

## Research output

**The use of intuitive AF-based modelling for the understanding of activation and signalling through insulin-like receptors**  
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**Structural conservation of insulin/IGF signalling axis at the insulin receptors level in *Drosophila* and humans**  
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**Non-glycosylated IGF2 prohormones are more mitogenic than native IGF2**  
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**Characterization of insulin crystalline form in isolated  $\beta$ -cell secretory granules**  
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**The efficiency of insulin production and its content in insulin-expressing model  $\beta$ -cells correlate with their Zn<sup>2+</sup> levels: Zn<sup>2+</sup> levels in  $\beta$ -cells**  
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**Can Arginine Inhibit Insulin Aggregation? A Combined Protein Crystallography, Capillary Electrophoresis, and Molecular Simulation Study**  
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**Structures of insect Imp-L2 suggest an alternative strategy for regulating the bioavailability of insulin-like hormones**  
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**Site-selective C-C modification of proteins at neutral pH using organocatalyst-mediated cross aldol ligations**  
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## Projects

**A regional cryo-EM Facility at the University of York**

DAVIES, G. J. (Principal investigator), ANTSON, F. (Co-investigator), BRZOZOWSKI, M. (Co-investigator), COWTAN, K. (Co-investigator), MOTTRAM, J. C. (Co-investigator), PLEVIN, M. J. (Co-investigator) & POTTS, J. R. (Co-investigator)  
20/12/18 → 19/12/23

**Equipment to Support Protein Crystallisation ....**

BRZOZOWSKI, M. (Principal investigator)  
BBSRC (BIOTECHNOLOGY AND BIOLOGICAL SCIENCES RESEARCH COUNCIL)  
1/02/07 → 31/01/08

**Hijacking intracellular storage bodies to create a novel mammalian cell-based expression system for the production of hard to express proteins**

BRZOZOWSKI, M. (Principal investigator) & GANDERTON, T. (Co-investigator)  
BBSRC (BIOTECHNOLOGY AND BIOLOGICAL SCIENCES RESEARCH COUNCIL)  
1/04/16 → 31/03/17

**Integrated multi-user crystallisation facility comprising a robot and storage system with image retrieval**

ANTSON, F. (Principal investigator), BRZOZOWSKI, M. (Co-investigator), DAVIES, G. J. (Co-investigator), POTTS, J. R. (Co-investigator), SMITH, D. F. (Co-investigator), WILKINSON, T. (Co-investigator) & WILSON, K. S. (Co-investigator)  
1/12/13 → 30/11/18

**Molecular dissection of diabetes and cancer interplay: integrated multidisciplinary approach**

BRZOZOWSKI, M. (Principal investigator)  
MEDICAL RESEARCH COUNCIL (MRC)  
1/11/12 → 31/10/18

**Molecular dissection of interplay between diabetes & cancer**

BRZOZOWSKI, M. (Principal investigator)  
1/01/18 → 23/02/22

**Revealing Molecular Bases of Signal Transduction through Drosophila Insulin Receptor**

BRZOZOWSKI, M. (Principal investigator), SWEENEY, S. (Co-investigator) & VIOLA, C. (Co-investigator)  
BBSRC (BIOTECHNOLOGY AND BIOLOGICAL SCIENCES RESEARCH COUNCIL)  
1/08/22 → 31/12/25

**X-ray Diffraction Equipment for Macromolecular Crystallography at York**

DAVIES, G. J. (Principal investigator), ANTSON, F. (Co-investigator), BRZOZOWSKI, M. (Co-investigator), COWTAN, K. (Co-investigator), FASCIONE, M. A. (Co-investigator), GROGAN, G. J. (Co-investigator), PLEVIN, M. J. (Co-investigator), THOMAS, G. H. (Co-investigator), WILKINSON, T. (Co-investigator), WILLEMS, L. I. (Co-investigator) & WILSON, K. S. (Co-investigator)  
BBSRC (BIOTECHNOLOGY AND BIOLOGICAL SCIENCES RESEARCH COUNCIL)  
18/09/20 → 17/09/22