

# New tools of the trade

MedImmune in Maryland, USA, is using its Freedom EVO® platforms as general-purpose tools for simple and routine tasks, rather than specific projects. This 'tools' concept has greatly increased use of the systems, saving much development time.

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MedImmune LLC., based in Maryland, USA, is a global biopharmaceutical company offering a comprehensive range of pharmaceutical development services, from target validation through to pre-clinical and clinical trials. MedImmune acts as the biologics support business for parent company AstraZeneca, and has a broad expertise in healthcare, covering areas such as infection control, oncology, respiratory disease and inflammation, cardiovascular and gastrointestinal diseases, and neuroscience. In addition, MedImmune has several marketed products, including FluMist™, an intranasal live influenza vaccine, and Synagis™, for prevention of respiratory syncytial virus in premature babies.

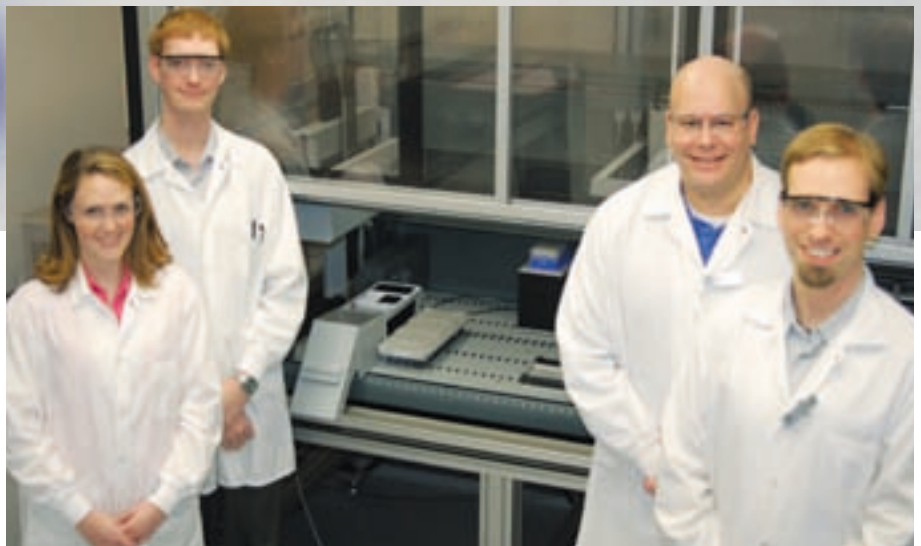
MedImmune uses automation as part of its research and development strategy, accelerating a variety of routine liquid handling tasks to reduce development times. Mr Nicholas Knoepfle, Associate Scientist in Analytical Biochemistry and leader of the Automation Group, explained MedImmune's approach to automation: "The Analytical Biochemistry Group at MedImmune is responsible for development of ELISAs and cell-based assays for testing our products

during development. When I joined the Company in 2002, the group already had an older Tecan liquid handling workstation, but it was an under-used resource as nobody was taking the time to develop automated versions of our assays. I began to extend our use of this instrument, splitting my time between ELISA development and transfer of existing assays onto the automated system. The benefits of automation were quickly realized, and my role changed to focus purely on automated assay development using the Tecan platform. To cope with an increasing demand for automated assays, we began looking for new systems to improve our throughput, and chose to stay with Tecan because of the very positive experience we already had with its instruments."

"We now have a dedicated team for development of our automation capabilities on the Tecan systems, and the use of these platforms has expanded beyond automation of existing manual ELISAs to include cell-based chromatographic analyses and nucleic acid assays, as well as mass aliquoting of reference standards. We are also increasing our use of automated data transfer and analysis, and providing an

internal consultancy service on automation strategies and purchasing of systems.”

“We purchased our first Freedom EVO 150 workstation to automate a suite of ELISAs for a specific project, but quickly realized that this did not offer the best return on investment in equipment, because the focus of projects often changes in the early stages of therapeutic agent development. This made it impractical to spend a lot of time developing complex protocols for specific applications, so we adopted a ‘tools’-based approach instead, automating routine laboratory functions. We began by targeting some of the simplest and most frequently performed tasks, such as serial dilution, fraction collection and microplate replication, creating simple scripts to allow analysts to rapidly pipette out reagents for multiple analyses by entering just a few variables. We created a whole suite of these scripts or ‘tools’, which could be used individually or linked together to create more elaborate processes, and this approach proved very popular with analysts. Use of the automated systems increased dramatically, leading to noticeable reductions in development times for new assays.”



(l to r) Amanda Dodds, William Ivory, Nicholas Knoepfle and Dorian Zoumplis with one of their Tecan Freedom EVO 200 platforms

“As a result of this rapid expansion, we now have two additional Freedom EVO platforms in Gaithersburg. We have one Freedom EVO 200 that is equipped for cell-based and ELISA-type assays, as well as DNA/RNA PCR preparations, and a second which is primarily set up for a range of bulk pipetting operations, including aliquoting of all reference standards used by MedImmune. However, in keeping with the ‘tools’ concept, both platforms are equipped with a wide range of devices and readers, giving us the flexibility to explore many different assays without having to buy in new equipment.”

“Overall, we have been very impressed with our Tecan workstations. The hardware

is high quality and has been immensely reliable, and the Freedom EVOware® software is also excellent, being easy to use, program and customize. We are very happy with the progress we have made so far, and plan to extend our use of these platforms to include more routine laboratory tasks,” Nicholas concluded.

For further information on MedImmune LLC., visit [www.medimmune.com/](http://www.medimmune.com/)

To find out more on Tecan’s Freedom EVO workstations, visit

[www.tecan.com/freedomevo](http://www.tecan.com/freedomevo)

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