

Looking Back, Looking Forward: The Legacy of the National Advisory Board on Ethics in Reproduction (NABER)

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Abstract The National Advisory Board on Ethics in Reproduction (NABER) was an independent, private, not-for-profit board created in 1991 by the American College of Obstetricians and Gynecologists (ACOG) and the American Fertility Society (AFS) to review and comment on ethical issues related to the use of new reproductive technologies. This paper reviews NABER's mission and accomplishments, and attempts to make sense of why this vibrant, important organization closed its doors in 1998.

THE BIRTH OF NABER

In the early 1990s, sensitive issues such as the federal ban on the experimental use of fetal tissue were making headlines across the country. Even though the American College of Obstetricians and Gynecologists (ACOG) and the American Fertility Society (AFS) had their own ethics committees to advise their members, certain leaders within these organizations felt that there needed to be an independent body that could review and comment on ethical issues in reproduction and assisted reproductive technology (ART). These leaders pulled together start-up funds to create the National Advisory Board on Ethics in Reproduction (NABER). When NABER was formally introduced at a press conference on January 7, 1991, it became the only independent body in the United States that was specifically focused on evaluating ART and genetics issues in a systematic way. Unfortunately, after eight years of impressive work, NABER formally disbanded in early 1998.

NABER'S PURPOSE AND GOALS

In 1991, federal regulations required ethics oversight of all research proposals that involved in vitro fertilization (IVF) or other related procedures;¹ however, the federal government, under the Reagan and Bush administrations, failed to appoint members to this Ethics Advisory Board (EAB). As a result, there was

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a de facto ban on federal funding for research related to ART. Research continued with private financial support, but without the added oversight that would have been provided by the National Institutes of Health (NIH) had there been federal funding. While privately funded research taking place in university-affiliated institutions most likely received peer review through an institutional review board (IRB), it is likely that some research continued in independent IVF clinics without any type of oversight. When the formation of NABER was jointly announced by Kenneth J. Ryan, MD, representing ACOG, and Howard Jones Jr., MD, representing AFS, it was clear that both organizations intended for NABER to become the private sector's ethics advisory board as well as something akin to a Federal advisory commission.

NABER's formal Statement of Purpose was as follows:

There are important areas of biomedical research for which no mechanism for national ethical review currently exists. These include such issues as in vitro fertilization research, research with early human embryos, research on preimplantation genetic diagnosis, and fetal tissue transplantation research.

The National Advisory Board on Ethics in Reproduction (NABER) has been established to fill this vacuum and to provide a forum for public discussion of these issues and the voluntary review of proposals on these topics. NABER will examine the ethical and public policy aspects of research covered by its mandate.

NABER's mandate was to:

... evaluate existing statements from this and other nations, and develop appropriate guidelines for the United States for research in the areas discussed in the Statement of Purpose. NABER will monitor research progress in these areas. NABER will review proposed research in a consultative and advisory capacity, and will evaluate new ethical issues and practice questions as they arise.

There were some members of the professional societies who hoped NABER would also become a licensing board similar to the Human Fertilisation and Embryology Authority (HFEA) in the United Kingdom.

MEMBERSHIP AND STAFF

Kenneth Ryan had worked with bioethicist Albert Jonsen, PhD, on *The Belmont Report*,² and asked him to chair this new organization. Dr. Jonsen agreed and began working with members of ACOG and AFS to identify potential board members. Every attempt was made to make the board a diverse body. The original group consisted of a developmental biologist, two law professors, a practicing lawyer, two philosopher/bioethicists, two ob/gyns, a pediatrician, a Protestant theologian, an Orthodox Jewish Rabbi, and a Catholic scholar (see Appendix A for a complete list of board members). Notably absent were members of the public, infertility patients, and experts in the field of reproductive technology. Later, as board members were replaced, one of the criteria for membership included some kind of expertise in reproduction. A reproductive endocrinologist was eventually added to provide clinical and scientific input, and a developmental child psychologist was added to provide perspective on how the use of new reproductive technologies might affect children. It was an eclectic group that otherwise would have had little interaction with each other. Being on the board created a common interest and led to what board member and cochair, Ruth Macklin, Ph.D., characterized as one of NABER's greatest achievements—dynamic interaction between individuals with a broad spectrum of backgrounds that resulted in an opportunity to introduce reproductive ethics issues into a wide range of disciplines.

