ANTEO TODAY PRESENTING AT LARGEST IVD TRADE SHOW IN CHINA

13 March 2017

- **Anteo invited to present at CACLP Expo in Qingdao, China**
- **CACLP is the largest *in vitro* diagnostic (IVD) trade-show in China**
- **Anteo will join Estapor/Merck, SepMag, and Kaivogen at the Medix Biochemica Seminar**

Anteo Diagnostics Limited (ASX: ADO) advises that Medix Biochemica extended Anteo an invitation to present at the China Association of Clinical Laboratory Practice (CACLP) Expo Seminar to be held in Qingdao China. CACLP is the largest professional and influential trade show of the Chinese IVD industry representing 90% of the local Chinese IVD producers.

Anteo will be presenting a technical seminar describing its enabling technology and associated benefits for the rapid development of immunoassays across a range of IVD applications.

- **Speaker:** Dr Charlie Huang, Head of Research and Development
- **Topic:** Anteo Technology: a unique and simple solution for complex protein coupling.
- **Time:** March 13, 16:00 – 16:40

Anteo joins several invited Companies at the Medix Biochemica symposium aimed at providing the Chinese IVD industry with leading edge information on the latest advancements made in the field. These include Estapor/Merck, SepMag and Kaivogen.

Anteo Group CEO Dr Jef Vangenechten said, “The technical presentation by Anteo will be critical for visibility in the Chinese IVD sector, and will help to progress business development activities underway regarding distribution of Anteo products in China.”

ABOUT ANTEO GROUP – Anteo Diagnostics Limited (ADO:ASX) & Subsidiaries

Anteo Group is a global nanochemistry technology and medical supply group, developing, commercialising, manufacturing and distributing products for the life sciences, clinical diagnostics and bioseparations markets, and creating new applications in the energy and medical devices sectors.

Through Anteo Technology, the Anteo Group owns a patented nanochemistry surface engineering technology which unites the strength and stability of covalent binding with the gentleness of passive binding through multi-point chelation. Through the use of its reagents binders, coatings or primers, Anteo provides materials and services for high-value commercial applications. Markets include protein binding and antibody coupling (e.g. point of care devices), primers for in-vivo medical devices and medical drug delivery, and coatings with commercial applications across a broad range of industry sectors, including life sciences, in vitro diagnostics, medical devices and energy.

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Through its wholly owned subsidiary, DIAsource Immunoassays SA, Anteo Group manufactures and distributes a complete catalogue of ELISA and RIA products for clinical diagnostics via established distribution channels in 75 counties across the world, including antibodies and laboratory automation instrumentation.

For more information, please visit www.anteodx.com

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Mix&Go™, a unique technology makes protein coupling in one simple step

