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**About the Project**
- **Start date:** 1st January 2015
- **Duration:** 48 Months, until 31st December 2018
- **Budget:** 14 million €
- **Project website:** www.spire2030.eu/prodias/

**PRODIA CONSORTIUM**

**Energy reduction**

<table>
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<th>2015</th>
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<td>Demo plant separator &amp; pilot trials</td>
<td>Separateability / Solids handling</td>
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**Separability/Solids handling**

- **Reduce power losses**
  Loss of rotational momentum is an issue encountered with conventional outlet devices at a finite radius. By use of centre-to-centre design, these losses are reduced.

- **Reduce pressure losses**
  Internal pressure drop generates substantial pressure losses when increasing the flowrate. These are reduced by using novel inlet design.

**Demo plant separator**

- **Versatile and scalable**
  A demo separator unit incorporating the novel features is designed for tests with fermentation broth. The unit is versatile comprising several variants and is scalable to larger sizes.

**Cell removal from fermentation broth using centrifugal separation**

*Alfa Laval Tumba AB:* S Szepessy, C Thorsson, P Thorwid, C Hägmark, S Königsson, O Törnblom.  **BASF SE:** T Merkel

**Energy reduction by 50%**

- **Reduce air friction**
  The rotor has high peripheral speed exceeding 200 m/s. Air friction causes considerable power losses and heat generation. Both can be reduced by applying vacuum outside the rotor.

- **Reduce pressure losses**
  The rotor has high peripheral speed exceeding 200 m/s. Air friction causes considerable power losses and heat generation. Both can be reduced by applying vacuum outside the rotor.