**Supplement**

Supplemental Text 1. Review methods.

A thorough, pseudo-systematic, narrative literature review was conducted in multiple steps. Given that the scope of this paper was to summarize a broad area (the translation of psychiatric genetic information) and a specific question was not posited, a narrative literature review was conducted instead of a systematic review (Kysh, 2019). However, a systematic search of the literature still occurred to increase the validity and rigor of the study.

First, all combinations of terms from three groups were searched in EBSCOhost, Google Scholar, and PubMed. The first group of terms included common translational frameworks (“translation;” “personalized medicine” OR “precision medicine;” “bench to bedside;” “implementation science”), the second group specified the illness type (“mental health;” “psychiatr\*”), and the final group indicated types of genetic information (“genetic OR genomic;” “twin OR family OR heritability”). Search results were limited through December 2017. The abstracts from all potentially relevant articles were downloaded. The search occurred between November 2017 and March 2018. Next, reviewers independently review abstracts for inclusion/exclusion criteria (see Supplemental Table 1). Inclusion criteria were that each paper had to mention translation or a translational framework, mention genetic information, and be about a psychiatric disorder or psychiatry broadly. Exclusion criteria (beyond not meeting inclusion criteria) were not being a peer-reviewed article (e.g., commentary, poster/oral presentation abstract, book chapter) and not being in English. Exclusion criteria were not meeting one or more of the inclusion criteria, not being a peer-reviewed article, and not being in English. Conference abstracts, short commentaries, dissertations, book chapters, and editorials were automatically excluded. If abstracts were too brief due to journal restrictions, reviewers were allowed to download full articles to complete the checklist.

Two reviewers were assigned to each abstract to allow for the calculation of agreement coefficients (see Supplemental Text 3). Reviewers then coded the included abstracts as follows (codes are in in parentheses): translational framework (precision medicine, bench-to-bedside, D&I, broad discussion of translation, other, multiple frameworks), type of genetic information (epidemiology [i.e., family, twin, heritability studies], molecular genetic information [i.e., genomic information about candidate genes, sequencing, genome wide analysis studies [GWAS], copy number variation, knockout genes, polygenic risk scores], epigenetics, broad discussion of genetics, multiple), psychiatric disorders (anxiety, mood, schizophrenia, neurodevelopmental [i.e., Autism Spectrum Disorder [ASD]], attention deficit hyperactivity disorder [ADHD], alcohol and substance use disorders [AUD/SUD] and other disorders of addiction, other, broad discussion of mental health, multiple disorders). From here, full PDFs of the articles were downloaded and read. As PDFs were read, reviewers were in charge of double-checking the assigned codes. The final step of the review involved the lead author closely reviewing the included articles to settle disagreements among reviewers, confirm that PDFs met all inclusion criteria, and double-check that no duplicates made it into the analyses.

Duplicates were not tracked because as the search occurred, authors checked a shared file that contained the citations of potentially relevant articles that had already been found. If an article had been found and added to the file by someone else, then reviewers were instructed to move on in their search.

A second search was done in May 2020 to capture articles missed by the first search. This search was done solely by the lead author. This search had the same parameters as the first except that the timeframe was restricted from January 2018 to present and only PubMed was searched. The same inclusion / exclusion criteria were used.

Additional references:

1. Kysh, L. (2019). What’s in a name? The difference between a systematic review and a literature review and why it matters. Retrieved From https://guides.libraries.psu.edu/c.php?g=319063&p=5222056.

Supplemental Text 2. Review search results.

In the first search, the first step of the review process ended with 325 abstracts that were loosely related to the aims of this paper. After reviewers completed the inclusion/exclusion checklist and coding form and the lead author confirmed the articles, 109 abstracts met criteria for inclusion. Nine of these were duplicates and 18 were not peer-reviewed articles (e.g., conference proceedings, commentaries, poster presentations) or did not meet inclusion criteria after a full read, leaving 82 articles that were analyzed. See Supplemental Table 2 for a list of the final articles included in the review.