Dr. Jonsen hired Cynthia B. Cohen, PhD, JD as NABER's first Executive Director. When she stepped down in 1994, Dr. Jonsen and the board hired Gladys B. White, PhD, as the second Executive Director.

The organization rented office space within the ACOG's Washington, DC building, next door to the AFS governmental affairs office. This was a convenient arrangement because it facilitated interaction with the two professional organizations and gave NABER access to resources such as administrative services and the ACOG library.

FUNDING

During NABER's formative years (1991–1993), ACOG and the AFS provided financial support. Soon thereafter, the Ford Foundation, Greenwall Foundation, Walter and Elise Haas Fund, Josiah Macy, Jr. Foundation, and Rockefeller Foundation became financial supporters, and on June 25, 1993, NABER became financially independent from the two professional societies. In NABER's final year, the California Wellness Foundation also became a financial supporter.

Raising private funds for an organization that focused on ethical issues in ART proved to be extremely challenging because most private foundations were not focused on this issue. According to Cynthia Cohen, private foundations were much more interested in supporting efforts to improve reproductive health internationally and efforts to increase access to health care for the poor than in what was perceived to be a much narrower issue that affected only the wealthiest members of developed countries. Ruth Macklin points out that another challenge was that a number of the board members could not participate in the fundraising process for NABER because to do so conflicted with their responsibilities to bring in funds to their academic institutions.

REVIEWING RESEARCH PROTOCOLS AND BECOMING A LICENSING AUTHORITY

The board had its first meeting in December 1991 and set about defining NABER's agenda. Members of the board quickly realized that they were not equipped to become the private sector's ethics advisory board or licensing agency. First, members were concerned about undermining the integrity of the local IRB system. Next, they did not have the scientific expertise to interpret complex research protocols. Finally, participation as a board member was uncompensated. NABER operated on a very tight budget with a skeleton staff of an Executive Director, administrative assistant, and occasional intern. It simply did not have the resources necessary to review numerous research proposals in a timely fashion or inspect and license IVF clinics. Even so, the board kept open the possibility of reviewing protocols under certain circumstances. NABER announced, through a notice published in the journal *IRB*, that it would review protocols that met the following criteria: a) the protocol is designed to emphasize new and cutting edge ethical issues; b) the protocol must have been approved by a local IRB first; and c) the investigators must give their permission for NABER's review.

As NABER's stability and visibility grew, there were attempts to fulfill its original mandate. Cynthia Cohen submitted a proposal to the Ethical, Legal, and Social Implications (ELSI) division of the Human Genome Project offering NABER's expertise to review any research proposals submitted for federal funding that were related to assisted reproduction. In the proposal, NABER offered to serve as an external ethics review in order not to compete with local IRBs. The board envisioned becoming something like NIH's Recombinant

DNA Advisory Committee (RAC). The government reviewed the original ELSI proposal, as well as a revised draft submitted by Gladys White, but eventually turned it down on the basis that NABER was not sufficiently broadly constituted to justify supporting its work.

