In labour studies, reproductive labour is typically defined as the activities involved in taking care of others on a daily basis in households. Reproductive labour, including cooking, cleaning, and socializing children, is typically unpaid as well as gendered and racialized, being performed disproportionately by women and minorities. However, in emerging research in labour studies, scholars are also increasingly paying attention to new forms of reproductive labour performed by women in conjunction with biomedicine and biological sciences. In developed countries everywhere birth rates are declining, impacting economies in profound ways and leading to shifts in public policy on labour markets, retirement, and immigration. At the same time and in the interest of mitigating these shifts, the advancement of reproductive technologies and new medical interventions into pregnancy and labour have commercialized, managed, and modernized reproduction. Women’s and fetal bodies are not only the sites of these interventions; increasingly, they are the sources of their ‘raw materials,’ which include stem cells, embryos, and other tissues of pregnancy such as placentas. The meaning of women’s labour, including their reproductive and economic labours, is thereby redefined. This lecture explores women’s labour in the context of reproductive sciences and medicine. Discussing results from two empirical research studies in placentology, or the science of placentas, the lecture explores how women are simultaneously marginalized, empowered, and interpellated into the projects of reproductive science and medicine. It also explores fundamental questions about how different academic disciplines study and theorize reproduction in a world in which science is increasingly defining and managing it. It is argued that transdisciplinary approaches to studying reproductive labour, which pursue novel methodologies and theories that are integrative of different knowledges, can help to democratize science and medicine while also advancing the health and wellbeing of women, children, families, and communities.