CACLP Qingdao 2017

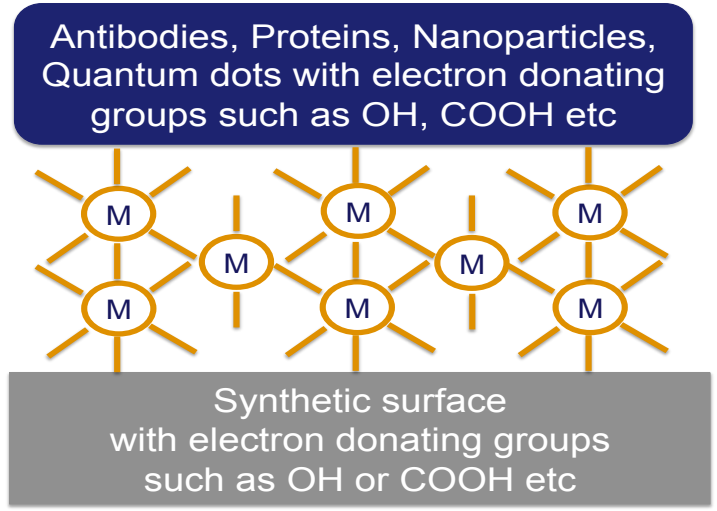
Dr. Charlie Huang

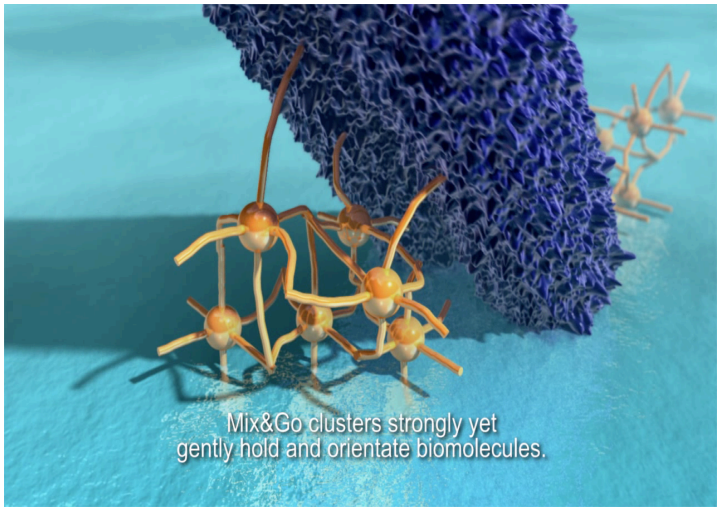
Head of R&D, Anteo Technologies

Anteo's Mix&Go™ Technology - Background

Metal complex based co-ordination chemistry for multipoint binding

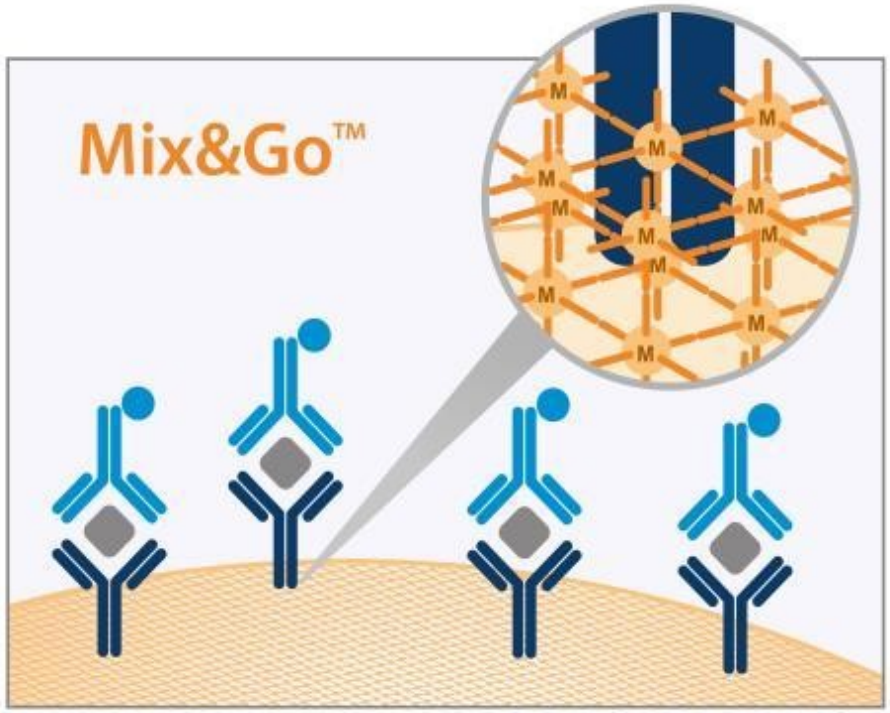
- **Nano-metre thin coating**
  - <10 nm thickness to reduce the impact to overall size and thickness
- **Multiple coordination points**
  - Coordinated coupling to strengthen the binding
- **Damage free binding**
  - Less rigid in comparison to chemical method





