POSITIVE RESULTS FROM EVALUATION OF EXO-NET IN PANCREATIC CANCER

- **Pancreatic cancer is one of the most deadly cancers, with a 5-year survival rate of 10%**
- **No liquid biopsy tests exist for the early detection of pancreatic cancer**
- **Positive results from collaborative research study to evaluate BARD1's EXO-NET™ exosome capture technology and Minomic's anti-GPC-1 antibody for detection of pancreatic cancer**
- **EXO-NET™ was shown to isolate exosomes from pancreatic cancer patients and healthy control plasma samples**
- **Minomic's GPC-1 antibody was shown to specifically bind EXO-NET isolated pancreatic cancer exosomes and not bind healthy (non-cancer) exosomes**
- **Pilot study demonstrates the scientific feasibility of utilising EXO-NET™ to isolate exosomes for pancreatic cancer detection in conjunction with an anti-GPC-1 antibody**

Melbourne, Australia, 16 March 2021: BARD1 Life Sciences Limited (ASX:BD1) (**BARD1** or the **Company**) is pleased to announce preliminary positive data from a collaborative pancreatic cancer pilot study with Minomic International Ltd (**Minomic**). Using the Company's game-changing EXO-NET™ technology, BARD1 scientists isolated exosomes from plasma in samples from ten pancreatic cancer patients and five healthy controls, and probed them with Minomic's proprietary antibody, MIL-38, that binds to a protein called glypican-1 (GPC-1). GPC-1 has been reported in several independent studies to be present on exosomes from pancreatic cancer patients[1,2,3] and high-levels are associated with poor prognosis.[4] The study found that EXO-NET™ was highly effective at isolating exosomes from both pancreatic cancer and healthy control samples, and the anti-GPC-1 antibody was specific for exosomes from pancreatic cancer patients.

BARD1 Chief Scientific Officer, Dr Peter French, said: "This is a pleasing result, as it highlights two key outcomes for BARD1. Firstly, the results demonstrated that the Company's proprietary exosome-capture technology, EXO-NET™, is extremely efficient at capturing exosomes from patient samples with a high specificity, yield and speed (15 minutes) which compares well with competitive exosome isolation technologies. Secondly, although only a small number of patient samples were tested, exosomes from pancreatic cancer patients displayed significant levels of GPC-1 protein compared to non-cancer patients, as indicated by binding of Minomic's MIL-38 antibody. This finding supports the previously reported association by several independent researchers that GPC-1 is a potential marker of pancreatic cancer exosomes. Whilst further studies are needed to confirm sensitivity and specificity of an exosome-based GPC-1 test for pancreatic cancer detection, the data support the ongoing development of this technology."

Minomic Head of Research and Development, Dr Douglas Campbell, said: "It is exciting that this pilot study indicated that our anti-GPC-1 antibody, MIL-38, appears to specifically bind pancreatic cancer exosomes. This opens up new applications for MIL-38 which we are eager to explore. The ease of use of EXO-NET™ means that an exosome-based diagnostic test is commercially viable, overcoming many of the barriers of current exosome isolation technologies in terms of scalability, isolation speed and high yield."

Dr Leearne Hinch, BARD1 CEO said, "This is a very encouraging result that clearly demonstrates the commercial potential of our soon-to-be launched RUO EXO-NET™ product for capturing exosomes and the feasibility of using GPC-1+ exosomes for detection of pancreatic cancer. BARD1 and Minomic are

[1] Buscail E, Chauvet A, Quincy P, et al. 2019. CD63-GPC1-positive exosomes coupled with CA19-9 offer good diagnostic potential for resectable pancreatic ductal adenocarcinoma. *Translational Oncology* 11(12). https://doi.org/10.1016/j.tranon.2019.07.009

[2] Melo SA, Luecke L.B, Kahlert C, et al. 2015. Glypican-1 identifies cancer exosomes and detects early pancreatic cancer. *Nature* 523:177–82

[3] Frampton AE, Prado MM, López-Jiménez E, et al. 2018. Glypican-1 is enriched in circulating-exosomes in pancreatic cancer and correlates with tumor burden. *Oncotarget* 9(27):19006-13. doi: 10.18632/oncotarget.24873

[4] Lu H, Niu F, Liu F, Gao J, Sun Y, Zhao X. Elevated glypican-1 expression is associated with an unfavorable prognosis in pancreatic ductal adenocarcinoma. *Cancer Med* 2017; 6(6):1181–1191.doi: 10.1002/cam4.1064

extremely pleased by this outcome and will discuss how to advance the project towards development of an exosome-based GPC-1 test for early detection of pancreatic cancer to improve patient outcomes and survival for this important unmet need."

Authorised by the Company Secretary, Tony Di Pietro.

