

Materials List for:

# Development of a Backbone Cyclic Peptide Library as Potential Antiparasitic Therapeutics Using Microwave Irradiation

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## Materials

| Name                                   | Company           | Catalog Number | Comments  |
|--|-------------------|----------------|---|
| <b>REAGENTS</b>                        |                   |                |   |
| Solid support, Rink Amide AM resin ML  | CBL               | BR-1330        | loading: 0.49 mmol/g  |
| Fmoc-Ala-OH                            | Advanced Chemtech | FA2100         |   |
| Fmoc-Arg(Pbf)-OH                       | Advanced Chemtech | FR2136         |   |
| Fmoc-Asn(Trt)-OH                       | Advanced Chemtech | FN2152         |   |
| Fmoc-Asp(OBut)-OH                      | Advanced Chemtech | FD2192         |   |
| Fmoc-Cys(Trt)-OH                       | Advanced Chemtech | FC2214         |   |
| Fmoc-Gln(Trt)-OH                       | Advanced Chemtech | FQ2251         |   |
| Fmoc-Glu(OtBu)-OH                      | Advanced Chemtech | FE2237         |   |
| Fmoc-Gly-OH                            | Advanced Chemtech | FG2275         |   |
| Fmoc-His(Trt)-OH                       | Advanced Chemtech | FH2316         |   |
| Fmoc-Ile-OH                            | Advanced Chemtech | FI2326         |   |
| Fmoc-Leu-OH                            | Advanced Chemtech | FL2350         |   |
| Fmoc-Lys(Boc)-OH                       | Advanced Chemtech | FK2390         |   |
| Fmoc-Met-OH                            | Advanced Chemtech | FM2400         |   |
| Fmoc-Phe-OH                            | Advanced Chemtech | FF2425         |   |
| Fmoc-Pro-OH                            | Advanced Chemtech | FP2450         |   |
| Fmoc-Ser(tBu)-OH                       | Advanced Chemtech | FS2476         |   |
| Fmoc-Thr(tBu)-OH                       | Advanced Chemtech | FT2518         |   |
| Fmoc-Trp(Boc)-OH                       | Advanced Chemtech | FW2527         |   |
| Fmoc-Tyr(But)-OH                       | Advanced Chemtech | FY2563         |   |
| Fmoc-Val-OH                            | Advanced Chemtech | FV2575         |   |
| 1-Methyl-2-pyrrolidinone (NMP)         | Sigma             | 328634         | <b>Caution</b> Toxic/Highly flammable/Irritant.   |
| <i>N,N</i> -Dimethylformamide (DMF)    | Alfa Aesar        | 43465          | <b>Caution</b> Toxic. Use high quality DMF to eliminate side reactions such as Fmoc removal as a result of the dimethylamine traces from DMF decomposition. |
| Dichloromethane (DCM)                  | Sigma             | D65100         | <b>Caution</b> Harmful  |
| Dibromomethane (DBM)                   | Sigma             | D41868         | <b>Caution</b> Harmful  |
| Trifluoroacetic acid (TFA)             | Sigma             | T62200         | <b>Caution</b> Corrosive/Toxic  |
| Trifluoroacetic acid, HPLC grade (TFA) | Sigma             | 91707          | <b>Caution</b> Corrosive/Toxic  |
| Diethylether                           | Sigma             | 31690          | <b>Caution</b> Highly flammable/Harmful   |

