

MONOCLONAL ANTIBODY – VITAMIN D



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A monoclonal antibody that detects 1,25 dihydroxy vitamin D developed by Professors Anne White and Barbara Mawer was licensed by UMIP on an exclusive basis to Immunodiagnostic Systems Limited (IDS) in 1996. IDS develop assays for use in clinical and research laboratories worldwide and this antibody was incorporated into a kit for diagnosis of bone and calcium disorders.

“A development that can be used across research, diagnostics and therapeutics”

Professor Anne White, from the Endocrine Sciences Research Group has a joint appointment in the Faculties of Life Sciences and Medical and Human Sciences. She developed this particular monoclonal antibody eighteen years ago whilst working in collaboration with colleague Professor Barbara Mawer in the field of endocrinology.

The monoclonal antibody is utilised by IDS in assays that can be used for research and diagnosis in calcium homeostasis and bone metabolism. Made in Professor White's research laboratories, the monoclonal antibody is secreted from hybrid cells which grow in culture and therefore reduces the dependency on using animals to produce antibodies. It also allows large quantities of antibody to be obtained.

Explains Anne: “The development of monoclonal antibodies is a process that should not be undertaken lightly, not least because it can take at least 6-12 months to generate suitable antibodies.

Although originally intended for use as a research tool, it soon became obvious that the rapid expansion of interest in this area was a prime opportunity for commercial development and I made contact with UMIP early on in the process to benefit from the team's knowledge from the outset.”

UMIP proved instrumental in brokering the deal with IDS, says Anne: “All the support we received from UMIP was useful but the assistance to negotiate the best deal and support on the legal side were particularly helpful as these were areas in which we were relatively inexperienced.”

The income from Professor White's discovery has been ploughed back into research, as she explains: “Because the antibody can be used across research, diagnostics and therapeutics, the commercialisation process has generated a financial income that has provided invaluable support for our research.”



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“It has enabled us to retain research staff, fund PhD projects and also speed up our research development without having to rely on grant funding, which has a rather long time-frame from idea to actual research activity.”

The commercialisation process will always be a steep learning curve, however Professor White found that the support from UMIP helped to significantly ease the process: “Commercialisation is never going to be an easy task, however the whole process became less time-consuming as it progressed. Our experience has shown that an initial investment of effort, with the support of UMIP, can result in income generation over subsequent years.”

Taking an active role in the commercialisation process has improved Professor White’s links to industry, with a number of collaborations now in the pipeline. Says Anne: “Through working closely with UMIP we have gained a much greater understanding of which collaborations would be worthwhile to pursue and which to disregard and this additional knowledge has saved us time and money.”

Academics commercialise their research for a variety of different reasons, including providing funding for their research or personal use, improving industry links or to taking their research to a wider market. Says Anne: “Although the financial aspect is important in terms of underpinning preliminary research ideas, seeing your research product used by research and diagnostic groups internationally, is the ultimate proof of your research. In cases such as this where collaborations have resulted in commercial assays which can be used diagnostically it is extremely rewarding to see the benefits to patients.”

Concludes Anne: “I would advise any colleague who is thinking of commercialising their idea to think carefully, don’t convince yourself that everything has a wide commercial market, but also don’t delay for too long and potentially miss the window of opportunity. If there is a market for your product then you will be successful but it is vital that you work with UMIP right from the initial research stage so that they can advise on which ventures are likely to work and which industry collaborations would prove the most beneficial.”