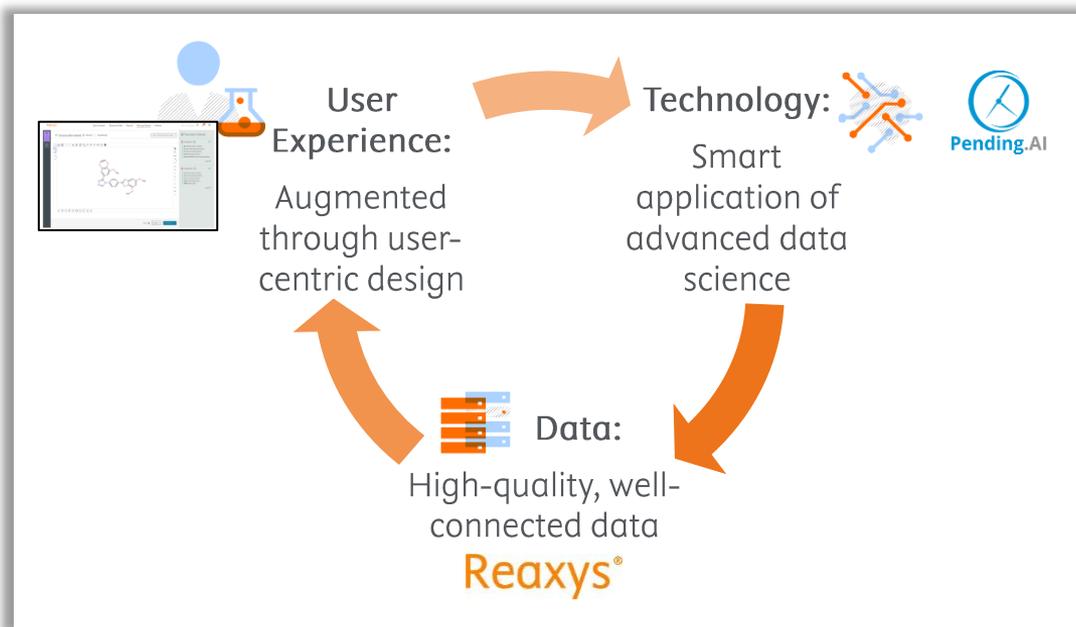
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Para Químicos







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## 2. Resultados



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### Bibliografia

>63 milhões de registros (de ~16,000 revistas de dif. Editoras e 105 escritórios de patentes)



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>39 milhões de dados de bioatividade experimentais

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