|  |                    |                              |  |
|--|--------------------|------------------------------|--|
| Triisopropylsilane (TIS)   | Sigma              | 233781                       | <b>Caution</b> Irritant/Flammable                |
| Water, HPLC grade  | Sigma              | 270733                       |  |
| Acetonitrile, HPLC grade (ACN)   | Fisher Scientific  | A998-4                       | <b>Caution</b> Flammable/Irritant/Harmful        |
| <i>N,N</i> -Diisopropylethylamine (DIEA)   | Sigma              | 3440                         | <b>Caution</b> Corrosive/Highly flammable        |
| Piperidine   | Sigma              | W290807                      | <b>Caution</b> Toxic/Highly flammable            |
| Pyridine   | Sigma              | 270970                       | <b>Caution</b> Highly flammable/Harmful          |
| Ethanol (EtOH)   | Sigma              | 459844                       | <b>Caution</b> Highly flammable/Irritant         |
| 1-Hydroxybenzotriazole hydrate (HOBt)  | Sigma              | 157260                       | <b>Caution</b> Highly flammable/Irritant/Harmful |
| O-(Benzotriazol-1-yl)- <i>N,N,N',N'</i> -tetramethyluronium hexafluorophosphate (HBTU) | Sigma              | 12804                        | <b>Caution</b> Irritant/Harmful                  |
| Benzotriazole-1-yl-oxy-tris-pyrrolidinophosphonium hexafluorophosphate (PyBOP)         | Advanced Chemtech  | RC8602                       | <b>Caution</b> Irritant                          |
| Ninhydrin  | Sigma              | 454044                       | <b>Caution</b> Harmful                           |
| Phenol   | Sigma              | P3653                        | <b>Caution</b> Corrosive/Toxic                   |
| Potassium cyanide (KCN)  | Sigma              | 11813                        | <b>Caution</b> Very Toxic                        |
| Potassium hydroxide (KOH)  | Sigma              | 221473                       | <b>Caution</b> Toxic                             |
| <i>N,N'</i> -Diisopropylcarbodiimide (DIC)   | Sigma              | 38370                        | <b>Caution</b> Flammable/ Toxic                  |
| 4-Dimethylaminopyridine (DMAP)   | Sigma              | 522805                       | <b>Caution</b> Toxic/Irritant                    |
| Glutaric anhydride   | Sigma              | G3806                        | <b>Caution</b> Flammable/Irritant/Harmful        |
| Succinic anhydride   | Sigma              | 239690                       | <b>Caution</b> Irritant/Harmful                  |
| Adipic acid  | Sigma              | A26357                       | <b>Caution</b> Toxic/Irritant                    |
| Pimelic acid   | Sigma              | P45001                       | <b>Caution</b> Toxic/Irritant                    |
| Chloranil  | Sigma              | 23290                        | <b>Caution</b> Toxic/Irritant                    |
| Acetaldehyde   | Sigma              | 402788                       | <b>Caution</b> Flammable/ Toxic                  |
| <b>EQUIPMENT</b>   |                    |                              |  |
| Centrifuge   | Beckman Coulter    | Allegra 6R centrifuge        |  |
| Lyophilizer  | Labconco           | freezezone 4.5               |  |
| Vacuum pump  | Franklin Electric  | model 1101101416 with 3/4 HP | Alcatel pump with Franklin Motor                 |
| Polypropylene cartridge 12 ml  | Applied Separation | 2419                         |  |
| Cap plug for 12 ml polypropylene cartridge   | Applied Separation | 8157                         |  |
| Polypropylene cartridge 3 ml   | Applied Separation | 2413                         |  |
| Cap plug for 3 ml polypropylene cartridge  | Applied Separation | 8054                         |  |
| Stop cocks PTFE  | Applied Separation | 2406                         |  |
| Tubes flat, 50 ml  | VWR                | 21008-240                    |  |
| Extraction manifold, 20 pos, 16 x 100 mm tubes   | Waters             | WAT200609                    |  |
| Shaker, BD adams nutator mixer   | Fisher scientific  | 22363152                     |  |
| Nalgene HDPE narrow mouth IP2 bottles, 125 ml  | Fisher scientific  | 03-312-8                     |  |
| Erlenmeyer flask   | Fisher Scientific  | FB-501, 500 ml               |  |
| Heating block  | Thermolyne         | 1760 dri bath                |  |

|  |                    |                         |  |
|--|--------------------|-------------------------|--|
| Disposable borosilicate glass tubes with plain end | Fisher Scientific  | 14-961-25               |  |
| Micropipettes and tips Finnpiquette                | Thermo             | 20–200 and 100–1,000 µl |  |
| HPLC vials - micro v l pp 400 µl PK100             | VWR                | 69400-124               |  |
| HPLC vial- Blue Snap-It Cap                        | VWR                | 66030-600               |  |
| Analytical HPLC column                             | Peeke Scientific   | U1-5C18Q-JJ             | ultra 120 5 µm C18Q, 4.6 mm ID 150 mm  |
| Prep HPLC column, XBridge                          | Waters             | OBD C18 5 µm column     | 19 mm × 150 mm   |
| Mass spectrometer                                  | Applied Biosystems | Voyager DE-RP           |  |
| Nitrogen cylinder                                  |                    |                         |  |
| Desiccator   |                    |                         |  |
| Analytical RP-HPLC system Shimadzu LC-20           |                    |                         | equipped with: CBM-20A system controller, SPD-20A detector, CTO-20A column oven, 2 x LC-20AD solvent delivery unit, SIL-20AC autosampler, DGU-20A5 degasser (Shimadzu, MD, USA). |
| Preparative RP-HPLC system Shimadzu LC-20          |                    |                         | equipped with: CBM-20A system controller, SPD-20A detector, CTO-20A column oven, 2 x LC-6AD solvent delivery unit and FRC-10A fraction collector (Shimadzu, MD, USA).            |