At Howard Jones's request, NABER began exploring how reproductive technologies were regulated in other countries. Dr. Jones wanted NABER to consider whether the United States could introduce a regulatory body or licensing authority similar to the HFEA in the United Kingdom, and whether NABER might be the appropriate body to do this work. At that time, the need for oversight was made even more clear by the growing evidence that health care providers at the University of California, Irvine had used oocytes and embryos for infertility treatment without the consent of the donors,³ and the announcement that research conducted by Stillman and Hall on embryo splitting was conducted prior to receiving IRB approval.⁴

Gladys White, NABER's second Executive Director, made an effort to reach out to the international community in order to form a network of people working in the area of reproductive ethics and policy. She made a trip to the United Kingdom to learn more about how the HFEA regulated ART research and practice; however, according to Cynthia Cohen, NABER did not pursue the idea of trying to become some sort of licensing authority because the political situation in Congress did not allow it, and infertility specialists were strongly against it, despite the fact that Dr. Jones was highly respected by them. As the years passed, Dr. Jones continued to support the idea that NABER might be the appropriate body to form a licensing board, but there continued to be little support from the industry and none of the necessary resources.⁵

SERVING AS A PUBLIC FORUM AND DEVELOPING PRACTICE GUIDELINES

The field of reproductive technology grew rapidly during the 1990s. At least once a month, there was a media report about a new technique or scientific breakthrough related to ART. NABER members felt torn between wanting to be responsive to these hot issues and wanting to take enough time with specific issues for a more in-depth, thoughtful analysis. It chose to focus on in-depth reports and recommendations. It started with the use of fetal tissue in research because this was the issue that motivated NABER's creation.

Fetal Tissue

NABER's discussions and deliberations on fetal tissue research led to its first published report in the journal *Science*⁶ (see Appendix B for a complete list of NABER publications). In the paper, NABER endorsed the recommendations of the Human Fetal Tissue Transplantation Research Panel⁷ and recommended the continuation of a unified network tissue sharing system that would establish guidelines for the collection and distribution of fetal tissue. About the same time, the Clinton administration lifted the ban on fetal tissue research, but did not actively pursue establishing a national fetal tissue bank. In 1993, Al Jonsen and Cynthia Cohen submitted a letter to the editor of the *Washington Post* advising the Clinton administration on how the national fetal tissue bank might be expanded so that it could be of scientific value.⁸

Following the fetal tissue report, Dr. Cohen realized that many members of the board were not experts in the field of reproductive technology. To support NABER's work, Dr. Cohen developed a consultants' working group that could be invited to open forums to enhance NABER's discussions (see Appendix C for a complete list of the consultants' working group). These open

public forums became both an educational tool for the board, and a place where members of the ART community could meet with experts from many other fields to openly discuss ethical issues in reproduction. Out of these forums, NABER would publish papers and reports with ethical guidelines and recommendations. Members of the ART community, the ethics committees of ACOG and AFS, RESOLVE (a patient support and advocacy group), the bioethics community, and officials from the NIH, especially the National Institute for Child Health and Development (NICHD), were also invited to participate. Some of these groups eventually cosponsored forums with NABER. NABER held a total of six forums between 1993 and 1997 and developed in-depth ethical guidelines on six different topics.

Oocyte Donation

At the December 1992 meeting of the board, Edward Wallach, Chairman of the Department of Obstetrics and Gynecology at Johns Hopkins University and member of the AFS's ethics committee, introduced the work the AFS ethics committee was doing on gamete donation. At the conclusion of the meeting, the board decided it would pursue the issues of oocyte donation—anticipating way in advance what was to become a growing controversy over the commercialization of human oocytes and embryos.

Oocyte donation became the focus of NABER's first forum held in the fall of 1993. Invited speakers included members of the consultants' working group. Following the forum, the board developed extensive recommendations for oocyte donation. NABER's *Report and Recommendations on Oocyte Donation* (hereafter called *The Oocyte Donation Report*), along with papers developed from the presentations given at the forum were published in the book *New Ways of Making Babies: The Case of Egg Donation* edited by Cynthia Cohen.⁹ Later, NABER published a summary of its recommendations in Vol. 1, No. 2 of *The NABER Report*, a newsletter developed by Gladys White to disseminate NABER's work.