The second search done on articles from January 2018 through May 2020 resulted in 48 potential articles. Of those, 32 met inclusion criteria and 2 were a duplicate from the first search (pre-prints of the article were available in 2017 but the final citation was 2018). This brought the total number of abstracts that met inclusion criteria to 114.

Supplemental Text 3. Information about reviewer agreement.

Weighted Cohen’s Kappa (Fleiss & Cohen, 1973; Koo & Li, 2016; Mandrekar, 2011) was calculated to confirm agreement among reviewers for the abstracts as a whole. All analyses were done in R (R Development Core Team, 2015). Overall, reviewers agreed 82% of the time with whether an article should be included which resulted in a weighted Cohen’s Kappa value of 0.67 (confidence interval [CI] = 0.59-0.74) (moderately reliable). Kappa values across the four pairs of reviewers were 0.47 (CI = 0.31-0.64) (poor-to-moderate reliability), 0.66 (CI = 0.51-0.81) (moderate-to-good reliability), 0.68 (CI = 0.52-0.84) (moderate-to-good reliability), and 0.83 (CI = 0.71-0.96) (moderate-to-excellent reliability).

It should be noted that the Kappa values between pairs of reviewers fluctuated. All but one pair of reviewers had reliability that was in a moderate-to-good or moderate-to-excellent range. The one pair that had poor-to-moderate reliability still had an upper CI in the “moderate” range (Koo & Mae, 2016). The fluctuation across pairs reliability between is likely due to the fact that reviewers were from different training backgrounds to facilitate interdisciplinary study and translation. Nevertheless, these results should be interpreted in light of this limitation. There are papers that have been written that were not included that perhaps should have been and vice-versa. This would change the specific values for the trends noted in this literature review, however, it is unlikely that the overall trends would significantly change.

Additional references:

1. Fleiss, J. L., & Cohen, J. (1973). The equivalence of weighted kappa and the intraclass correlation coefficient as measures of reliability. *Educational and Psychological Measurement, 33*, 613-619.
2. Koo, T. K., & Li, M. Y. (2016). A guideline of selecting and reporting intraclass correlation coefficients for reliability research. *Journal of Chiropractic Medicine, 15*, 155-163.
3. Mandrekar, J. N. (2011). Measures of interrater agreement. *Journal of Thoracic Oncology, 6(1)*, 6-7.
4. R Development Core Team. R: A language and environment for statistical computing. R Foundation for Statistical Computing. Vienna, Austria; 2015. ISBN 3-900051-07-0. Retrieved from [http://www.R-project.org.](http://www.r-project.org./)

Supplemental Text 4. Review limitations.

There are several limitations to note from the current study. First, this review was narrative and not systematic, although a pseudo-systematic literature search was conducted (see Supplement). A narrative review literature review was appropriate for this topic, though, given its broad scope (Kysh, 2019; Robinson & Lowe, 2015). Second, reviewers had to often use their knowledge of translational science to determine which framework(s) articles were working under. This admittedly allowed some bias into the review as interpretations of translational frameworks and terms are somewhat fluid. Third, there was some overlap in when the first literature search took place (November 2017 to March 2018) and the publication dates of included abstracts (through December 2017). This created a small gap where some articles in December 2017 may not have been captured by the first search engine that was used during this search. However, later search engines hopefully captured these articles. The second literature search was restricted by January 2018, so this month of potential missing articles was not captured. Finally, the age of the articles may mean that some do not agree with the views posited. Improvements regularly occur about how to better design studies to assess the genomics of psychiatric disorders (Peterson et al., 2019) and psychiatric genetic counselors already include genetic epidemiological information into clinical care (Moldovan, Pintea, & Austin, 2017), although there are no psychiatric genetic counselors in the United States (they are located in Canada). This may be especially true of articles found for the narrative literature review that discussed or studied candidate genes (Addington & Rappaport, 2012; Amare et al., 2017; Cuthbert & Insel, 2013; LeFoll et al., 2014; Malhotra et al., 2007; Myers & Nemeroff, 2010; Ozmaro et al., 2013; Rende & Slomkowski, 2008; Singh et al., 2014).

