



Australasian Pork Research Institute Ltd

Call for research proposals – APRIL

Australasian Pork Research Institute Limited (APRIL) is calling for research proposals for its first investment round.

The call will **close on February 16, 2018** and investment decisions will be made on **April 23, 2018**.

Successful projects will **commence on July 1, 2018**.

Timetable for 18-19 Investment Round

Date	Action
December 11, 2017 –February 16, 2018	Call for proposals in areas approved by the APRIL Board. R&D Subcommittee to quality control the proposals to ensure that APRIL criteria are fully addressed to enable evaluations to be conducted after lodgement of proposals in Pork CRC's Omnistar system
February 19, 2018 - March 16, 2018	Proposal reviews and Program meetings with APRIL to finalise the proposals for consideration by the R&D Committee
March 26, 2018	R&D Committee meet to discuss and review the list of proposals for the 2018 investment round to ensure strategic and budgetary fit.
April 23, 2018	APRIL Board to discuss and approve investment in the recommended Proposals
May 2018	Applicants notified of decisions and changes required to proposals
By June 30, 2018	Project documentation prepared, issued and signed
July 1, 2018	Approved Projects can commence in Q1 2018-2019

Lodgement of Response

Proposals are to be lodged in Pork CRC's Omnistar system:

<https://porkcrcomnistar.f1solutions.com.au/>

Note: APRIL is using Pork CRC's system and not APL's PigNet

The application "form" is similar to Pork CRC and you will need to upload APRIL's budget and milestone spreadsheet with your application (available [here](#)).

Applicants wishing to submit a Project proposal should visit the APRIL section of the Pork CRC website (link [APRIL website](#)) to obtain information on use of Omnistar.

Base-funded facilities

APRIL and APL invest in base-funded facilities and staff across the industry.

These include facilities for discovery type research in reproduction, animal welfare and physiology (Roseworthy, SA) and larger scale facilities for validation studies. The latter facilities include those for detailed discovery research on progeny performance and health, large-scale weaner and finisher performance, sow reproduction, animal health and animal welfare. The facilities are specially designed for accurate experimental work within commercial production units within Rivalea Australia and SunPork Farms.

If your proposal includes base-funded facilities, it is essential that you discuss and confirm availability with the contact person for each facility before submitting your application.

Priority will be given to proposals, which do utilise base-funded facilities.

Further details on the Base-funded facilities (location, availability and contact details) can be obtained from:

Rivalea (NSW) – Dr Rob Smits (RSmits@rivalea.com.au)

SunPork North (QLD) & South (SA) – Dr Darryl D'Souza (darryl.dsouza@sunporkfarms.com.au)

Roseworthy (SA) – Dr Cameron Ralph (Cameron.Ralph@sa.gov.au)

Research Priorities

APRIL's strategic plan for research is largely about making the Australasian industry more resilient and sustainable by markedly reducing cost of production through enhanced productivity and differentiation in specific areas.

The research priorities were established by the R&D Committee on August 30 2017.

The target cost of production (COP) is \$2.22/kg carcass weight. The current COP with feed at \$370/tonne varies from \$2.60 - \$2.80/kg carcass weight.

There are three programs

1. Resilience
2. Cost
3. Return on Assets

Program 1 - Resilience

Under the Resilience program, APRIL is seeking proposals on the more judicious use of antibiotics and interested but not limited in ideas/proposals on:

- Reduction in the use of in-feed medications or more conservative delivery of in-feed medications (pulse medication post-feed mixing, in line blending of medications).
- Non-antibiotic alternatives (i.e. vaccines, nutritional strategies, microbiome, effective additives and "natural" products).
- Elimination of critical antibiotics from the production system.
- Reduction in antimicrobial resistance
- Development of "sentinel" pig systems that provide alerts to the early onset of disease or give an indication of the overall immune status of the herd.
- Novel diagnostics

The target for the more judicious use of antibiotics is a 50% reduction in antibiotic doses administered per pig per year and elimination of critical antibiotics from production systems.

APRIL is also seeking new ideas/new science on enrichment and interested in but not limited to the following areas.

- Quantification of enrichment practices to improve health and productivity.
- Measurement of affective state in farmed animals.
- Novel diagnostics of affective state in farmed animals
- Real time monitoring of affective state
- Understanding of factors contributing to tail biting.

Program 2 - Cost

Under the Cost program, APRIL is seeking proposals, which will help the Australian industry reduce its reliance on the more conventional feed ingredients and help divorce the industry from the global grain and soybean markets.

The target is to reduce average feed cost by 10% based on "current" ingredient prices.

APRIL is seeking ideas on, but not limited to,

- Enhancing our capacity to utilise grain alternatives including milling co-products and pulses.
- Maintaining development of NIR calibrations for DE and available lysine in cereals and oilseeds, respectively.
- Developing effective means of measuring feed intake and wastage in pigs through all production phases.
- Enhancing methods for recovery of waste phosphorus and other high-demand nutrients.
- Improving application of enzyme and other feed additive technologies to conserve nutrients.
- Developing nutrient profiling and feeding practices of alternative or novel feed sources

Program 3 –Return on Assets

Program 3 covers new science to enhance markedly both reproduction and progeny health and performance.

Reproduction

APRIL is seeking new science and technologies to enhance markedly the reproductive performance of Australian sows without the need to import foreign genetics.

The targets are 12 piglets weaned/litter and 28 piglets weaned per mated female /year.

New ideas and science is sought but not limited to the following areas.