Anteo's Mix&Go™ Technology - Benefits

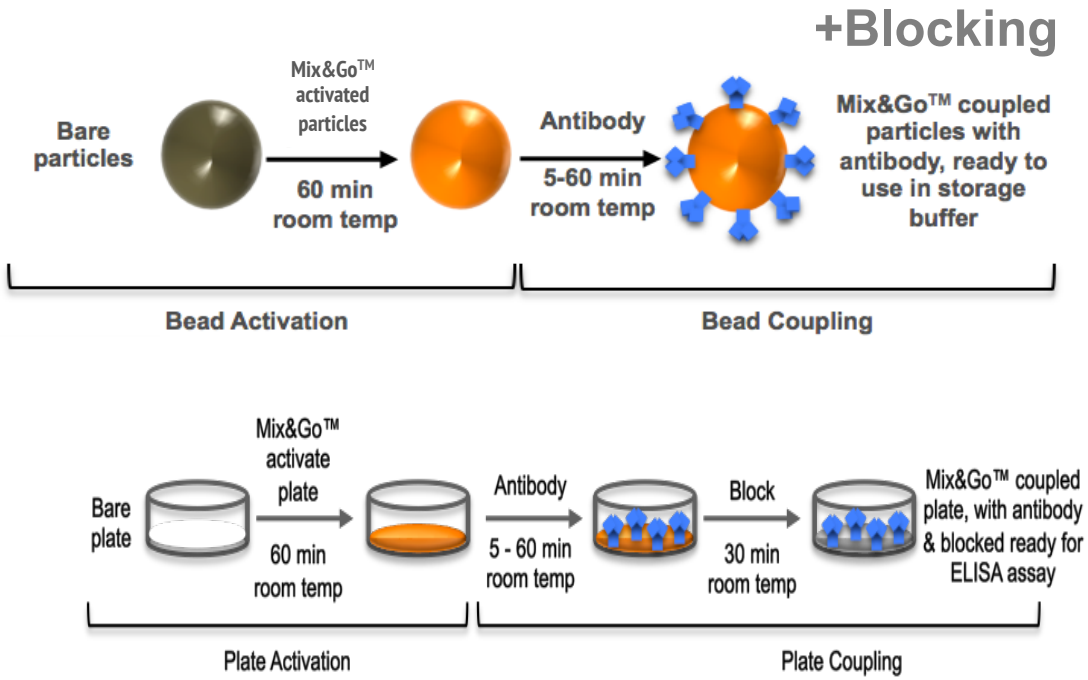
- **The benefits include:**
  - Water based and environmentally friendly to use
  - Store your activated surfaces for one year
  - Binds molecules onto surfaces such as polymeric, plastic and metallic particles and planar surfaces
  - Co-coupling two or more biomolecules in one step (1 hr)
  - Excellent reproducibility between coupling experiments



Mix&Go can improve functionality of proteins on synthetic surfaces and allow multi-functional protein attachment.

Anteo's Mix&Go™ Technology - Platform

- **Mix&Go is an enabling technology combining**
  - the ease of handling of passive adsorption
  - with the strength of binding of covalent chemistry
- **Mix&Go activation**
  - Simple, fast & scalable
  - Aqueous reagents (no solvents)
  - Stable
- **One-step protein coupling**
  - Simple, no protein pre-treatment
  - Retain protein functionality
  - Reduce protein usage



Mix&Go™ Applications & Kits

- **Multiplex Immunoassay Development**
  - Multiplex Activation kit
- **Particles size from 200nm to 3 micron**
  - Particle Coupling kits
- **Biosensors COC/COP/Graphene**
  - Mix&Go Biosensor
- **Lateral Flow Assays**
  - Lateral Flow Coupling Kit

Multiplex Application: Activation Kit for Multiplex Microspheres (Luminex®)