The Oocyte Donation Report was guided by a set of ethical principles, and its recommendations focused on avoiding or minimizing potentially deleterious consequences of the practice of oocyte donation. It included recommendations on informed consent for both the donor and recipient, appropriate psychological and medical counseling for both parties, medical and psychological criteria for participation, compensation and insurance for the donor, the donor's right to withdraw, the use of donor eggs from other infertility patients, and access to information by the recipients or resulting child.

During the development of *The Oocyte Donation Report*, there was a significant amount of discussion over how NABER should deliberate and report its findings. The board finally decided that in order to make the greatest impact, it would need to reach consensus and make definitive recommendations. This process of consensus building would be essential in the development of all of its future reports.

Cloning

At the American Society for Reproductive Medicine's (ASRM—formerly the AFS) 1993 annual meeting, researchers Stillman and Hall from George Washington University announced that they had successfully "cloned" a human embryo.¹⁰ NABER immediately responded by organizing a forum of principal participants and commentators on this embryo splitting research. It also announced that it would issue a report aimed at clarifying the science and ethics of this type of research. The forum was held early in 1994. Following the forum, NABER developed recommendations on cloning. This report, entitled

Report on Human Cloning Through Embryo Splitting: An Amber Light (hereafter called *The Cloning Report*) was published along with papers submitted by forum participants in a special issue of the *Kennedy Institute of Ethics Journal* edited by Cynthia Cohen.¹¹ The articles and report anticipated many of the issues that would emerge three years later with the announcement that a sheep named Dolly had been successfully cloned.

NABER's first two reports were quite influential. The NIH requested copies of both *The Cloning Report* and *The Oocyte Donation Report* for distribution to members of the Human Embryo Research Panel in 1994, and the National Bioethics Advisory Commission (NBAC) would later request copies of *The Cloning Report* and informally query members of the board on their thoughts about nuclear transfer cloning when it prepared its own report on cloning for President Clinton. In addition, chapters and sections of NABER's recommendations from *New Ways of Making Babies: The Case of Egg Donation* are cited 17 times in the Gamete and Embryo Donation chapter of the New York State Task Force on Life and the Law's report on *Assisted Reproductive Technologies*.

Use of Fetal Eggs and Ovaries and Fetal Cells in Maternal Blood

As work on *The Cloning Report* and *The Oocyte Donation Report* concluded, the board discussed a number of new issues it could pursue, including intracytoplasmic sperm injection (ICSI), sex selection, fetal cell isolation in maternal blood, fetal ovary transplantation, advertising, and informed consent issues related to ART. The use of fetal eggs and ovaries was chosen as the priority, and the NABER board set about discussing and debating this issue—this time without a public forum. The final report was titled *The Use of Human Fetal Eggs and Ovaries: Ethical Implications*. Next, the board produced a report titled *Isolating Fetal Cells in Maternal Blood*. Although attempts were made to publish these reports in medical and policy journals, the only publications that resulted were excerpts of the *Human Fetal Egg and Ovaries Report*, published in the Vol. 1, No. 3 issue of *The NABER Report* and a discussion of the ethical issues of isolating fetal cells in maternal blood in the Vol. 2, No. 1 issue of *The NABER Report*.

ART and Regulation—Part I

Following Gladys White's visit to the HFEA in the United Kingdom, NABER hosted a forum entitled "Assisted Reproduction: A Process Ripe for Regulation" in the fall of 1995. Invited presentations were given by the Chief Executive of the HFEA of the United Kingdom and the Chair of Canada's Royal Commission on New Reproductive Technologies, as well as representatives from U.S. IVF clinics. The conference proceedings and papers submitted by the participants were published in *Women's Health Issues*¹² and a summary was published in Vol. 1, No. 3 of *The NABER Report*.

Marketing, Advertising, and Money-back Guarantees

The following year, NABER focused on issues of marketing and advertising related to ART services. The board was deeply concerned by examples of marketing experimental therapy directly to consumers, such as ovarian cryopreservation and ICSI. In addition, the Federal Trade Commission (FTC) had recently investigated and cited a number of IVF centers over the use of inaccurate statistics to promote their centers. Finally, the board was disturbed by the growing number of ads—particularly in college newspapers—soliciting young women to become egg donors. NABER introduced this topic in the Vol.

