

## ADVANCING REACTION PLATFORMS FOR DRUG DISCOVERY (AiRPaDD)

AiRPaDD Doctoral Network (<https://airpadd.eu/>) will contribute to the sustainable development of European pharmaceutical industries by delivering an ambitious doctoral training programme that draws on expertise from industry and academia.

**Applications are open to recruit four highly motivated PhD candidates in organic chemistry that will participate in our network.**

The offered positions will be available to start September-November 2023 with a duration of 3 years.

### OFFERED POSITIONS

Each Doctoral Candidate's PhD program will consist of an 18-month period of research in academia, located in USFD (UK) or UPV/EHU (Spain), and 18 months in industry, located in AstraZeneca (Sweden) or Sanofi (Germany).

All partners have clear Equal Opportunities policies ensuring equal and fair recruitment and employment of men and women. The selection process will be in accordance with the European Charter for Researchers and the European Code of Conduct for recruitment of researchers.

#### **P1: Synthesis of Pyrazolylmethyl Trifluoroborate Salts. Powerful New Scaffolds for Drug Discovery**

<b>Description</b>	P1 <i>N</i> -Benzyl pyrazoles and related compounds are a privileged family of molecules in medicinal chemistry. These compounds offer a broad range of biological activities and therefore methods to access these sub-structures are highly sought after. The goals of this project are to devise a new synthetic strategy to borylated pyrazoles that will be amenable to the high throughput synthesis of <i>N</i> -benzyl pyrazoles bearing drug-relevant structures.
<b>Recruiting institutions</b>	USFD (UK) & Sanofi (DE)

#### **P2: New Methods for the Synthesis of Densely Functionalised Olefins**

<b>Description</b>	Borylated enamines represent attractive scaffolds, as they are densely functionalised olefins with the opportunity to elaborate in an orthogonal manner. Despite the potential of this motif, it remains relatively unexplored.
<b>Recruiting institutions</b>	USFD (UK) & ASTRAZENECA (SE)

#### **P3: Late Stage Functionalization of Pyrazole Scaffolds for the Synthesis of Lead-Like Building Blocks**

<b>Description</b>	The research goals in this project complement those of Project 1 in that they target the privileged pyrazole family of molecules. However, in this program transition metal catalysis will be employed to promote the remote functionalization of different positions of the alkyl chains and/or the aromatic ring of drug-relevant pyrazole intermediates.
<b>Recruiting institutions</b>	UPV/EHU (ES) & Sanofi (DE)

## P4: High Throughput Development of Radical Reactions Aided by Systematic Radical-philicity DFT Studies

<b>Description</b>	In contrast to nucleophilicity and electrophilicity, radical-philicity and radicalicity are much less developed concepts, especially from the theoretical/computational point of view. Computational studies will be carried out on <i>N</i> -heterocycles to understand the intrinsic propensity of the selected substrates to form radicals in different positions, and the effect that the introduction of substituents has in the radical formation. These investigations will inform subsequent experimental studies to identify reactions that will produce products that are within lead-like chemical space.
<b>Recruiting institutions</b>	UPV/EHU (ES) & ASTRAZENECA (SE)

## APPLICATION PROCESS

### Eligibility criteria

We welcome applications from candidates of any nationality completing the following criteria:

- Candidates must have a master degree or equivalent diploma in Chemistry, awarded by a College, University or Technical School. Previous industrial experience is desirable but not essential.
- Candidates must not have resided or carried out their main activity (studies, etc.) in the country of their first recruiting organisation (i.e. UK for P1&P2; Spain for P3&P4) for more than 12 months in the 3 years immediately prior to their recruitment. Date of recruitment means the first day of the employment of the researcher for the purposes of the action (i.e. the starting date indicated in the employment contract/equivalent direct contract).

Candidates may be required to provide documentation proving their eligibility for recruitment, i.e. to provide supporting documentation proving your place(s) of residence or work during the previous 3 years.

- Candidates must have a high level of proficiency in written and spoken English, which will be assessed with the motivation letter and the interview, respectively.

### Submission of applications

Applications must be submitted online through the project website with the following supporting documents in a single PDF file:

- A motivation letter.
- A detailed CV including publications, relevant skills and experience.
- A digital copy of all academic certificates and records (in the respective official English transcription).
- Two letters of recommendation, including contact details.

All the above documents must be provided in English.

**Applications will close on 31/05/2023.**

**More information and details:** <https://airpadd.eu/>, <https://airpadd.eu/open-positions/>