anteo technologies

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NMI achieving results

Natural and MedicalSciences Institute at the University of Tübingen

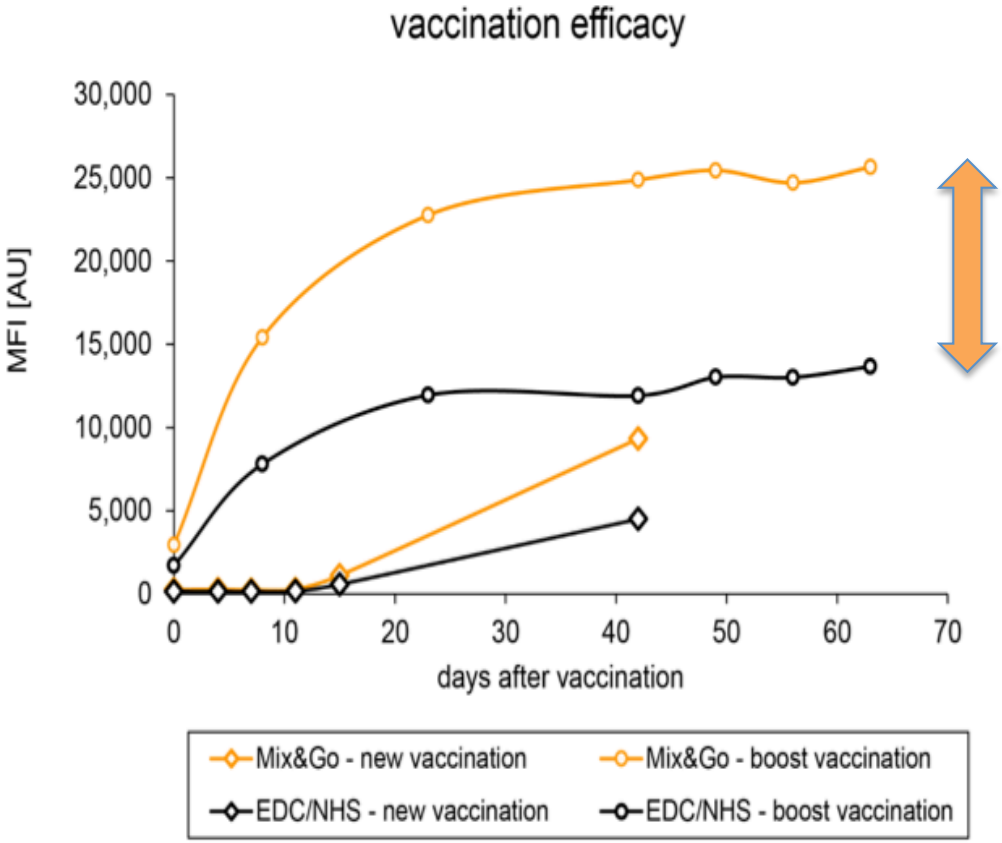
A Novel User Friendly Chemistry to Couple Antibodies and Challenging Proteins to Luminex MagPlex Microspheres

Nicole Schneiderhan-Marra[1], Anna Günther[1], Angela Filomena[1], Thomas Joos[1], Claudia Sievers[2], Katrin Bohm[2], Peter Vukovic[3], Charlie Huang[3], Dean Jennins[3] and Joshua Soldo[3]

[1] Natural and Medical Sciences Institute at the University of Tübingen, Reutlingen, Germany
[2] Helmholtz Center for Infection Research, Braunschweig, Germany
[3] Anteo Technologies Pty Ltd, Brisbane, Australia

Conclusion from NMI using Mix&Go activation kit:

- Inactivated HAV could be functionally immobilised on beads, which was difficult using EDC/NHS.
- Using Mix&Go NMI double MFI signal in comparison to EDC/NHS immobilisation (graph)
- Mix&Go, can be used to successfully couple difficult proteins.



Particle Application (1): Mix&Go™ Sav coupled particles for cell isolation

Materials Views
www.MaterialsViews.com

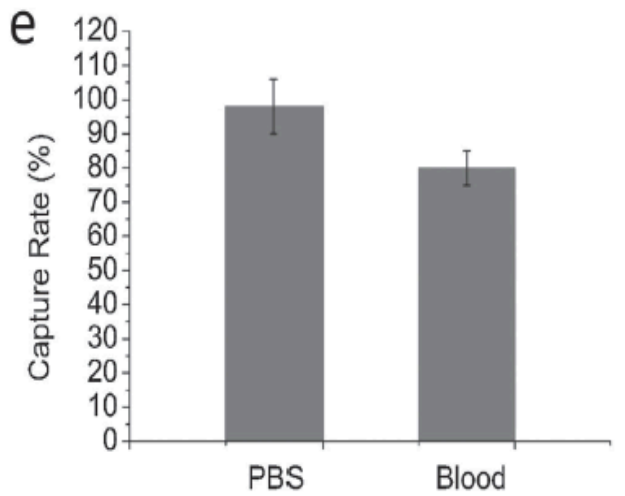
ADVANCED FUNCTIONAL MATERIALS
www.afm-journal.de