2, No. 2 issue of *The NABER Report* and began collecting ads promoting IVF clinics and ads recruiting gamete donors. It sponsored a forum on advertising and ART services in the fall of 1996, inviting experts in advertising ethics and representatives from a number of IVF clinics to give presentations. These conference proceedings were published in *Women's Health Issues*¹³ with a summary published in the Vol. 2 No. 3 issue of *The NABER Report*.

NABER's forum on marketing and advertising coincided with a request from one of the IVF centers for NABER to review a new marketing practice called shared risk or money-back guarantee. A number of clinics were offering a financing program to a select group of patients who paid a flat fee for three attempts at IVF. If the woman did not become pregnant after three attempts, the couple would receive a portion of their money back. This direct request for review and the willingness of multiple clinics to send their promotional materials as well as representatives to the NABER board meeting to respond to questions about their program constituted evidence that NABER was being taken seriously by the ART community. However, at the time the review was requested, NABER was aware of only three clinics with shared risk/money-back guarantee programs. By the time the report was issued in *The NABER Report*,¹⁴ NABER was aware of over 23 clinics offering this type of financing arrangement. While some members of the ASRM were hoping NABER's recommendations would give them some support after the American Medical Association (AMA) denounced these financing arrangements, the increase in the number of clinics offering these arrangements suggests that the ART community was not waiting for NABER's stamp of approval before proceeding with these types of financing arrangements.

ICSI and Prenatal Genetic Diagnosis (PGD)

NABER's next large-scale project was on ICSI and PGD. NABER cosponsored a forum in 1997 entitled "Introducing Innovation into Practice: Technical and Ethical Analyses of Preimplantation Genetic Diagnosis and Intracytoplasmic Sperm Injection Technologies" with the NICHD and held the forum on the NIH campus. PGD is a method of extracting a cell from a very early embryo formed in vitro and then examining the DNA of that cell to make determinations about some of the genetic characteristics of the human embryo and resulting child. It is currently used to identify embryos that carry genetic diseases. ICSI refers to the direct mechanical insertion of individual spermatozoa into the cytoplasm of a human oocyte to effect fertilization and the activation of development. These techniques created concern because of the speed with which they were introduced into clinical practice, the purposes for which they are used, and the inadequacy of existing public policy to address issues of quality and dissemination of the new technologies. In addition, concerns about the potential risk to offspring had led several foreign governments to restrict the use of ICSI. These conference proceedings were published in the *Journal of Law, Medicine, and Ethics*.¹⁵

ART and Regulation—Part II

In the mid to late 1990s, small steps were being taken by the federal government to regulate areas of the infertility industry. The Centers for Disease Control and Prevention (CDC) finally received the funds it needed to begin collecting and reporting IVF clinic success rates, but it lagged years behind. The FTC published a guide to help consumers sort through much of the industry's marketing rhetoric. The FDA informed IVF clinics that they would have to register with the FDA if they were manipulating human gametes, and the President created NBAC to advise him and make recommendations on issues

related to human subjects research and genetic technology. In reaction to the continued attention being paid to regulation and oversight of the IVF industry, NABER's final project in 1997 was a forum on regulation cosponsored by the CDC and RESOLVE, a consumer and patient support group for infertility. The forum focused on the best ways to approach regulating ART services. Unfortunately, these conference proceedings were never published as NABER was disbanded soon thereafter, and there was neither funding nor personnel to work on a publication.

LESSONS LEARNED

NABER produced many thoughtful reports anticipating many of the ethical issues related to new reproductive technologies, and it held many dynamic public forums where these issues were discussed and debated. Its reports were being requested by presidential commissions, and board members were giving testimony at congressional hearings and at NBAC meetings. So why did this influential and dynamic organization disband when it seemed to be filling such a necessary role?