- ENDS -

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ABOUT BARD1 LIFE SCIENCES LTD

BARD1 Life Sciences Ltd (ASX:BD1) (**BARD1** or the **Company**) is a leading Australian diagnostics company with an innovative portfolio of diagnostic technologies and products. The Company is focused on developing and commercialising best-in-class diagnostic solutions based on its BARD1, SubB2M, Molecular NETs and hTERT platforms for healthcare professionals and patients. The cancer diagnostics portfolio includes the commercialised hTERT test used as an adjunct to urine cytology testing and development-stage tests for ovarian, breast, lung, prostate and pancreatic cancers. The Company is also commercialising its Molecular NETs platform for sample preparation and is launching its proprietary EXO-NET™ exosome capture tool for use in research for exosome-based diagnostics and therapeutics. For more information on BARD1 see www.bard1.com.

ABOUT EXO-NET: Next generation exosome capture

BARD1's EXO-NET™ technology is a Molecular NET, or matrix, comprising several antibodies that bind to common external exosome-associated proteins with spacers and linkers that form a multilayered matrix with defined pores that exclude larger particles. The Molecular NET matrix is coated onto magnetic beads for ease of use in the laboratory. This allows for fast, accurate and efficient capture and isolation of exosomes from any liquid biopsy sample, including plasma, saliva, urine and culture media. The technology is easy to use, rapid and highly scalable and is compatible with existing automated testing systems and downstream biomarker analysis making it ideal for high volume clinical laboratory applications. For more information on EXO-NET see www.bard1.com/products/exo-net-ruo/ and www.exo-net.com.

ABOUT MINOMIC INTERNATIONAL LTD

Minomic International Ltd (**Minomic**) is an Australian diagnostic company specialising in development of diagnostics for solid tumours, including prostate, bladder and pancreas. Minomic has developed the *in vitro* diagnostic MiCheck® Prostate test for the early detection of aggressive prostate cancer. Minomic is currently launching MiCheck® Prostate in Australia and the US, to assist clinicians in determining the risk of men having aggressive prostate cancer which can reduce unnecessary biopsies. For more information on Minomic see www.minomic.com.

ABOUT PANCREATIC CANCER

Pancreatic cancer was the 10th most common cancer and the 4th leading cause of cancer death, accounting for about 3% of all cancers in the USA and 7% of all cancer deaths in 2018. In the USA, there were an estimated 57,600 people diagnosed with pancreatic cancer and 47,050 deaths in 2020.[5] Cancer Australia estimated there were 3,933 new cases diagnosed and 3,300 deaths from pancreatic cancer in Australia in 2020.[6]

The 5-year survival rate for pancreatic cancer is only 10%. The poor prognosis for pancreatic cancer is largely due to the asymptomatic nature of early-stage pancreatic cancer and its late-stage diagnosis when

[5] NIH. Cancer Stat Facts: Pancreatic Cancer. https://seer.cancer.gov/statfacts/html/pancreas.html
[6] Cancer Australia. Pancreatic cancer. https://www.canceraustralia.gov.au/affected-cancer/cancer-types/pancreatic-cancer/statistics

the disease is locally advanced or metastatic (85% of cases) and can't be surgically removed. The median survival time for pancreatic cancer patients detected at late-stage is only 3 -14 months.[4] Early detection of pancreatic cancer when local (11% cases) increases 5-year survival to 39%, compared to late-stage detection of only to 3% when distant (52% cases).[7]

There are no accurate, reliable and specific screening tests to detect early-stage pancreatic cancer in people who have no symptoms. As a result, most people are diagnosed at a late stage when the cancer can't be surgically removed and/or has already spread from the pancreas. A blood test that could specifically detect asymptomatic premalignant or early malignant tumors and predict the response to treatment would greatly benefit pancreatic cancer patients by improving patient outcomes and survival.[8]

FORWARD LOOKING STATEMENTS

This announcement contains certain 'forward-looking statements' within the meaning of the securities laws of applicable jurisdictions. Forward-looking statements can generally be identified by the use of forward-looking words such as 'may,' 'should,' 'expect,' 'anticipate,' 'estimate,' 'scheduled' or 'continue' or the negative version of them or comparable terminology. Any forecasts or other forward-looking statements contained in this announcement are subject to known and unknown risks and uncertainties and may involve significant elements of subjective judgment and assumptions as to future events which may or may not be correct. There are usually differences between forecast and actual results because events and actual circumstances frequently do not occur as forecast and these differences may be material. The Company does not give any representation, assurance or guarantee that the occurrence of the events expressed or implied in any forward-looking statements in this announcement will actually occur and you are cautioned not to place undue reliance on forward-looking statements.

[7] ACS. Survival rates for Pancreatic Cancer. https://www.cancer.org/cancer/pancreatic-cancer/detection-diagnosis-staging/survival-rates.html

[8] Qi Z-H, Xu H-X, Zhang S-R, Xu J-Z, Li S, Gao H-L, Jin W, Wang W-Q, Wu C-T, Ni Q-X, Yu X-J, Liu L. The significance of liquid biopsy in pancreatic cancer. *J Cancer* 2018; 9(18): 3417-3426. doi: 10.7150/jca.24591