Additional references:

1. Kysh, L. (2019). What’s in a name? The difference between a systematic review and a literature review and why it matters. Retrieved From https://guides.libraries.psu.edu/c.php?g=319063&p=5222056.
2. Robinson, P., & Lowe, J. (2015). Literature reviews vs systematic reviews. *Australian and New Zealand Journal of Public Health, 39*, 103.
3. Peterson, R. E., Kuchenbaecker, K., Walters, R., Chen, C.-Y., Popejoy, A. B., Periyasamy, S. … Dundan, L. E. (2019). Genome-wide association studies in ancestrally diverse populations: Opportunities, methods, pitfalls, and recommendations. *Cell, 179*, 1-15. doi:10.1016/j.cell.2019.08.051

Supplemental Table 1. Original checklist for the brief literature review. Note that the codes listed on this document were not the final codes (see *Methods*).

|  |  |
| --- | --- |
| First author (last name, first initial): |  |
| Year: |  |
| Title (abbreviated is fine): |  |
| **Topic** | **Options (circle correct one)** |
| Genetic information explicitly mentioned? | Yes No |
| If yes, what type? | Family history  Heritability  Molecular genomics  Methylation  Other (specify) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  N/A - broad discussion |
| Does the paper discuss psychiatric disorders or mental health? | Yes No |
| If yes, which disorder(s) | Anxiety  Depression  Bipolar disorder  Schizophrenia  Autism Spectrum Disorder  Eating disorder  Alcohol and other substance use disorder  Other (specify) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  N/A - broad discussion of mental health |
| Is a translational framework explicitly mentioned? | Yes No |
| If so, which one(s)? | Precision / personalized medicine  Bench to bedside  Dissemination and Implementation Science  Research to practice  Research to policy  Other (specify) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  N/A - broad discussion |
| **A paper must check “yes” to all three of these for inclusion. If it does not, then automatically exclude it from further analyses. If you are unsure, flag it for the lead reviewer to examine.**  **If a paper meets the above three criteria, please answer a few additional questions about it (if such information is in the abstract):** | |
| Animal model? | Yes No |
| Candidate gene study? | Yes No |
| Theoretical paper? | Yes No |
| Pharmacotherapy? | Yes No |
| **Please include additional notes about this paper below:** | |
|  | |

Supplemental Table 2. Articles that met inclusion criteria for the review.