The answer is not completely clear. One answer is that NABER simply ran out of money, not momentum. The original members of ACOG and ASRM who brought in the initial start-up funds had retired from active participation in the professional societies or had intentionally withdrawn from NABER so it could be truly independent, and the Executive Director and members of the board simply could not bring in the necessary funds to keep the doors open. Grant writing and soliciting funds created a constant distraction from the good work NABER was doing. Al Jonsen points out that independent ethics organizations are extremely difficult to support financially. The only independent ethics think tank in the U.S., the Hastings Center, maintains its funding through grants for specific projects. In retrospect, Dr. Jonsen thinks it might have been helpful to have included additional board members who could have helped bring in financial support, such as a strong media personality.

Others, including Cynthia Cohen, contend that NABER's task was too vast, and from the beginning it did not have the resources to fulfill the vision of its creators. When it did not become the private sectors' answer to a presidential commission or become the nation's IRB for reproductive medicine, and instead became a source of rival practice guidelines critical of those promulgated by the professional associations, it was abandoned.

Another related limitation was NABER's lack of a good public relations campaign. NABER struggled with how to get its message out to the public, because even if it had a designated spokesperson, that person could not speak for NABER on hot issues until the board had the chance to meet, debate, and come to some consensus on an issue. This limited NABER's ability to be proactive, and it created a frustrating "catch 22." NABER could not mount initiatives without sufficient funds, yet it could not get sufficient funds without creating a public presence to convince foundations that NABER was worth funding.

Yet others contend that NABER never really garnered much political support from policymakers because it had the appearance of being too connected to the professional organizations that helped create it. Although there is no evidence that NABER's initial affiliation with ACOG and ASRM kept it from being independent in its recommendations, the fact that its membership was selected by the two societies, and that it continued to be dependent on ACOG for support services may have limited its effectiveness.

Finally, Kenneth Ryan points out that, with the establishment of NBAC, there was less of a moral vacuum in the area of reproductive ethics. Although

NBAC was not charged with addressing reproductive ethics directly, it has issued reports on the two most controversial reproductive issues of the late 1990s—cloning and stem cell research.

WHERE DO WE GO FROM HERE?

Although there is no longer an independent, private body devoted to ethical analysis on reproductive and genetic issues, there are many other groups working on similar ethics and policy issues. First, the Family Law Section of the American Bar Association (ABA) has spent many years conducting consensus-building focus groups with major stakeholders to develop model state legislation for ART. Their report is currently under review and should be available in the coming months.

Second, state legislatures have been involved in creating legislation to sort through issues of parental rights and responsibilities and to protect consumers. One example is legislation that makes it a crime in the state of California to steal gametes or embryos.

Third, the ACOG and ASRM still have active ethics committees and, according to Kenneth Ryan, the respective memberships are becoming more aware of and open to active discussions about ethical issues in their respective professions. For instance, he points out that the 1999 annual meeting of the ASRM featured more ethics discussions than ever before. The ASRM ethics and practice committees have recently issued recommendations on:

- disposition of abandoned embryos;¹⁶
- oocyte donation to postmenopausal women;¹⁷
- embryo splitting for infertility treatment;¹⁸
- the use of fetal oocytes in assisted reproduction;¹⁹
- posthumous reproduction;²⁰
- informed consent and the use of gametes and embryos for research;²¹
- guidelines on advertising;²²
- shared-risk or refund programs;²³
- sex selection and preimplantation genetic diagnosis;²⁴ and
- guidelines on the number of embryos transferred.²⁵

Dr. Ryan adds that current issues under discussion by the committee include cloning, payment to gamete donors, and treating HIV-discordant couples who wish to reproduce. Dr. Jones has continued his interest in national regulation by publishing an international comparison of ART and IVF regulations with Jean Cohen, MD in the ASRM journal *Fertility and Sterility*.²⁶

Fourth, the federal government has weighed in as well by putting together an ART working group with representatives from the CDC, FDA, NIH, FTC, and other agencies. This group's purpose is to coordinate the regulatory efforts of different agencies. Recent federal actions include the CDC's release of the final version of its model program for the certification of embryo laboratories and the NIH's appointment of two special advisory panels to make recommendations for guidelines on stem cell research and genetic testing.