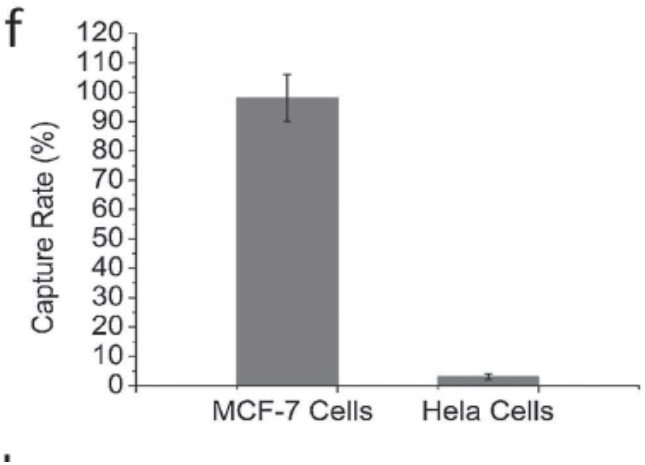
Multifunctional Magnetic Particles for Combined Circulating Tumor Cells Isolation and Cellular Metabolism Detection

Jiao Wu, Xiang Wei, Jinrui Gan, Lin Huang, Ting Shen, Jiatao Lou, Baohong Liu, John X. J. Zhang, and Kun Qian**

Conclusion from Jiao-Tong Uni using Mix&Go Sav particles:

- Anteo Sav 200nm magnetic particle demonstrated high (80%) capturing rate in blood sample (graph e)
- Anteo Sav 200nm magnetic particle demonstrated high specific binding (90%) and very low non-specific binding in cell isolation application (graph f)





Particle Application (2): Mix&Go™ Activated Magnetic Particles

Contents lists available at ScienceDirect

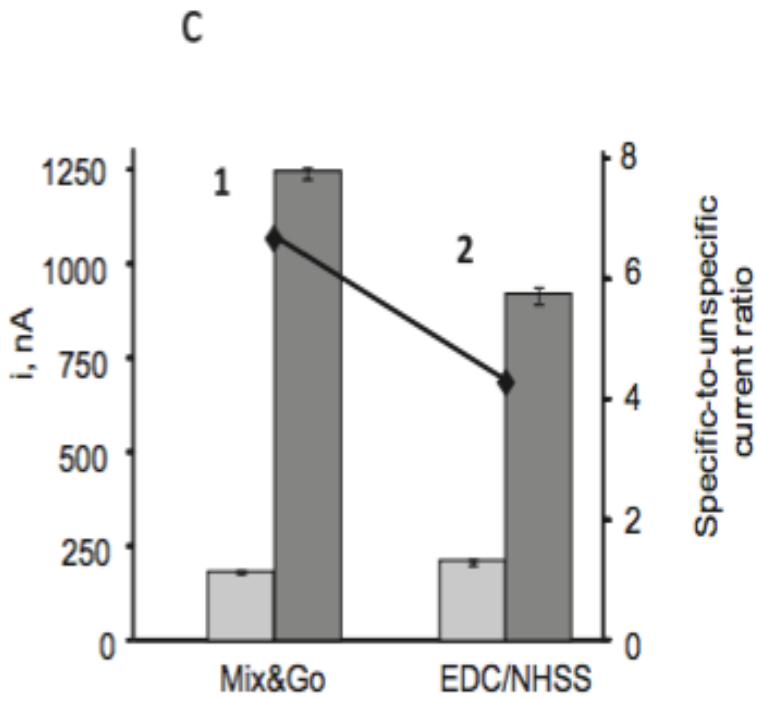
Biosensors and Bioelectronics

journal homepage: www.elsevier.com/locate/bios

Electrochemical immunosensor for sensitive determination of transforming growth factor (TGF) - β1 in urine

E. Sánchez-Tirado, G. Martínez-García, A. González-Cortés, P. Yáñez-Sedeño*, J.M. Pingarrón

Department of Analytical Chemistry, Faculty of Chemistry, University Complutense of Madrid, 28040 Madrid, Spain



Conclusion from UCM Madrid using Mix&Go reagent

- Mix&Go surface demonstrated stable and oriented immobilization of the specific antibodies on COOH-functionalized magnetic particles.
- Mix&Go surfaces also demonstrated better signal to noise ratio in the electrochemical signal amplification (graph c).