| **Citation** | **Translational Framework** | **Genetic Information** | **Psychiatric Disorder** |
| --- | --- | --- | --- |
| Addington, A. M., & Rappaport, J. L. (2012). Annual Research Review: Impact of advances in genetics in understanding developmental psychopathology. *Journal of Child Psychology & Psychiatry, 53*, 510-518. | Broad | Molecular | Multiple  (ASD, schizophrenia) |
| Alhajji, L., & Nemeroff, C. B. (2015). Personalized medicine and mood disorders. *Psychiatric Clinics of North America, 38*, 395-403. | Precision Medicine | Molecular | Multiple  (mood, schizophrenia) |
| Allenby, C. E., Boyland, K. A., Lerman, C., Falcone, C. (2016). Precision medicine for tobacco dependence: Development and validation of the nicotine metabolite ratio. *Journal of Neuroimmune Pharmacology, 11*, 471-483. | Precision Medicine | Molecular | AUD/SUD & Addiction |
| Amare, A. T., Schuberg, K. O., & Baune, B. T. (2017). Pharmacogenomics in the treatment of mood disorders: Strategies and opportunities for personalized psychiatry. *EPMA J, 8*, 211-227. | Other  (predictive, preventive, and personalized medicine) | Molecular | Mood |
| Bierut, L. J., Johnson, E. O., & Saccone, N. L. (2014). A glimpse into the future: Personalized medicine for smoking cessation. *Neuropharmacology, 76,* 592-599. | Precision Medicine | Molecular | AUD/SUD & Addiction |
| Beversdorf, D. Q. (2016). Phenotyping, etiological factors, and biomarkers: Toward precision medicine in Autism Spectrum Disorders. *Journal of Developmental & Behavioral Pediatrics, 37*, 659-673. | Precision Medicine | Molecular | Neuro (ASD) |
| Bickman, L., Lyon, A. R., & Wolpert, M. (2016). Achieving precision mental health through effective assessment, monitoring, and feedback processes. *Administration and Policy in Mental Health and Mental Health Services Research, 43*, 271-276. | Other  (precision *mental* health) | Broad | Broad |
| Bloss, C. S., Jeste, D. V., & Schork, N. J. (2011). Genomics for disease treatment and prevention. *Psychiatric Clinics of North America, 34*, 147-166. | Precision Medicine | Broad | Multiple  (mood, anxiety, schizophrenia) |
| Blum, K., Modestnio, E. J., Gondre-Lewis, M. C., Neary, J., Siwicki, D., Hauser, M. … Badgaiyan, R. D. (2017). Global opioid epidemic: doomed to fail without genetically based precision addiction medicine (PAM™): Lessons learned from America. *Precision medicine (Balgalore), 2(1)*, 17-22. | Precision Medicine | Molecular | AUD/SUD & Addiction |
| Bousman, C., Maruf, A. A., & Muller, D. J. (2019). Towards the integration of pharmacogenetics in psychiatry: A minimum, evidence-based genetic testing panel. *Current Opinion Psychiatry, 32,* 7-15. | Precision Medicine | Molecular | Broad |
| Bradley, P., Shiekh, M., Mehra, V., Vrbicky, K., Layle, S. … Lukowiak, A. A. (2018). Improved efficacy with targeted pharmacogenetic-guided treatment of patients with depression and anxiety: A randomized clinical trial demonstrating clinical utility. *Journal of Psychiatric Research, 96,* 100-107. | Precision Medicine | Molecular | Multiple (anxiety, mood) |
| Brown, A. S., & Meyer, U. (2018). Maternal immune activation and neuropsychiatric illness: a translational research perspective. *American Journal of Psychiatry, 175,* 1073-1083. | Bench-to-Bedside | Multiple (molecular, epigenetics) | Multiple (schizophrenia, mood, ASD) |
| Brown, L., Eum, S., Haga, S. B., Strawn, J. R., & Ziehut, H. (2019). Clinical utilization of pharmacogenetics in psychiatry - perspectives of pharmacists, genetic counselors, implementation science, clinicians, and industry. *Pharmacogenetics in Psychiatry.* doi:10.1055/a-0975-9595 | Multiple (Precision Medicine, D&I) | Molecular | Broad |