Finally, as mentioned above, NBAC, the Presidential ethics commission, has dealt with many issues related to ART in its reports on cloning, stem cell research, and the use of human biological materials. NBAC has the opportunity not only to make recommendations that can influence policy, but, like NABER, it also provides an opportunity for reflective ethical analysis. NBAC has the opportunity to bridge some of the gap left by NABER. Unlike NABER, NBAC is federally funded with a budget ten times the size of NABER's, so its much larger staff and commissioners are free to focus on the project work

without being distracted by funding concerns. NBAC also does not have to seek out publicity or work to establish its credibility, but its ability to influence cultural and political change is still uncertain. Whereas some past commissions have been extremely influential in affecting public policy, others, particularly NIH's Embryo Research Panel, have been ignored.

NABER'S LEGACY

NABER clearly amassed an impressive body of work during its seven years of operation, writing guidelines and recommendations that IVF clinics and other policymaking bodies can turn to, now and in the future, when establishing policy and standards of practice. In addition, NABER furthered the dialogue on many important ethical issues through its open forums, perhaps motivating clinicians to consider the implications of certain practices. A more subtle, but important legacy for NABER may, in fact, be its members, consultants, and staff. Leaders within the fields of biology, philosophy, law, religion, ethics, and medicine have a new appreciation for the complex ethical issues in reproductive technology and have carried that interest and knowledge into their fields. They will continue to contribute to national discussion through the literature, in their classrooms, courtrooms, hospitals, places of worship, and in the policy arena.

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APPENDIX A

NABER BOARD OF DIRECTORS AND EXECUTIVE DIRECTORS

Board Members

- Fredrick R. Abrams, MD. (1995–1998) Professor Adjoint of Public Affairs, Associate Clinical Professor of Obstetrics and Gynecology, University of Colorado, Denver, CO.
- Mary Martin Cadieux, MD. (1994–1998) Associate Professor of Obstetrics, Gynecology, and Reproductive Sciences, University of California, San Francisco, San Francisco, CA.
- Lisa Sowle Cahill, PhD. (1991–1998) Professor of Theology, Boston College, Boston, MA.
- Ezra C. Davidson, Jr., MD. (1991–1998; Secretary/Treasurer 1993–1996; Cochair 1996–1998) Professor and Chair, Department of Obstetrics and Gynecology, King-Drew Medical Center, Los Angeles, CA.
- Sherman Elias, MD. (1994–1998) Professor of Obstetrics and Gynecology, Professor of Molecular and Human Genetics, Baylor College of Medicine, Houston, TX.
- Thomas E. Elkins, MD. (1991–1994) Professor and Chair, Department of Obstetrics and Gynecology, Louisiana State University, New Orleans, LA.
- Neal L. First, PhD. (1994–1998) Le Casida Professor of Reproductive Biology and Biotechnology, University of Wisconsin, Madison, WI.

Clifford Grobstein, PhD. (1991–1993) Professor Emeritus in Science, Technology, and Public Affairs, University of California School of Medicine, San Diego, CA.

James Gustafson, PhD. (1991–1993) Professor of the Humanities, Emory University, Atlanta, GA.

John S. Hoff, JD. (1991–1998; Secretary/Treasurer 1996–1998) Swidler and Berlin, Chartered, Washington, DC.

Albert R. Jonsen, PhD. (1991–1996; Chair 1991–1996) Professor and Chair, Medical History and Ethics, University of Washington, Seattle, WA.

Patricia King, JD. (1991–1996) Professor of Law, Georgetown Law Center, Washington, DC.

