What's New in Contraceptive R&D Investments and Resources?
G-FINDER report
Maya Goldstein, Policy Cures Research

Calliope and CTI Exchange
Amelia Mackenzie, FHI 360

Donor perspective on contraceptive R&D
Kirsten Vogelsong, The Bill & Melinda Gates Foundation

Reflections on contraceptive R&D: Past and future
Laneta Dorflinger, FHI 360

Panel discussion and Q&A
G-FINDER report

Maya Goldstein, Policy Cures Research
SEXUAL AND REPRODUCTIVE HEALTH RESEARCH AND DEVELOPMENT: UNDERSTANDING THE SPECTRUM

Maya Goldstein
The Process

- Broad sector-wide stakeholder consultation
- Expert Advisory Group comprising 23 global experts in SRH

The Criteria

- The SRH area is a **significant health issue affecting people in LMICs**
- There is a **need for new products** (i.e. there is no existing product, or improved or additional products are needed to meet the needs of people in LMICs)
  - 7 issues and associated products gaps
  - Surveyed the sector for investments made FY2018

To be included in the report, R&D must be for:

- Products that are **appropriate to and suitable for** LMIC contexts (for example: heat stable, easy-to-use, or do not require a skilled professional to administer them)
SRH R&D Investment overview 2018 (USD)

HIV/AIDS $1,442m

- Multipurpose prevention technologies $48m
- Core funding $20m
- Platform technologies $23m
- HPV & HPV-related cervical cancer $52m
- Contraception $64m
- Sexually transmitted infections $71m
- Pre-eclampsia $12m
- PPH $4m
- Unspecified $1.1m
- HPV & HPV-related cervical cancer $52m

Orange text references the other figures from the questionnaire.
What was $64m spent on?

- **Most spent on short-term methods ($24m, 37%)** – mostly drugs e.g. 6-monthly injectables, once-monthly pills.

- **Then on long-acting reversible methods (LARC, $18m, 28%)** – mostly devices & combination products. e.g. IUSs and vaginal rings with longer duration. **Annovera, the 1-year heat-stable vaginal ring is now FDA approved (2018).**

- Much smaller amounts to on-demand methods ($3.7m, 5.7%) – mostly devices e.g. new or improved barrier methods with user experience in mind; and to innovative, non-surgical permanent methods ($3.6m, 5.6%).

- **71% ($46m) female vs 14% ($9.2m) male** – although latter an evolving area of research. e.g. NES/T gel.
Who provided the funding?

14 funders (including aggregate industry) in 2018

- Gates Foundation ($24m, 37%) and US NIH ($21m, 33%) were dominant funders – largely unchanged trend of philanthropic and public sector support.

- But there was some interest from industry ($8.6m, 14%) – notably women-focused SMEs.

- 99% HIC public sector from US

Contraception R&D funding by sector 2018

<table>
<thead>
<tr>
<th>Funder</th>
<th>US$ (millions)</th>
<th>% of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gates Foundation</td>
<td>24</td>
<td>37</td>
</tr>
<tr>
<td>US NIH</td>
<td>21</td>
<td>33</td>
</tr>
<tr>
<td>Aggregate industry</td>
<td>8.6</td>
<td>14</td>
</tr>
<tr>
<td>USAID</td>
<td>5.2</td>
<td>8.1</td>
</tr>
<tr>
<td>Population Council</td>
<td>3.3</td>
<td>5.2</td>
</tr>
<tr>
<td>Male Contraceptive Initiative (MCI)</td>
<td>0.5</td>
<td>0.8</td>
</tr>
<tr>
<td>South African MRC</td>
<td>0.4</td>
<td>0.6</td>
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<tr>
<td>Parsemus Foundation</td>
<td>0.3</td>
<td>0.5</td>
</tr>
<tr>
<td>Tara Health Foundation</td>
<td>0.2</td>
<td>0.3</td>
</tr>
<tr>
<td>Research Council of Norway</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>Reproductive Health Investors Alliance</td>
<td>0.1</td>
<td>0.2</td>
</tr>
<tr>
<td>Chinese NSFC</td>
<td>&lt;0.1</td>
<td>0.2</td>
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<tr>
<td>Subtotal of top 12</td>
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<td>98.8</td>
</tr>
<tr>
<td>Total</td>
<td>64</td>
<td>100</td>
</tr>
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</table>
Who received the funding (and did the R&D)?