| Bubier, J. A., & Chelser, E. J. (2012). Accelerating discovery for complex neurological and behavioral disorders through systems genetics and integrative genomics in the laboratory mouse. *Neurotherapeutics, 9*, 338-348. | Bench-to-Bedside | Molecular | Broad |
| Bulik, C. M., Blake, L., & Austin. J. (2019). Genetics of eating disorders: What the clinician needs to know. *Psychiatry Clinical North America, 42,* 59-73. | Multiple (Precision Medicine, D&I) | Multiple (Molecular, Epi) | Eating Disorders |
| Chen, L. A., Zawertailo, L., Piasecki, T. M., Kaprio, J., Foreman, M., Elliott, H. R. … Saccone, N. L. (2018). Leveraging genomic data in smoking cessation trials in the era of Precision Medicine: Why and how. *Nicotine Tobacco Research, 20*, 414-424. | Precision Medicine | Molecular | AUD/SUD & Addiction |
| Chiu, A., Hartz, S., Smock, N., Chen, J., Qazi, A., Onyeador, J. … Chen, L.-S. (2018). Most current smokers desire genetic susceptibility testing and genetically-efficacious medication. *Journal of Neuroimmune Pharmacology, 13,* 430-437. | Multiple (D&I, Precision Medicine) | Molecular | AUD/SUD & Addiction |
| Costa, J. A. (2013). Personalized medicine in psychiatry: New technologies and approaches. *Metabolism Clinical and Experimental, 62*, S40-S44. | Precision Medicine | Molecular | Broad |
| Costain, G., Esplen, M. J., Toner, B., Scherer, S. W., Meschino, W. S., Hodgkinson, K. A., & Bassett, A. S. (2012). Evaluating genetic counseling for individuals with schizophrenia in the molecular age. *Schizophrenia Bulletin, 40(1),* 78-87. | D&I | Epidemiology | Schizophrenia |
| Cuthbert, B. N. & Insel, T. R. (2013). Toward the future of psychiatric diagnosis: The seven pillars of RDoC. *BMC Medicine, 11:126.* | Precision Medicine | Broad | Broad |
| Dalvie, S., Koen, N., McGregor, N., O’Connell, K. Warnich, L., Ramesar, R. … Stein, D. J. (2016). Toward a global roadmap for precision medicine in psychiatry: Challenges and opportunities. *OMICS: A Journal of Integrative Biology, 20*, 557-564. | Precision Medicine | Molecular | Multiple  (mood, schizophrenia) |
| Damiano, C. R., Mazefsky, C. A., White, S. & Dichter, G. S. (2014). Future Directions for Research in Autism Spectrum Disorders. *Journal of Clinical Child & Adolescent Psychology, 43*, 828-843. | Multiple  (bench-to-bedside, precision medicine) | Broad | Neuro (ASD) |
| Daws, S. (2017). Ethical Application of Precision Medicine to Schizophrenia Management. *New Bioethics, 23*, 147-153. | Precision Medicine | Molecular | Schizophrenia |
| deLeon, J. (2009). The future (or lack of future) of personalized prescription in psychiatry. *Pharmacological Research, 59,* 81-89. | Precision Medicine | Molecular | Broad |
| deLeon, J. (2006). AmpliChip CYP450 Test: personalized medicine has arrived in psychiatry. *Expert Review of Molecular Diagnostics, 6*, 277-286. | Precision Medicine | Broad | Broad |
| Donaldson, Z. R., & Hen, R. (2015). From psychiatric disorders to animal models: A bidirectional and dimensional approach. *Biological Psychiatry, 77*, 15-21. | Bench-to-Bedside | Molecular | Broad |
| Drake, R. E., Cimpean, D., & Torrey, W. C. (2009). Shared decision making in mental health: Prospects for personalized medicine. *Dialogues in Clinical Neuroscience, 11,* 455-463. | Precision Medicine | Molecular | Broad |
| Driscoll, A. C., Barr, C. S. (2016). Studying longitudinal trajectories in animal models of psychiatric illness and their translation to the human condition. *Neuroscience Research, 102*, 67-77. | Bench-to-Bedside | Molecular | Multiple  (mood, stress, anxiety, AUD, conduct disorder) |
| Drury, S., & Cuthbert, B. (2015). Advancing pediatric psychiatry research. *Therapeutic Innovation & Regulatory Science, 49*, 643-646. | D&I | Molecular | Broad |