Biosensor Application (1): Cyclic Olefin Copolymer (COC)

Analytical Biochemistry 456 (2014) 6–13

Contents lists available at ScienceDirect

Analytical Biochemistry

journal homepage: www.elsevier.com/locate/yabio

Coordination complexes as molecular glue for immobilization of antibodies on cyclic olefin copolymer surfaces

Huey Wen Ooi [a,b], Shaun J. Cooper [a], Chang-Yi Huang [a], Dean Jennins [a], Emma Chung [a], N. Joe Maeji [a], Andrew K. Whittaker [b,c,*]

Conclusion from UQ Brisbane Australia using Mix&Go reagent

- Mix&Go was a simple to use, water-based one-step surface modification reagent.
- Mix&Go activated COC demonstrated improved performance for immunoassays (TNF-aplha, TnI and TSH) in comparison to passive absorption (Fig.9)

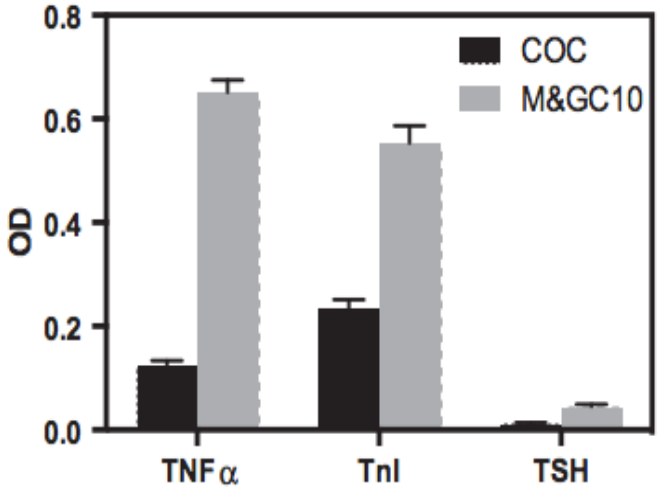


Fig.9. Performance of TNFα, TnI, and TSH sandwich assays on COC and M&G–COC surfaces over capture antibody incubation time of 24 h.