70 recipients in 2018 – top 12 made up 85% of total

- Aggregate industry = 20 pharmaceutical companies ($26m) – 40% of all funding received
- But FHI 360 was the largest single recipient ($8.6m, 13%) – mostly for CTI Initiative (Gates) and Envision FP (USAID)
- Public ($27m, 42%) and private ($26m, 40%) sector orgs near-equal, but intermediaries play important role ($11m, 18%)

Top recipients of contraception R&D funding 2018

<table>
<thead>
<tr>
<th>Recipient</th>
<th>US$ (millions)</th>
<th>% of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aggregate industry</td>
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<td>40</td>
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<tr>
<td>FHI 360</td>
<td>8.6</td>
<td>13</td>
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<tr>
<td>Oregon Health and Science University</td>
<td>4.2</td>
<td>6.6</td>
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<tr>
<td>University of Minnesota</td>
<td>3.4</td>
<td>5.4</td>
</tr>
<tr>
<td>Population Council</td>
<td>3.3</td>
<td>5.2</td>
</tr>
<tr>
<td>Boston University</td>
<td>2.4</td>
<td>3.8</td>
</tr>
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<td>WomanCare Global (WCG)</td>
<td>1.7</td>
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<td>SRI International</td>
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<td>Baylor College of Medicine</td>
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<td>Northwestern University</td>
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<td>1.7</td>
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<tr>
<td>CONRAD</td>
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<td>1.5</td>
</tr>
<tr>
<td>Cardiff University</td>
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<td>0.9</td>
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<tr>
<td>Subtotal of top 12</td>
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<td>85</td>
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<tr>
<td>Total</td>
<td>64</td>
<td>100</td>
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Access to the data

G-FINDER SRH report
(planned biannually)
www.policycuresresearch.org/analysis

G-FINDER data portal
(planned annual update)
https://gfinderdata.policycuresresearch.org/
Calliope and CTI Exchange

Amelia Mackenzie, FHI 360
Note: We continue to add new entries and update the Calliope database.
Slides presented here are illustrative and do not reflect a final version of the site.
Welcome to Calliope

The Contraceptive Pipeline Database

Calliope, the Contraceptive Pipeline Database, houses information on potential contraceptive targets and leads in early development, products in pre-clinical and clinical development, and a selection of products with limited market availability. Calliope is coordinated by FHI 360 as part of the Contraceptive Technology Innovation (CTI) Exchange, www.clexchange.org, with support from the Bill & Melinda Gates Foundation.

Explore the database below using the keyword search, the search filters, and the two display options. For each entry in the database, click on the entry name to view its full information.

See our How to Use page for additional guidance and our About and Glossary pages for more information.

Recently Updated
- ADCY10 and cAMP
- CABYR
- RTI-4587-073()
- Subtilosin
- Tamsulosin

<table>
<thead>
<tr>
<th>Search</th>
<th>Filter Options</th>
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<tbody>
<tr>
<td>Keyword Search</td>
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<tr>
<td>Developer (0)</td>
<td>Delivery Type (0) Reset</td>
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<tr>
<td>Development Stage (0)</td>
<td>Duration Type (0) Reset</td>
</tr>
<tr>
<td>User (0)</td>
<td>Hormonal (0) Reset</td>
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<tr>
<td>Potential MPT (0)</td>
<td>API (0) Reset</td>
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<tr>
<td>Hormonal</td>
<td>Non-Hormonal</td>
</tr>
<tr>
<td>----------</td>
<td>-------------</td>
</tr>
<tr>
<td>Female</td>
<td>99</td>
</tr>
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<td>86</td>
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<td>44</td>
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<tr>
<td></td>
<td>Hormonal</td>
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<tr>
<td>---------</td>
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</tr>
<tr>
<td>Female</td>
<td>+ 99</td>
</tr>
<tr>
<td>Male</td>
<td>- 16</td>
</tr>
</tbody>
</table>