| Evers, K. (2009). Personalized medicine in psychiatry: Ethical challenges and opportunities. *Dialogues in Clinical Neuroscience, 11*, 427-434. | Precision Medicine | Molecular | Broad |
| Falk, A., Heine, V. M., Harwood, A. J., Sullivan, P. F., Peitz, M., Brustle, O … Djurovic, S. (2016). Modeling psychiatric disorders: From genomic findings to cellular phenotypes. *Molecular Psychiatry, 21*, 1167-1179. | Bench-to-bedside | Broad | Multiple  (ASD, schizophrenia) |
| Finn, C. T., & Smoller, J. W. (2006). Genetic counseling in psychiatry. *Harvard Review of Psychiatry, 14(2),* 109-121. | D&I | Epidemiology | Broad |
| Finucane, B., Challman, T. D., Martin, C. L., & Ledbetter, D. H. (2016). Shift happens: Family background influences clinical variability in genetic neurodevelopmental disorders. *Genetics in Medicine, 18*, 302-304. | Precision Medicine | Multiple  (molecular, epi.) | Neuro (ASD) |
| Foley, C., Corvin, A., Nakagome, S. (2017). Genetics of schizophrenia: Ready to translate? *Current Psychiatry Reports, 19:61* | Multiple  (bench-to-bedside, precision medicine) | Molecular | Schizophrenia |
| Fraguas, D., Diaz-Caneja, C. M., State, M. W., ODonovan, M. C., Gur, R. E., & Arango, C. (2017). Mental disorders of known aetiology and precision medicine in psychiatry: A promising but neglected alliance. *Psychological Medicine, 47*, 193-197. | Precision Medicine | Molecular | Broad |
| Gandal, M., Leppa, V. Won, H., Parikshak, N. N., & Geschwind, D. H. (2016). The road to precision psychiatry: Translating genetics into disease mechanisms. *Nature Neuroscience, 19*, 1397-1407. | Precision Medicine | Molecular | Multiple  (ASD, mood, ADHD, OCD, schizophrenia) |
| Gardner, P. O., Tapper, A. R., King, J. A., DiFranza, J. R., & Ziedonis, D. M. (2009). The neurobiology of nicotine addiction: Clinical and public policy implications. *Journal of Drug Issues, 39*, 417-441. | Bench-to-Bedside | Molecular | AUD/SUD & Addiction |
| Garner, M. Mohler, H., Stein, D. J., Mueggler, T., & Baldwin, D. S. (2009). Research in anxiety disorders: From the bench to the bedside. *European Neuropsychopharmacology, 19*, 381-390. | Bench-to-Bedside | Molecular | Anxiety |
| Gerretsen, P., Muller, D. J., Tiwari, A., Mamo, D., & Pollock, B. G. (2009). The intersection of pharmacology, imaging,  and genetics in the development of personalized medicine. *Dialogues in Clinical Neuroscience, 11*, 363-376. | Precision Medicine | Molecular | Multiple  (mood, schizophrenia) |
| Geschwind, D. H. (2003). DNA microarrays: Translation of the genome from laboratory to clinic. *The Lancet Neurology, 2,* 275-282. | Precision Medicine | Molecular | Multiple  (ASD, AUD, schizophrenia) |
| Geschwind, D. H., & State, M. W. (2015). Gene hunting in autism spectrum disorder: on the path to precision medicine. *Lancet Neurology, 14*, 1109-1120. | Precision Medicine | Molecular | Neuro (ASD) |
| Glatt, C. E., & Lee, F. S. (2016). Common polymorphisms in the age of Research Domain Criteria (RDoC): Integration and translation. *Biological Psychiatry, 79(1),* 25-31. | Bench-to-Bedside | Molecular | Broad |
| Hack, L. M., Fries, G. R., Eyre, H. A., Bousman, C. A., Singh, A. B., Quevedo, J. … Dunlop, B. W. (2019). Moving pharmacoepigenetics tools for depression toward clinical use. *Journal of Affective Disorders, 249,* 336-346. | Bench-to-Bedside | Epigenetics | Mood |
| Hariri, A. R., & Holmes, A. (2015). Finding translation in stress research. *Nature Neuroscience, 18*, 1347-1352. | Bench-to-bedside (emphasis on mouse models) | Molecular | Multiple  (anxiety, mood, trauma, stress-related disorders, PTSD) |