Biosensor Application (2): Mix&Go™ for Graphene Based Electrode

Sensors and Actuators B 223 (2016) 89–94

Contents lists available at ScienceDirect

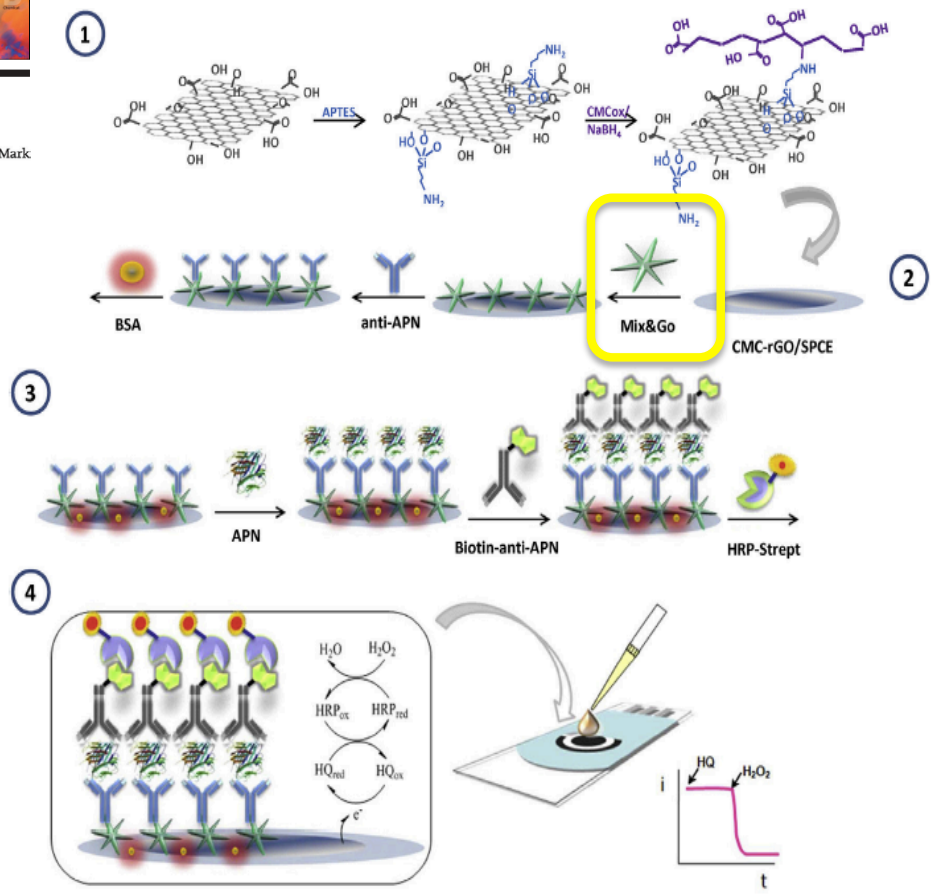
Sensors and Actuators B: Chemical

journal homepage: www.elsevier.com/locate/snb

An electrochemical immunosensor for adiponectin using reduced graphene oxide–carboxymethylcellulose hybrid as electrode scaffold

C.B. Arenas, E. Sánchez-Tirado, I. Ojeda, C.A. Gómez-Suárez, A. González-Cortés, R. Villalonga, P. Yáñez-Sedeño*, J.M. Pingarrón

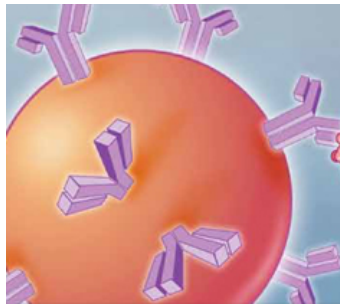
Department of Analytical Chemistry, Faculty of Chemistry, University Complutense of Madrid, 28040 Madrid, Spain



Conclusion from UCM Madrid using Mix&Go reagent

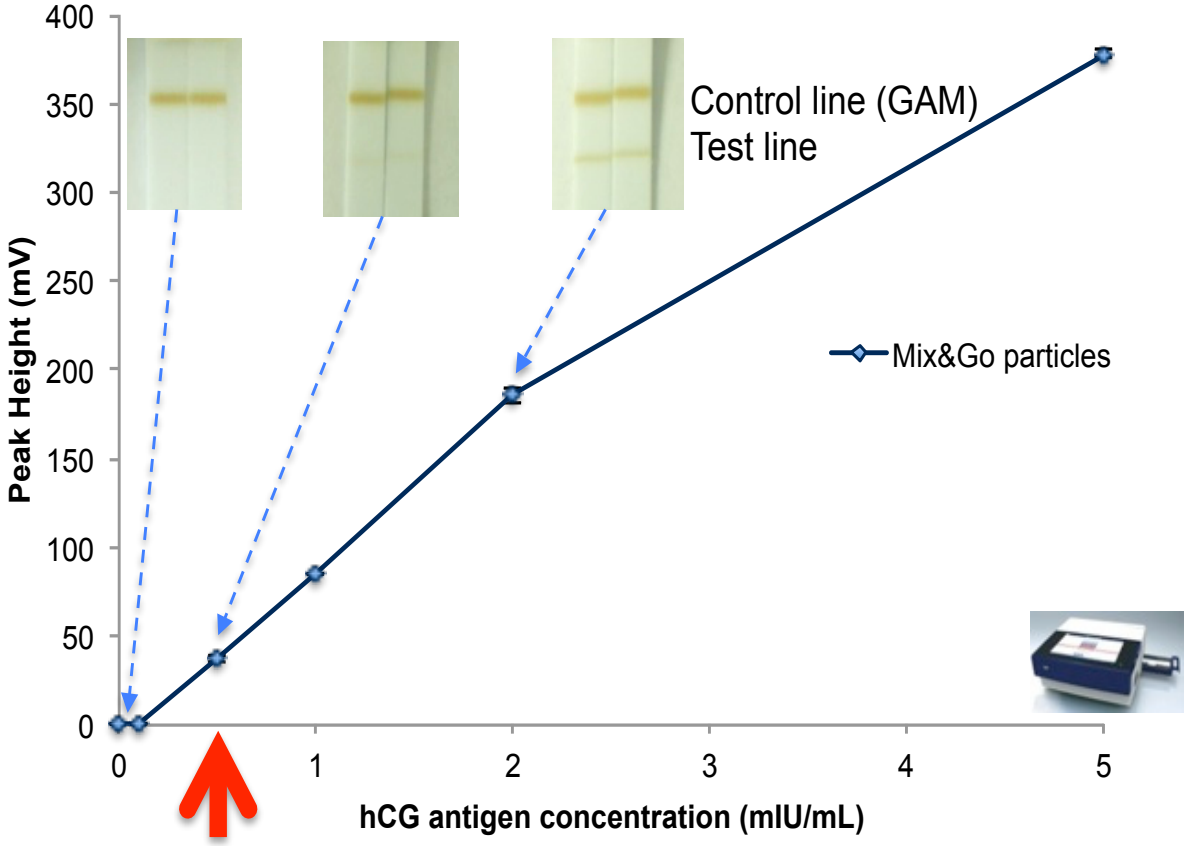
- Mix&Go activated COOH-functionalized graphene and subsequently used in electrochemical signal amplification.
- Mix&Go generated a stable and oriented immobilization of specific capture antibody allowed the development of an immunosensor for the APN protein involved in glucose and lipid metabolism.