Gerald P. Koocher, PhD. (1995–1998) Associate Professor of Psychology and Executive Director, Linda Pollin Institute, Harvard Medical School, Boston, MA.

Ruth Macklin, PhD. (1991–1998; Vice Chair 1993–1996; Cochair 1996–1998) Professor of Bioethics, Albert Einstein College of Medicine, Bronx, NY.

Karen Rothenberg, JD, MPA. (1995–1998) Marjorie Cook Professor of Law, Director, Law and Health Care Program, University of Maryland School of Law, Baltimore, MD.

Mildred T. Stahlman, MD. (1991–1994) Professor of Pediatrics and Pathology, Vanderbilt University School of Medicine, Nashville, TN.

Bonnie Steinbock, PhD. (1995–1998) Professor of Philosophy, University at Albany/SUNY, Albany, NY.

Rabbi Moses Tendler, PhD. (1991–1998) Professor of Biology, Talmudic Law, and Jewish Medical Ethics, Yeshiva University, New York, NY.

Allen D. Verhey, PhD. (1994–1998) The Evert J. and Hattie E. Blekkink Professor of Religion, Hope College, Holland, MI.

Walter J. Wadlington, LLB. (1991–1994) Professor, University of Virginia School of Law, Charlottesville, VA.

Executive Directors

Cynthia B. Cohen, PhD, JD. (1992–1994)
 Gladys B. White, PhD. (1994–1998)

APPENDIX B

LIST OF NABER PUBLICATIONS

1. Cohen CB, ed. *New ways of making babies: the case of egg donation*. Indianapolis: Indiana University Press; 1996.
2. Cohen CB, ed. *Special Issue: Ethics and the Cloning of Human Embryos*. *Kennedy Institute Ethics J* 1994;4:187–282.
3. Cohen CB, Jonsen AR. The future of the fetal tissue bank. *Science* 1993;262:1663–1665.
4. Jonsen AR, Cohen CB. An improved tissue bank. *Washington Post*. Feb. 4, 1993; A20.
5. Jonsen AR, Cohen CB. Ethical advice in reproductive medicine. *Fertil Steril* 1994;61:236–238.
6. The NABER Report. Vol. 1, No. 1–Vol. 3, No. 1.
7. Symposium: PGD and ICSI Reproductive Technologies. *J Law Med Ethics* 1998;26:5–37.
8. White GB. The Work of the National Advisory Board on Ethics in Reproduction. *Nursing Connections* 1994;7:38–41.
9. White GB. The National Advisory Board on Ethics in Reproduction (NABER). *Politics and the Life Sciences* 1995;14:93–95.
10. *Women's Health Issues* 1996;6:117–182.
11. *Women's Health Issues* 1997;7:127–199.

APPENDIX C

CONSULTANTS' WORKING GROUP

Anita Allen, JD, PhD, Law, Georgetown University, Washington, DC.
Judith L. Benkendorf, MS, Genetic Counseling, Georgetown University Medical Center, Washington, DC.
Dan Brock, PhD., Philosophy, Brown University, Providence, Rhode Island.
Ruth E. Bulger, PhD., Director, Health Sciences Policy, Institute of Medicine, National Academy of Sciences, Washington, DC.
Alta Charo, JD, Law and Medical Ethics, University of Wisconsin, Madison, WI.
Sherman Elias, MD, Reproductive Genetics, Obstetrics and Gynecology, and Genetics, University of Tennessee College of Medicine, Memphis, TN.
Elizabeth Heitman, PhD., Public Health, University of Texas, Houston, TX.
Howard Jones, MD, Obstetrics and Gynecology, Eastern Virginia University, VA.
Carol Levine, MA, Executive Director, The Orphan Project, New York, NY.
Richard McCormick, SJ, Theology, Notre Dame University, South Bend, IN.
Nancy Press, PhD., Anthropology, Psychiatry and Biobehavioral Sciences, University of California at Los Angeles, Los Angeles, CA.
John Robertson, JD, Law, University of Texas, Austin, TX.
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