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Research Proposal Template

## **Seeking Novel Immune-Inflammatory Targets, Pathways, and Therapies**

*Almirall, S.A. are funding research projects up to €250k total funding per project based on their interest in the immune-inflammatory disease space, with a particular focus on dermatological indications. Please see a copy of the one-page campaign summary (i.e. Almirall, S.A.’s specific criteria for this Research Proposal) at the end of this document.*

**Project Title**

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| *Title should be no longer than 20 words.* |

**Principal Investigator Contact Information**

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| **Name:** |
| **Title:**  |
| **Email:** |
| **Phone:** |
| **Institution, Department, and Address:** |

**Abstract**

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| **Please provide a summary of the research proposal, including: the overall goal; hypothesis; specific aims; clinical rationale; commercial potential (if known); and what is novel and innovative about your approach.***Abstract should be no longer than 250 words.*  |

**Therapeutic Opportunity Description**

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| 1. **What is the primary therapeutic area?**

**Highest priority indications are as follows:** Dermatology: atopic dermatitis; alopecia areata; Bulloid pemphigus; chronic eczema; Dermatomyositis; Erythema nodosum; Epidermolysis bullosa; Hydradenitis suppurativa; Lichen planus; Pemphigus vulgaris; Psoriasis; Pyoderma gangrenosum; Scleroderma; Vitiligo**Other chronic immune-inflammatory diseases to be considered for new targets, pathways and therapies**Gastrointestinal: Crohns’ disease; ulcerative colitisNeurology: Multiple sclerosisMusculoskeletal disorders: ankilosing spondilytis; juvenile idiopathic arthritis; polymyalgia rheumatica; Psoriatic arthritis; Reumathoid arthritis; Systemic lupus erythematosusRespiratory: Asthma; Sarcoidosis |
| 1. **What is the development stage?**Please choose from: Discovery, target identification, target validation, hit generation, compound screening, lead generation, *in vitro, in vivo*, or preclinical validation.
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| 1. **What is the therapeutic modality (if any)?**
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| 1. **Have you developed experimental models to support the research?**Please include details on: the type of model (*in-vitro/in-vivo/ex-vivo* etc.); and species (mouse, human-mouse, rat, etc.). Please also provide a brief description of the model, and the following, if applicable: similarities or differences to human pathology; possible limitations of the model; and key advantages over alternative models available.
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| 1. **Please provide a brief description of the target/pathway and its link to human disease.** For a list of already known (i.e. lower priority targets), please see appendix 2 of this document.
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| 1. **Please describe any therapeutic candidates the investigator has generated against the target, including the mechanism of action.** Include the known characteristics of the therapeutic candidate (such as affinity, specificity, potency, pharmacokinetics, etc.) If unavailable, please describe the preferred attributes of the therapeutic candidate.
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**Scientific Background and Rationale**

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| 1. **Please summarise the hypothesis, background science and rationale, work completed to date, and current stage.**
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| 1. **Please provide key evidence/data to support the hypothesis.** This may include human genetics, human tissue, *in vivo* models, and preclinical proof of concept.
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**Research Plan and Milestones**

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| **Please provide a brief description of the research plan to be carried out to reach your goals.** This should include your objectives and specific aims. |

**Budget, Resources, and Funding**

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| Awardees can request up to €250k total funding per project, through a Sponsored Research Agreement. This includes all expenses and indirect costs, etc. Term of funding should not exceed 2 years. **With this in mind, please could you specify what the award money would be spent on?** |

**IP and Legal Considerations**

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| 1. **Have you previously disclosed this technology to your technology transfer office?**

**1.a If yes, who is your Case Manager?** Please include their email address.  |
| 1. **To the best of your knowledge, what is the prior art in this space?** This could include publications, patent applications, and issued patents.
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**Research Team**

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| 1. **Please provide a brief biographical sketch of the principal investigator and a list of his or her key publications.** An NIH format biosketch is acceptable.
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| 1. **Please list other team members (if any), including collaborators, and describe their roles in the project.** Please provide a brief biographical sketch of the co-investigators (including Title, Department, and Institution).
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**Submitting this Research Proposal**

Once filled out, please submit this form using the following method:

1. For universities subscribed to IN-PART and using the dashboard, please simply upload this document as a ‘Research Project’ under the correct ICO.
2. For anyone else, please simply email a copy of this document to discover@in-part.co.uk

If you have any questions regarding filling out or submitting this Research Proposal Template, or any other aspect of the Discover process, please do not hesitate to reach out to discover@in-part.co.uk. Additionally, answers to university FAQs can be found [here](https://in-part.com/blog/in-part-discover-faqs/).

Thank you for participating in this particular Discover call! We will keep you updated on the status of this submission.

## **Appendix 1 – Seeking Novel Immune-Inflammatory Targets, Pathways, and Therapies**



## ­ **Appendix 2 – Already known (i.e. lower priority) targets**

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| 5-HT1A receptor 5-HT2B receptorAryl hydrocarbon receptor (Ahr) Calcineurin pathwayCannabinoid receptor (agonist target)CD11a/CD18 (LFA-1)Chemokine receptorsChymase(s)Cycloxygenases (COX1 and COX2)Dihydroorotate dehydrogenase (DHODH)E,L,P selectinsGalectin 3 GATA3 Glucocorticoid receptor (agonist target)Histamine receptors (H1 to H4)Inosine monophosphate dehydrogenase (IMPDH)IntegrinsInterferon gamma receptor (agonist; IFN-g)Interferon gamma receptor (agonist; IFN-g)Interleukins: IL-5, IL-12, IL-13, IL-17, IL-23, IL-33, or their receptorsIrak4ItkJAK1, 2, 3Leukotriene pathways (synthesis of LTB4, LTC4 and their receptors)Liver X Receptor (LXR) Neurokinin 1 receptor (NK1R) Neutrophil elastaseNFkappaB pathwayNitric oxide synthase (NOS)Opioid receptors (kappa, mu, delta)OX40/OX40L P2X's | P38 mitogen-activated protein kinases (P38)PAR-2phosphatidylinositol 3-kinase (PI3K)phosphatidylinositol 3-kinase/protein kinase B pathway (PKB or Akt)Phosphodiesterase 4 (PDE4)Phospholipase A2 (PLA2) Platelet activating factor receptor (PAFR)Prostaglandin D2 receptors (DP1, Crth2)Prostaglandin E receptors (EP1,2,3,4)Retinoic acid receptors (RAR) RoRgTSphingosine 1 phosphate receptor (S1PR)Thymic stromal lymphopoietin (TSLP) TNF-alphaToll like receptors TrkATyk2Vanilloid VR1 Receptor (TRPV1)   |