- Optimisation of intake during lactation and management of sow body condition to maximise/enhance subsequent reproduction.
- Relationship between seasonal fertility versus infertility.
- Quantification of methods to control seasonal market supply through breeder management
- Investigate and review new reproductive technologies and nutrient requirements that optimize piglets weaned/sow and reduce litter weight variability.
- Develop alternatives to importation of genetics to facilitate faster rate of genetic gain in Australia.

Progeny

APRIL is seeking new science and technology to improve the efficiency and survival of pigs from weaning to sale. The targets are to achieve 2.4% mortality between weaning and sale and a feed: gain of 2.0 (26 MJDE/kg live weight gain) from weaning to sale at 110 kg and a corresponding HFC (carcass weight basis) of 3.4. The averages for feed: gain from weaning to sale and HFC are currently 2.4 and 3.75 respectively.

New ideas and science is sought but not limited to the following areas.

- Growth enhancement to improve inherent feed efficiency
- Manipulation and monitoring of feed intake
- Control and manipulation of carcass quality and variability
- Measurement and reduction of feed wastage
- Early detection of health challenges and improved control of sub-clinical health issues
- Appropriate revision of nutrient requirements

Other

APRIL will also consider innovative proposals in the following areas

- Novel methods to control vermin in production systems.
- Novel and cost effective precision farming technologies relevant to the pork industry.
- New low cost technologies for assessing the sensory quality of Australasian pork
- Real time assessment of eating quality

Innovation or Longer Term

APRIL will accept shorter-term innovation proposals and longer term research proposals. Innovation proposals have a maximum budget and period of \$50,000 and 12 months respectively and are ideal for testing new ideas and strategies, which could lead to a commercial project or a longer-term research project.

Longer-term research proposals will initially be limited to three years duration and should contain appropriate stop-go milestones.

Need for cash investment

All APRIL proposals will need to include a minimum external cash contribution of 25% of the proposal's total cash cost in the budget for longer-term proposals and a minimum of 20% for Innovation proposals. . The cash component can come from applicants and/or organisations interested in commercialising the project outcomes. Cash can also come from other funding organisations such as the CRC program through CRC –Projects or through the ARC via ARC Linkage grants. A number of organisations may contribute to a project to meet the minimum cash contribution requirement. The cash component is to be paid to APRIL.

An example for a longer term project:

Total project cash cost **\$100,000 (paid to Lead organisation by APRIL)**

Provided by:

Organisation A	\$ 12,000 (paid to APRIL)}	}	25%
Organisation B	\$ 13,000 (paid to APRIL)}		
APRIL	\$ 75,000		75%

Commercialisation Projects

Commercialisation awards are also available. Commercialisation applications are assessed on a competitive basis using the selection criteria set out in the application form.

Each of these criteria can be addressed by providing evidence against the indicators set out under each criterion.

As a guide, your responses should be limited to about half a page per selection criteria.

Further details and an application form are available from:

Dr Charles Rikard-Bell on 0439 513 723 or at Charles.rikard-bell@porkcrc.com.au

APRIL Project Guidelines and Conditions

Project Assessment

All APRIL proposals will need to address how the proposal is new and how it will help enable the targets for each program be achieved.

Project proposals will be assessed on:

- the quality of the science,
- the cost of the project (including levels of external cash contributions),
- chances of success
- ease of adoption of the project outcomes and their potential impact on the Australian Pork industry and APRIL Program targets

Other important considerations are:

- potential IP and commercialisation opportunities, which may arise from the project's outcomes.
- the level of utilisation of base-funded research facilities,

One of the main determinants of success will be the innovativeness and impact of proposals received.

Researcher responsibilities

Research providers, successfully being awarded projects, will be responsible for:

- Assembling expertise identified in the proposal from within or between organisations to deliver the research outcomes identified in the proposal.
- Securing access to required research facilities (laboratories, equipment, base-funded facilities, and on-farm demonstration sites) and the necessary approvals for the conduct of the research.
- Delivering the research outcomes within agreed budget and timeframe.
- Analysing and reporting all data generated in formal reports to APRIL using standard templates.
- Identifying potential IP and commercialisation opportunities likely to arise from the project.
- Disseminating key findings from the research to the wider scientific community, the pork industry, and community in general in a variety of formats subject to approval by APRIL.

Specific outputs required by APRIL will be:

1. Progress reports against milestones/decision points agreed with APRIL that detail project findings from individual experiments.
2. Quarterly reports submitted within two weeks of the quarter's end commencing at the end of the first quarter of the project until the Final Report is submitted.
3. A comprehensive Final Report (following approval of a draft by APRIL) detailing all aspects of the research conducted (methodology, data, analysis and conclusions).
4. A one-page summary emphasising the Key findings and Implications for Industry.
5. Scientific papers, conference presentations, producer talks and trade articles as appropriate, and approved in advance by APRIL.

How to apply

Research Applications (Innovation and longer term) will need to be lodged on Pork CRC's Omnistar system.

<https://porkcrcmnistar.f1solutions.com.au/>

Note: APRIL is using Pork CRC's system and not APL's PigNet

Commercialisation applications need to be lodged with Dr Charles Rikard-Bell.

Further Information

For further information, contact:

Dr Roger Campbell on 0407 774 714 or at roger.campbell@porkcrc.com.au

Mr Geoff Crook on 08 8313 7684 or at Geoff.crook@porkcrc.com.au

Dr Charles Rikard-Bell on 0439 513 723 or at Charles.rikard-bell@porkcrc.com.au