| Harold, G. T., Leve, L. D., & Sellers, R. (2017). How can genetically informed research help inform the next generation of interparental and parenting interventions? *Child Development, 88*, 446-458. | D&I | Epidemiology | Broad  (childhood pathology) |
| Hartwell, E. E., & Kranzler, H. R. (2019). Pharmacogenetics of alcohol use disorder treatments: An update. *Expert Opinion on Drug Metabolism & Toxicology, 15,* 553-564. | Bench-to-Bedside | Molecular | AUD/SUD & Addiction |
| Helton, S. G., Lohoff, F. W. (2015). Pharmacogenetics of alcohol use disorders and comorbid psychiatric disorders. *Psychiatry Research, 230,* 121-129. | Precision Medicine | Broad | Multiple  (AUD, mood, anxiety) |
| Hendershot, C. S. (2014). Pharmacogenetic approaches in the treatment of alcohol use disorders: addressing clinical utility and implementation thresholds. *Addiction Science & Clinical Practice, 9:20.* | D&I | Molecular | AUD/SUD & Addiction |
| Herbert, D., Neves-Pereira, M., Baidya, R., Cheema, S., Groleau, S., Shahmirian, A. … Kennedy, J. L. (2018). Genetic testing as a supporting tool in prescribing psychiatric medication: Design and protocol of the IMPACT Study. *Journal of Psychiatric Research, 96*, 265-272. | Precision Medicine | Molecular | Broad |
| Hess, G. P., Fonseca, E., Scott, R., & Fagernes, J. (2015). Pharmacogenomic and pharmacogenetic-guided therapy as a tool in precision medicine: current state and factors impacting acceptance by stakeholders. *Genetics Research, 97*, e13. | Precision Medicine | Molecular | Mood |
| Hippman, C., & Nislow, C. (2019). Pharmacogenomic testing: Clinical evidence and implementation challenges. *Journal of Personalized Medicine, 9*(40), 1-25. | Bench-to-Bedside | Molecular | Broad |
| Hoehe, M. R., & Morris-Rosendahl, D. J. (2018). The role of genetics and genomics in clinical psychiatry. *Dialogues on Clinical Neuroscience, 20,* 160-177. | Precision Medicine | Molecular | Broad |
| Hutchison, K. E. (2010). Substance use disorders: Realizing the promise of pharmacogenomics and personalized medicine. *Annual Review of Clinical Psychology, 6*, 577-589. | Precision Medicine | Broad | AUD/SUD & Addiction |
| Hsin-Ya, L., Jih-Heng, L., Uuh-Ling, T., Wei-Chiao, C., Tze-Chun, T. … Liu, R.-H. (2013). Moving toward personalized medicine in the methadone maintenance treatment program: A pilot study on the evaluation of treatment responses in Taiwan. *BioMed Research International, 2013*, 1-11. | Precision Medicine | Molecular | AUD/SUD & Addiction |
| Insel, T. R., Voon, V., Nye, J. S., Brown, V. J., Altevogt, B. M., Bullmore, E. T., ... & Marston, H. M. (2013). Innovative solutions to novel drug development in mental health. *Neuroscience & Biobehavioral Reviews*, *37*, 2438-2444. | Bench-to-Bedside | Molecular | Broad |
| Jia, F., Shan, L., Wang, B., Li, H., Miao, C., Xu, Z. … Saad, K. (2017). Bench to bedside review: Possible role of vitamin D in autism spectrum disorder. *Psychiatry Research, 6*, 360-365. | Bench-to-Bedside | Molecular | Neuro (ASD) |
| Jurgens, G., Jacobsen, C. B., Rasmussen, H. B., Werge, T., Nordentoft, M., & Andersen, S. E. (2012). Utility and adoption of CYP2D6 and CYP2C19 genotyping and its translation into psychiatric clinical practice. *Acta Psychiatrica Scandinavica, 125,* 228-237. | Precision Medicine | Molecular | Broad |
| Kaiser, T., Feng, G. (2015). Modeling psychiatric disorders for developing effective treatments. *Nature Medicine, 21*, 979-988. | Bench-to-Bedside | Genomics | Broad |
| Kong, C., Dunn, M., & Parker, M. (2017). Psychiatric genomics and mental health treatment: Setting the ethical agenda. *American Journal of Bioethics, 17,* 3-12. | Broad | Genomics | Broad |
