

## Paper Modification and Paper Coating Infrastructure for Packaging Applications

**one.five** is a biomaterials discovery and development company transforming material science solutions into radically better packaging. one.five is seeking scientists and research groups with physical lab/pilot plant capacities or access to such physical lab/pilot plant facilities with experience in **paper modification and coating** at lab and pilot scale. The main goal is to find partners for rapid prototyping and quick design-build-test-learn (DBTL) iterations.



### Approaches of Interest in Paper Modification:

- Paper (barrier) coating e.g. biopolymers and natural polymers
- Pulp processing e.g. modification of pulp to enhance properties (barrier and strength)
- All cellulose composites
- Bio-based polymer dispersion coatings from feedstocks that are not competing with food
- End-of-life testing for paper recycling and compostability

**Starting Materials:** Biobased polymers, biodegradable polymers (industrially compostable, home compostable, soil degradable and marine degradable) , natural polymers, cellulose based materials, nano-clays.

**Desired Prototypes & Samples:** Coated paper sheets (min A5, ideally A4) plus coating material, biopolymer films plus coated paper rolls (minimum 100 metres)

### Product Testing:

- Barrier (water vapour, oxygen, aroma, light, oil/grease, mineral oil)
- Mechanical properties (tensile strength, elongation at break, tear strength, puncture resistance, drop test)
- Recyclability (e.g. in the paper waste stream)
- Compostability and biodegradability (including marine degradability)




**Out of Scope:** Fully petroleum based solutions, oxo-degradable coatings, solutions without a paper substrate, solutions involving corrugated paper, corrugated board packaging.

*Please see this **Additional Information** document for more information on this campaign.*

**Opportunity for Collaboration:** Potential collaborations will be assessed on a case-by-case basis, with the ideal outcome being a research collaboration starting in June 2022.

**Submission Information:** Submission of either this **optional submission form** or alternatively one page, 200-300 word briefs are encouraged, along with any optional supplementary information (e.g. relevant publications, patents, slide decks). In submitting to this campaign, you confirm that your submission contains only non-confidential information.

### Opportunities sought

-  Spinout companies
-  Research projects
-  Centres of excellence
-  Academics and expertise
-  Technologies

### Submissions

Please submit relevant, non-confidential opportunities online via: [discover.in-part.com](https://discover.in-part.com)

Deadline: **9th May 2022 - 10:59 pm GMT**

#### Have any questions?

Contact our team at [discover@in-part.co.uk](mailto:discover@in-part.co.uk)

This allows them to tackle the challenge of industry success holistically - meaning all stakeholders in the supply chain will find value in the technologies they develop.