Lateral Flow Application: Mix&Go™ Activated Magnetic Nanoparticles



Anteo in-house hCG LFIA using 200nm Mix&Go magnetic particles as optical detection

- The 200nm Anteo magnetic nanoparticles can be used in hCG spiked buffer.
- Anteo magnetic particle achieved impressive lower Limit of Detection cut-off of hCG (0.5mIU/mL) in buffer (arrow).



IVD Protein Coupling Challenges

- Lengthy R&D assay development
  - Lengthy development of bio-conjugation prototypes using chemical or passive methods
- Limited method compatibility across different surface materials
  - Some antibodies or proteins are not compatible between substrates e.g. from silica to polystyrene
- Limited portability of coupling methods across diverse assay platforms
  - Not easy to transfer immunoassays between assay platforms e.g from. ELISA plates to particles
- Existing coupling methods restrict novel developments
  - Not easy to generate multi-functional surfaces for novel applications

Anteo's Mix&Go™ - Solution For IVD Challenges

- Lengthy R&D assay development
  - ✓ Anteo's Solution: Create new working prototype diagnostic assays in less time
- Limited method compatibility across different surface materials
  - ✓ Anteo's Solution: Compatible with glass, silica, polystyrene, latex, dextran and metal oxides
- Limited portability of coupling methods across diverse assay platforms
  - ✓ Anteo's Solution: Can be applied to biosensor, lateral flow and nanoparticle applications
- Existing coupling methods restrict novel developments
  - ✓ Anteo's Solution: Co-coupling enables development of multi-functional conjugates easily

Anteo's Mix&Go™ – Collaborators

- **Defense Material Technology Centre, Deakin University and Planet Innovation Pty Ltd (Australia)**
  - ✓ Developing multiplexed Point-of care (POC) Lateral flow immunoassay (LFIA) for infectious diseases
- **Atomo Diagnostics Pty Ltd (Australia)**
  - ✓ Developing all-in-one biomarker POC LFIA based on AtomoRapid platform
- **Ellume Pty Ltd (Australia)**
  - ✓ Developed high sensitive quantum-dot based technology used in POC LFIA trial for infectious diseases
- **Cook Medical (Australia)**
  - ✓ Developing improved surface coating on medical devices for *in vivo* application
- **Custom Services & Reagents (Singapore, Japan, France, Australia & USA)**
  - ✓ Protein coupled Mix&Go particles and Mix&Go activated surfaces

Conclusion

- Ease of use reduces R&D assay development time
- Mix&Go works with difficult to couple proteins improving their functionality
- Mix&Go is compatible with a broad range of materials for diverse assay platforms
- Flexible protocols allow development of novel multi-functional conjugates
- Anteo Coupling kits & reagents allow developers to overcome their current protein coupling challenges.

THANK YOU

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