| Lally, J., Gaughran, F., Timms, P., & Currna. S. R. (2016). Treatment-resistant schizophrenia: Current insights on the pharmacogenomics of antipsychotics. *Pharmacogenomics and Personalized Medicine, 7(9)*, 117-129. | Precision Medicine | Molecular | Schizophrenia |
| Lee, B. S., McIntyre, R. S., Gentle, J. E., Park, N. S. Chiriboga, D. A., Lee, Y. … McPherson, M. A. (2017). A computational algorithm for personalized medicine in schizophrenia. *Schizophrenia Research, 192*, 131-136. | Precision Medicine | Molecular | Schizophrenia |
| LeFoll, B., Pushparaj, A., Pryslawsky, Y., Forget, B., Vemuri, K., Makriyannis, A., & Trigo, J. M. (2014). Translational strategies for therapeutic development in nicotine addiction: Rethinking the conventional bench to bedside approach. *Progress in Neuro-Psychopharmacology & Biological Psychiatry, 52*, 86-93. | Bench-to-Bedside | Molecular | AUD/SUD & Addiction |
| Lett, T., Walter, H., & Brandl, E. J. (2016). Pharmacogenetics and imaging-pharmacogenetics of antidepressant response: Towards translational strategies. *CNS Drugs, 30*, 1169-1189. | Precision Medicine | Molecular | Mood |
| Lobo, D. S. S., Aleksandrova, L., Knight, J., Casey, D. M., el-Guebaly, N., Nobrega, J. N., & Kennedy, J. L. (2015). Addiction-related genes in gambling disorders: new insights from parallel human and pre-clinical models. *Molecular Psychiatry, 20,* 1002-1010. | Bench-to-Bedside | Molecular | AUD/SUD & Addiction  (gambling) |
| Luoni, A., & Riva, M. A. (2016). MicroRNAs and psychiatric disorders: From aetiology to treatment. *Pharmacology & Therapeutics, 167*, 13-27. | Bench-to-Bedside | Epigenetics | Broad |
| Malhotra, A. K., Lencz, T., Correll, C. U., & Kane, J. M. (2007). Genomics and the future of pharmacotherapy in psychiatry. *International Review of Psychiatry, 19*, 523-530 | Precision Medicine | Molecular | Multiple  (mood, schizophrenia) |
| Malter, C. M., Tottneham, N., & Casey, B. J. (2013). Translational developmental studies of stress on brain and behavior: Implications for adolescent mental health and illness. *Neuroscience, 249,* 53-62. | Bench-to-Bedside | Molecular | Other  (acute threat, chronic stress) |
| Martin, A. R., Kanai, M., Kamatani, Y., Okada, Y., Neale, B. M., & Daly, M. J. (2019). Current clinical use of polygenic scores will risk exacerbating health disparities. *Nature Genetics, 51*, 584-591. | Precision Medicine | Molecular | Broad |
| Martin, A. R., Daly, M. J., Robinson, E. B., Hyman, S. E., & Neale, B. M. (2019). Predicting polygenic risk of psychiatric disorders. *Biological Psychiatry, 86,* 97-109. | Precision Medicine (some D&I flavor) | Molecular | Broad |
| Menke, A. (2018). Precision pharmacotherapy: Psychiatry’s future direction in preventing, diagnosing, and treating mental disorders. *Pharmacogenomics and Personalized Medicine, 11,* 211-222. | Precision Medicine | Molecular | Broad |
| Menke, A., Weber, H., & Deckert, J. (2019). Roadmap for routine pharmacogenetic testing in a psychiatric university hospital. *Pharmacopsychiatry.* doi:10.1055/a-0914-3234 | Preision Medicine | Molecular | Mood |
| Murck, H., Laughren, T., Lamers, F., Picard, S., Walther, S., Goff, D., & Sainati, S. (2015). Taking personalized medicine seriously: Biomarker approaches in phase IIb/III studies in major depression and schizophrenia. *Innovation Clinical Neuroscience, 12*, 26S-40S. | Precision Medicine | Molecular | Multiple  (mood, schizophrenia) |
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| Notes: AUD/SUD = alcohol use disorder / substance use disorder; D&I = dissemination and implementation science; ASD = autism spectrum disorder; ADHD = attention-deficit hyperactivity disorder; Neuro = neurodevelopmental disorder; OCD = obsessive-compulsive disorder; PTSD = post-traumatic stress disorder. | | | |