- 11β-MNTDC / 11β-19/17β
- CDK2
- Desogestrel + Testosterone
- Dimethandrolone Undecanoate
- DMPA + Testosterone
- DMPA + TU
- Faslodex Spironolactone Inhibitor
- GTx C-6
- MENT Gel
- MENT Implant
- NES + Testosterone Gel
- Oral Testosterone
- Ouabain Derivatives
- Testosterone Undecanoate (TU)
- TU + ENS
- TU + NET-EN
Displaying 1 - 10 of 243

11b-MNTDC / 11b/19/17β
ALTERNATIVE NAME: 11b-methyl-19-nortestosterone 17b-dodecyliccarbonate (11b-MNTDC)
USER: Male
HORMONAL: Yes
DELIVERY METHOD: Injectable, Oral
DEVELOPER: BIOQUAL, Inc.
DEVELOPMENT STAGE: Lead Optimization
DEVELOPMENT PHASE: Discovery and Early Development

3-DRIUD
USER: Female
HORMONAL: No
DURATION TYPE: Long acting
<table>
<thead>
<tr>
<th>Product</th>
<th>Alternative Name</th>
<th>User</th>
<th>Hormonal</th>
<th>Development Stage</th>
<th>Development Phase</th>
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</thead>
<tbody>
<tr>
<td>ADCY10 and cAMP</td>
<td>Adenylate Cyclase 10 and cyclic adenosine monophosphate, sAC and cAMP, soluble adenylyl cyclase</td>
<td>Female, Male</td>
<td>No</td>
<td>Target Validation</td>
<td>Discovery and Early Development</td>
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<tr>
<td>ADGB</td>
<td>Androglobin, Calpain-7-Like Protein, C6orf103, Chromosome 6 Open Reading Frame 103, CAPN16, CAPN7L</td>
<td>Female, Male</td>
<td>No</td>
<td>Target Identification</td>
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<td>Adjudin</td>
<td>AF-2304</td>
<td>Female, Male</td>
<td>No</td>
<td>Short-acting</td>
<td>Discovery and Early Development</td>
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</tbody>
</table>

**Export Options:**
- Export filtered product list to CSV
- Export all products list to CSV
Displaying 1 - 10 of 243

11b-MNTDC / 11P/19/17P
ALTERNATIVE NAME: 11b-methyl-19-nortestosterone 17b-dodecylcarbonate (11b-MNTDC)
USER: Male
HORMONAL: Yes
DELIVERY METHOD: Injectable, Oral
DEVELOPER: BIOQUAL, Inc.
DEVELOPMENT STAGE: Lead Optimization
DEVELOPMENT PHASE: Discovery and Early Development

3-DRIUD
USER: Female
HORMONAL: No
SUSTAINING TYPE: Long acting
EP055
USER: Male
HORMONAL: No
DEVELOPER: Eppin Pharma, Inc.
DEVELOPMENT STAGE: Lead Optimization
DEVELOPMENT PHASE: Discovery and Early Development

ALTERNATIVE NAME: Epididymal Protease Inhibitor
USER: Male
HORMONAL: No
DEVELOPER: Eppin Pharma, Inc.
DEVELOPMENT STAGE: Lead Optimization
Note: We continue to add new entries and update the Calliope database. Slides presented here are illustrative and do not reflect a final version of the site.
Other databases: CITDBase (www.citdbase.org)
Other databases: MPT Product Development Database (mpts101.org)
www.ctiexchange.org
Donor perspective on contraceptive R&D

Kirsten Vogelsong, The Bill & Melinda Gates Foundation
Reflections on contraceptive R&D: Past and future

Laneta Dorflinger, FHI 360
5 things to be excited about in contraceptive R&D

- Public-sector funding has fueled research on contraceptive innovation for several decades and continues
- Philanthropic foundations are increasing investments in contraceptive R&D
- Novel partnerships are expanding (NGOs, academia, pharma, foundations, public sector) and donor coordination increasing
- Funding for discovery is growing, with focus on targets for non-hormonal approaches (male and female)
- User-centered design is being emphasized, helping ensure products will meet user needs and desires (including potential non-contraceptive benefits)
Panel discussion and Q&A
Thank you

@CTIExchange @PCuresResearch

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