Dental trends

Next-generation dentistry will see innovation in diagnostics and the ability to rapidly model and process oral data for optimised manufacture. It will rely more heavily on connectivity & integrated devices and will benefit from technology transfer from other markets. Materials science advances and product design will continue to provide incremental innovation, but new technology will lead to disruptive changes in patient care models.

Sagentia in dentistry

Sagentia has vast experience of imaging, energy-based surgical tools, digital health, in vitro diagnostics, sensor technology and optics. Our work spans technology scouting and market landscaping, proof of principle investigation, concept development, design, prototyping, verification and transfer to manufacture.

Working in partnership with dental device & system manufacturers we use our deep scientific and technology capabilities to deliver innovation and major advancements in dental care.

At Sagentia, we work across the development lifecycle:

- initial need and market analysis
- concept generation
- technology and product development
- transfer to manufacture

Next-generation device for root canal treatment

Full lifecycle design support from concept to regulatory submission

Full case study overleaf →

Dental diagnostic technologies

Fast, convenient diagnosis from the dentist’s chair: biomarkers to optical technologies

More details overleaf →
To develop a next-generation root canal treatment device
Full design lifecycle support from concept to regulatory submission

**Challenge →**
The client asked Sagentia to identify a number of efficiencies for the next-generation version of their device within ambitious timescales

**Approach →**
- Voice of the customer research as well as procedure assessments
- Flexible R&D resource which could be adapted to the needs of the project
- Technology transfer from applications in other sectors guide the development
- Three unique concepts, with the one selected taken through prototyping, manufacturing, verification & regulatory submission

**Benefit →**
- The client was able to consolidate its position in the root canal market
- The new modular system provides a scalable platform to cater for other intraoral procedures

**Technology transfer from applications in other sectors helped guide the development**

**Dental diagnostic technologies**

**Technology transfer →**
Sagentia has deep experience working with imaging and diagnostic technologies in clinical settings. Novel imaging methods provide the opportunity to enhance or replace x-ray imaging.

**Imaging options →**
Just some of the technologies with which we work
- 3D x-ray
- Intraoral imaging
- Connected consumer devices combined with an app
- Near infrared
- Raman spectroscopy
- Optical coherence tomography
- Natural fluorescence
- Enhanced fluorescence

**Salivary diagnosis →**

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<tr>
<th>Biomarkers of periodontal disease</th>
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<tbody>
<tr>
<td>Inflammatory</td>
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<td>β-glucoronidase</td>
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<td>C-Reactive</td>
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<td>Protein</td>
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<th>Connective Tissue Degradation</th>
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<td>α2-macroglobin</td>
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<td>MMPs</td>
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<td>Aminotranferases</td>
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<td>Alkaline phosphatase</td>
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<td>C-term Type 1 collagen degradation products</td>
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<td>Receptor activation of NF-kβ ligand</td>
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**Contact us**
The above are just two examples of our work in dentistry. For more information, please email us at info@sagentia.com or visit us at www.sagentia.com/dental

**sagentia**
a **science group** company